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OF THE

PROGRESS OF MEDICAL KNOWLEDGE AT HOME AND ABROAD.

EDITED BY

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WITH THE ASSISTANCE OF A BODY OF GENTLEMEN ENGAGED IN THE PRACTICE AND TEACHING OF MEDICINE.

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Part I.—ORIGINAL ARTICLES.

Statistics of 5754 *Deliveries, by* William Campbell, M.D., Lecturer on Midwifery, and Consulting Physician Accoucheur to the Lying-in Hospital, &c. &c. &c., Edinburgh.

This statistical report embraces not only the particulars of the cases which have occurred for some years in the author's private practice, and such as have been under the management of his pupils, but also those for which he has been consulted by professional friends. The responsible duties of public teaching, which have occupied a large share of his attention for nearly 26 years, and the harassing avocations of private practice, have prevented, until a comparatively recent period, his accomplishing little more than a record of the age of the mothers and the sex of their infants, except in those labours only, which, from their particular character, required special management. The various points stated have been recorded with a due regard to accuracy; and in particularizing the position in which the foetal head entered and traversed the pelvis, the comparative frequency of the face towards the right or left ilium only, has been noted, since a correct account of the other positions of the head could scarcely be expected from the generality of students.

The oldest parent among the males was 77 years of age, and his wife produced 13 sons and 3 daughters—two of the latter being by a former husband: when her sixteenth child was born, she was in her forty-first year. In 5754 deliveries, there were but 5 male parents below the age of 20; 4 at 18, and 1 at 19. Among the female parents, 2 only were delivered at the age of 50; 3 at 47; 9 at 46; 15 at 45; 20 at 44; 21 at 43; 37 at 42; 28 at 41; 124 at 40; 153 at 19; 87 at 18; 35 at 17; 7 at 16; and 2 at 15. Of the whole number of female parents

referred to, each of 31 mothers produced 12 children; 14—13; 5—14; 1—15; and 3—16 children.

In 5754 deliveries there were 2901 males, and 2219 female children; the sex of the remainder had not been recorded.

There were in 400 first deliveries 244 males and 160 females, including 3 twin births, of which 1 was a female and 5 were male infants.

In 116 illegitimate births, there were 65 male and 52 female infants, including 1 twin delivery, in which there was one of each sex.

By 153 males and females of equal ages, 318 males and 245 females were procreated, including 3 twin births, of which 2 were male and 4 female infants.

By 340 fathers, from 3 to 6 years older than their wives, 795 males and 351 females were produced, including 5 twin cases, in which there were 3 males and 7 females.

By 143 fathers, who were from 7 to 10 years older than their wives, 366 males and 289 females were produced, including one twin birth, of which both were male infants.

To 112 fathers, who were from 11 to 36 years older than their wives, 267 males and 194 female children were born, including one twin birth, in which there was one infant of each sex.

To 117 husbands, who were from 3 to 17 years younger than their wives, 285 males and 214 females were born.

In 1310 deliveries, extending over a period of four and a half years, the head presented in 1244 births, with the face towards the right ilium, in 977 instances, and in the reverse position in 263 cases; in the remainder some other part of the foetus presented, or the delivery had been effected without assistance, and the presentation not ascertained.

Among the 5754 births already referred to, the following varieties occurred, viz.:—

44 cases in which, during the progress of labour, the face was forced into the arch of the pubes; and in all, with one exception, the delivery was protracted and painful. Too frequently in these cases, the position of the head is not ascertained until labour is so far advanced that the case cannot be improved; but it is still my firm belief, that were the position discovered before the head had entered the brim of the pelvis, and also previously to the rupture of the membranes, an effort ought to be made to direct the face towards either sacro-iliac symphysis, as in the event of our succeeding, the delivery would be more speedily terminated, and the sufferings of the patient abbreviated. I have not met with a face presentation, strictly so called, since I have been in practice.

One case in which the right ear with the side of the face presented. The head was so firmly impacted in the pelvic cavity when a consultation was held, that it was deemed advisable to leave the case to nature; and the foetus was expelled still-born,

after protracted and severe suffering, but the patient had a favourable recovery. In the progress of delivery the face was forced into the arch of the pubes.

Two cases in which the head accompanied by the right foot over the corresponding ear, passed through the pelvis.

One case in which the head with the right foot over the corresponding ear, and the left hand over the left ear, passed through the pelvis.

One case in which the back of the neck presented, the head being pressed upon the upper part of the thorax.

81 breech presentations, in five of which, owing to the foetus being arrested in its progress, the blunt hook was applied over one of the thighs, and the foetus extracted, not only with ease, but speedily, and with scarcely any injury to the part on which the instrument was placed: one of the children was still-born, but life had been extinct before artificial delivery had been commenced. The hook is not only a much more efficient contrivance, but infinitely safer than forceps, in such cases.

59 footling deliveries. In one of these, and which was *a first labour*, the foetus was expelled without any other aid than that derived from the organs of the parent. In none of the cases, although on several occasions the face was directed towards the front of the pelvis, was it necessary to interfere artificially in changing the position of the head.

Four cases in which the breech and feet simultaneously presented. The labour in these cases was too far advanced when assistance was procured, to admit, without undue interference, of an attempt to reduce the process to a footling delivery. The expulsion was therefore left to nature, and though tardily in three of these, it was eventually safely accomplished in all the cases except one, both as regarded the parents and the foetuses; but in this last, the child had been some time dead.

Four cases occurred in which one foot only presented.

Two cases in which both knees presented.

Four labours happened in which the shoulder occupied the brim of the pelvis, and in one of these the presenting arm was fractured and torn away above the elbow before a consultation was requested. In all the cases, the extraction of the foetus was accomplished by placing a branch of the forceps in the axilla of the protruded arm, while one of the lower extremities was encircled by the noose of a piece of tape. By cautiously elevating the shoulder with the instrument, and employing traction on the pelvic limb by means of the tape, the case was soon reduced to a footling presentation, and the foetus speedily extracted.

Eight cases of arm presentation were met with, in all of which the version of the foetus was effected by seizing one of the knees. In 28 additional labours, besides those of the two foregoing va-

ricties, the version of the foetus was resorted to under various other circumstances, upon the same principle.

21 cases were met with in which the placenta presented. In two of these the expulsion of the mass preceded that of the foetus, which was hurried through the passages; and in the remaining 19 instances, turning was resorted to. Of the whole 21 cases, one only, in which the version of the foetus was performed, proved fatal, in consequence of great loss of blood before any assistance was procured.

51 cases of hemorrhage occurred, four of which proved fatal, —three from the attendant having permitted the whole placenta, or a considerable portion of it, to remain too long in utero after the birth of the foetus, and the fourth from the mass having been extensively detached about three weeks before labour should have supervened.

One case of spontaneous evolution occurred in a foetus of the eighth month.

17 cases of convulsions. Of these two proved fatal,—one from inefficient treatment, and the second from a debilitated constitution.

Eight cases of rupture of the uterus occurred, in which the writer had some responsibility. All proved fatal except one, in which the laceration happened in the lower and back part of the cervix of the organ, and in the upper part of the vagina. Only one of the fatal cases was examined with accuracy, and in this instance a rent so extensive was discovered in the anterior wall of the body of the organ, as to permit nearly the whole of the body of a large foetus to protrude among the intestines.

82 cases of twin labours, which produced 87 male and 77 female infants. In 32 instances both presented the head; in 4 the breech and feet; in 20 the head and feet; in 4 the breech; in 6 the feet; in 16 the head and breech.

Two triplet deliveries. In the first, all the infants were males, —the two first born presented the head, and the third the breech, and this last was still-born. In the second case, two of the infants were males, and, as in the first instance, also presented the head, but the third was a female, which was born by the feet, and all three were not only born alive, but were reared for a considerable time. All the infants were well developed in both instances. In the first case, the parents were Irish—in second, Scotch.

19 cases of protrusion of the funis, in five of which only, and where none of the methods usually recommended was adopted, the foetus was born alive.

172 forceps cases. In 16 of these, the foetus was still-born, and four of the parents died from puerperal inflammation. Of the foetuses still-born, there was satisfactory evidence that all except six had been dead before forceps had been used. Con-

trary to what has been stated by Professor Burns, who may be considered among the highest authorities in midwifery, I am quite confirmed in an opinion which I have long since advanced, viz. that cases may occur in which both blades of the instrument cannot be applied. In a great majority of the foregoing cases, the infant was of the male sex. This amount of instrumental practice extended over a period of 26 years, and consisted for the most part of labours in which the narrator had been consulted.

35 crotchet deliveries. In none of these, except one, was the deformity considerable; and in this instance the brim was so vitiated, owing to an injury received on the lower part of the spine at a very early period of life, that it was insufficient, as was confirmed by the repeated induction of premature labour, to admit the transit of a foetus arrived at such a stage of maturity, as would enable it to support an independent life. On two occasions, the foetus of this woman was born alive and vigorous; the first died of convulsions in 18 hours after birth, and the second from the same cause on the seventh day. In both instances the cranium presented fractures at different points, from pelvic pressure.

One case of evisceration. The liquor amnii had escaped for some time before delivery was attempted, the funis had protruded as also an arm; and as the former was pulseless and the latter ecchymosed and vesicated, while the foetus was closely embraced by the uterus, the thorax was perforated to prevent the uterus being injured by the version of the foetus, which had been repeatedly attempted without success.

One case of detruncation. In her first confinement the woman was delivered in the country of a still-born child by means of instruments. She was of rather diminutive stature, and the attendant practitioner declared that she could never give birth to a living child; and so correct was his estimate of the condition of her pelvis, that his opinion proved quite prophetic, for the second child was still-born without any instrumental aid; and the third foetus, which presented the feet, was so large, that it was necessary to have recourse to detruncation; but before the head could be extracted, the woman expired, from the combined debilitating effects of her efforts and internal hemorrhage. From the most projecting point of the first sacral portion to the upper part of the symphysis pubis, measured two inches and nine-tenths; and from the left sacro-iliac symphysis to the opposite acetabulum, four inches and six-tenths. The cranium, from the chin to the top of the occipital bone, measured five inches and seven-tenths; and from one parietal protuberance to the other, four inches and two-tenths.

Three cases of caesarean section, *post mortem*. The first of these women died undelivered, when nearly at the full time, of cholera. The foetus had been emancipated without loss of time,

but from obvious marks of decomposition, it was evident that its life had become extinct some days before the decease of the parent. The second operation was resorted to in a case where a female, also within a few days of the full time, died of what an author, treating of the diseases of India, styled Colonitis; but here also, from evidences of decomposition, the foetus must have died some days before its parent. The third operation was performed on a woman who died of rupture of the peritoneal covering of the uterus. She had been about a week in labour, and refused all offers of assistance. The foetus, which was unusually large, was extracted almost immediately after the decease of the parent by desire of the relatives, although no doubt could be entertained at the time, that it had been dead for some hours.

Vagitus uterinus. When this occurred there was no medical attendant present; but the cries of the child were so distinctly heard by a female acting in the capacity of nurse, that she thought it was actually born, and upon this supposition she went off for the gentleman who was to have attended the patient. The crying was heard when the membranes were ruptured, but the foetus was not expelled for three hours afterwards. The foetus was a male, and the face descended towards the right sacro-iliac symphysis.

In conclusion, it may be noticed, that although, as a general rule, matrons suffer more while in labour with their male than with their female children, as was pointed out many years ago by some of our brethren in charge of Lying-in Establishments, yet that exceptions are occasionally met with. The writer was concerned in two cases in which this was strikingly exemplified. In one of these, the individual produced four daughters and three sons; and while her labours with the latter were comparatively easy, she suffered severely with the former. The second was the mother of three female and two male children; the latter were born alive, but all the former were still-born; and the birth of the third, from the protracted detention of its head in the pelvis, was followed by a vesico-vaginal fistula, though forceps had not, nor could have been used, for want of space. The cranium of the female foetus, though generally somewhat smaller than that of the male, nevertheless bulges so much more at the parietal protuberances than the male head, that if the sacro-pubic diameter at the brim were but in a trivial degree less than the standard size, or the head somewhat larger than usual, this would render parturition more painful and protracted with a female than with a male child. In the great majority of head presentations, the sex of the foetus may be predicted by an experienced practitioner before its expulsion, owing to the conformation of the cranium and its degree of mobility in traversing the pelvic brim. Among the causes for retarding delivery, the writer has been consulted in several instances where anchylosis and consequent incurvation of the coccyx

were concerned: one case required the perforator, two the use of forceps, and in a fourth the foetus was still-born,—being the second dead child produced by this woman, owing to the condition of the sacro-coccygeal joint, as was confirmed by the examination of the pelvis, after the expulsion of the last foetus.

4 Picardy Place, May 16th, 1845.

A Case of Sudden Death, in which, on examination, a portion of the Muscular Fibres of the Heart was found to be ruptured. Communicated by James Andrew, M.D., F.R.S.E., Fellow of the Royal College of Physicians, &c.

The subject of the following communication was a gentleman of about sixty years of age, of middle stature, or rather above it —corpulent, but at the same time muscular—of a florid complexion, with blue eyes and light hair. He was exceedingly active and punctual in his business habits, and of a social turn in private. His constitution always appeared remarkably strong, healthy, and good. Having known this gentleman well for a long time, I only remember of his being confined to the house by sickness three times in the last fifteen years; the first occasion was in consequence of a rather severe attack of diarrhœa; the second was an accident; and the third was an attack of bronchitis, from which he suffered for a short time last year, at which time he was stethescopised by his medical adviser, who has since informed me that his attention was not attracted by any sounds which led him to suspect a cardiac affection. For some months previous to his death, my impression was, that he was suffering from emphysema of the lungs, as whenever I chanced to see him, I observed that, on making any exertion, his breathing became hurried, accompanied by a loud wheezing sound; at the same time, however, he did not complain of either pain or palpitation. Three days before the day of his death, he received notice to have some very extensive and laborious reports prepared for a public board which was to sit in Edinburgh; and such was the labour in preparing these, that it required all his assiduity, assisted by three clerks, from nine o'clock of one morning to four o'clock of the next morning, for three continuous days, to complete the necessary returns. His health and strength, however, seemed quite unimpaired, and his medical man informed me that he had seen him by accident the afternoon before he died, when he appeared quite well.

After having given this brief notice of the previous history of the case, I may now proceed to state, that this gentleman arose on Monday morning, the 6th of January 1845, at six o'clock,

apparently quite well, took an early breakfast, and started from Glasgow at half-past eight o'clock by the railway train, reached the Edinburgh terminus at half-past ten, and walked with a friend from thence to George Street. On reaching the chambers of the board, he went into one of the private parlours and wrote some memoranda, after which he proceeded to the clerk's office (an adjoining room). On opening the door, he commenced making an observation upon the weather, but before he could conclude, he made a stagger—fell forward—lighting upon the upper and left side of his face, and never spoke or appeared to breathe again. Mr Lizars, who was the medical man sent for, saw him about five minutes after he fell, but life was then quite extinct. Mr Lizars therefore presumed, from the suddenness of the shock and immediate suspension of all vital action, that death had been occasioned by the rupture of one of the large arterial trunks either in the thorax or abdomen.

In the course of the afternoon, accompanied by a medical friend, Mr Innes, a surgeon in the Honourable East India Company's Service, I reached the chambers and saw the body. There did not appear to have been any spasmodic or convulsive movements of the muscles of the face or extremities, but the countenance appeared unnaturally pallid and ghastly, so much so indeed, that Mr Innes, who had been perfectly acquainted with the deceased, at first declared that it was not he.

The remains were taken back to Glasgow, and forty-eight hours after death, an autopsy was made by Dr Easton, surgeon to the Glasgow police, in the presence of Dr Gibson of Glasgow, Mr Innes, and myself, when the following appearances were remarked. External; considerable lividity of the head and neck, but not extending to other parts of the body, the face had altogether lost the ghastly appearance it had presented on the afternoon of his decease, and, as to colour, showed even something of a life-like aspect, the tint approaching to a rose hue. There was a small abrasion on the upper part of the left cheek, and an oozing of sero-sanguinolent fluid from the nostrils. On making the first incision, the parietes of the thorax and abdomen were found greatly loaded with fat. There was no effusion of blood into the thoracic cavity, nor were there any adhesions between the pulmonary and costal pleuræ. The temperature within the cavities of the body seemed higher than usual, but, as we had no thermometer, I cannot say what it actually was. The blood in the vessels was very fluid, almost resembling that of persons who have died from lightning. The lungs appeared healthy, the left one in its upper part being slightly engorged, but quite crepitous. On opening the pericardial sac, it was also found to be free of fluid. The large vessels of the heart were now secured by ligatures, and that organ, on being removed, was found enlarged to nearly three times its ordinary volume. It felt quite soft and flabby, was

loaded with fat, and a patch of lymph rather larger than a sixpence was observed on the external surface of the right ventricle. The softening of the heart in the right auricle and right ventricle, and also in the upper two-thirds of the left ventricle, was such that, without great care, it was difficult to avoid lacerating it with the fingers.

The right ventricle, on being opened, was found to contain neither clot or fluid blood, but was much dilated and its walls attenuated. The right auricle was also dilated and attenuated, and near the tuberculum Loweri, the muscular fibres were found ruptured in three places from above downwards, to the extent of about three quarters of an inch, with extravasated blood among the ruptured fibres. Effusion of blood into the pericardial sac being only prevented by the serous covering of the heart remaining unruptured. The left auricle appeared healthy in substance. The left ventricle was much softened, and dilated, and attenuated in its upper two-thirds. Near the base of one of the segments of the tricuspid valve, and also in one of those of the mitral valve, at a corresponding place, a very small cartilaginous production was met with. The chordæ tendineæ were also slightly thickened, otherwise the valves were healthy. The semilunar valves were healthy, as also the coronary vessels.

In the abdominal cavity, the liver, stomach, and bowels were found to be healthy. The omentum, mesentery, and kidneys loaded with fat; the latter, as also the spleen, were somewhat enlarged, but all the abdominal viscera were healthy. The head was the last part which was examined. On dividing the scalp, there was some oozing of blood from the part which was struck in falling. On attempting to detach the dura mater from the skull, the attachments were found to be excessively strong, so much so, that the united efforts of three individuals, assisted by a pretty powerful levator, were scarcely able to accomplish this. There was a very trifling serous effusion in the arachnoid sac. The lateral ventricles contained rather more serum than natural. All the other parts were healthy.

Before concluding, I wish to make one or two very short remarks. In the above case, the heart presented no appearance externally from which we could infer rupture or extravasation. It was not until the right auricle was laid open that the lesion was discovered; and in this respect the case presents a contrast to some of the recorded cases of rupture of the heart, in which, though an external aperture was at once apparent, it was difficult to discover its communication with an internal cavity. Cruveilhier refers to cases of this kind, and in particular to one in which it cost him much pains to discover the internal aperture, though the pericardium was distended with blood which had issued from the heart. In this case, however, the rupture was in the wall of

the left ventricle, and the internal aperture was doubtless concealed by the columnæ carneæ.

Respecting the immediate cause of death, it cannot I think be doubted, that the extravasation in the right auricle, found on dissection, just preceded death, otherwise it must have risen to such an extent as to distend the pericardium visibly, or rather to rupture it, and fill its cavity with blood. Whether an extravasation so moderate as this was, could be the sole cause of death, may be made a subject of question. It must also be admitted, that mere softening of the heart, proceeding to a great extent by rendering it incapable of obeying its ordinary stimulus, is quite a sufficient cause of death. In this case, the previous exhaustion must not be overlooked. Continued mental labour and anxiety, for at least eighteen hours during each of three successive days, may have greatly aided the effect of the extravasation, or, if that were of little effect, may have rendered the softening an adequate cause of death.

Case of Intermittent Mental Disorder of the Tertian Type, with double consciousness. By David Skae, M.D., Fellow of the Royal College of Surgeons, &c.

The following case is interesting, as affording an illustration of an extremely rare form of mental disorder, that in which it assumes a periodic or intermittent character. I am acquainted with only one case of a similar character, which was mentioned to me by the late Dr Abercrombie; the particular features of the case I have not been able to learn, but they are probably known to several members of the profession in Edinburgh, as the individual affected himself occupied a prominent position in the medical profession. This much I have learned regarding his case, that he was affected periodically, I believe, on every alternate day, or at least the regularity of the remission or intermission was such, that his family were able to anticipate, by calculation, the days on which he would be well, and those on which he would be ill, and to arrange their social and domestic engagements accordingly. On the intermediate days, he was perfectly qualified for the discharge of his several duties; on the other days, he was totally disqualified for social intercourse or the ordinary business of life.

The subject of the following remarks exactly resembles the individual referred to in the particulars enumerated. He is an unmarried gentleman, in the prime of life, connected with the legal profession, of a leuco-phlegmatic temperament, regular in his habits, which have always been retired, and extremely temperate in his mode of life. His complaint commenced with the usual

symptoms of dyspepsia—it then gradually passed into hypochondriacism—and ultimately into its present form, a state bordering between hypochondriasis and mental alienation.

The dyspeptic symptoms became a subject of complaint and solicitation to the patient about 10 or 12 years ago. They appeared to have had their origin partly in habits of over-walking before dinner, so as to produce considerable exhaustion, and partly in habits of sitting up to a late hour engaged in reading or in business. The symptoms gradually increased in severity and obstinacy, it being found quite impossible to induce the patient to break through the habits which he had acquired, or to alter in the least the quantity or quality of the diet to which he had been accustomed from his earliest youth.

To the usual dyspeptic symptoms there gradually succeeded a train of morbid feelings, and ultimately of illusions founded upon them. The distress occasioned by flatulent distention of the stomach, and the painful feelings in different parts of the body, which are its usual concomitants, led the patient to consult many medical men, and use large quantities of medicine, which, as he still persisted in the habits in which his complaints originated, and the diet by which they were excited, rather aggravated than abated the evil. The fugitive pains and uneasy feelings experienced in different parts of the body were spoken of as sufferings of a mysterious and unparalleled kind; they were at one time believed to be wind circulating through the veins, and at another, the whole system was imagined to be charged with water. While under the influence of these impressions, the patient, day after day, would sit for many hours in the water-closet, believing that the water was constantly discharging itself; and at another time, he continued spitting incessantly for many weeks, under the impression that his whole frame was becoming converted into saliva.

Feelings of gloom and despondency were at the same time developed:—the most trifling errors of the past were magnified into crimes of unpardonable magnitude, and the future was contemplated with the utmost dread. He commenced a system of reading the Scriptures, psalms, and paraphrases with great zeal and rapidity; this soon grew into a system of rapidly scanning the pages, and incessantly turning over the leaves, and he persuaded himself that he read the whole Bible through, and all the metrical psalms, once or twice daily. He now sat up the greater part of every night, and lay in bed during the day; and when he went to bed, he carefully surrounded his person, from head to foot, with bibles and psalm books.

Under the influence of the bodily distress and mental despondency from which he suffered, he not unfrequently spoke of drowning himself, or of throwing himself over a window, and on several occasions begged earnestly that he might have his razors. A natural timidity of disposition, and a prevailing conscientiousness,

prevented this tendency from displaying itself with any seriousness or determination of purpose.

From an early period in the history of this case, it was observed that the symptoms displayed an aggravation every alternate day. This gradually became more and more marked, and for the last 18 months the symptoms above described have become distinctly periodic. On each alternate day, the patient is affected in the manner just described, and will neither eat, sleep, nor walk, but continues incessantly turning the leaves of a Bible, and complaining piteously of his misery. On the intermediate days, he is, comparatively speaking, quite well, enters into the domestic duties of his family, eats heartily, walks out, transacts business, assures every one he is quite well, and appears to entertain no apprehension of a return of his complaints.

What is chiefly remarkable and interesting in the present features of the case, is the sort of double existence which the individual appears to have. On those days on which he is affected with his malady, he appears to have no remembrance whatever of the previous or of any former day on which he was comparatively well, nor of any of the engagements of those days ;—he cannot tell whether he was out, nor what he did, nor whom he saw, nor any transaction in which he was occupied. Neither does he anticipate any amendment on the succeeding day, but contemplates the future with unmitigated despondency. On the intermediate days, on the other hand, he asserts that he is quite well, denies that he has any complaints, or at least evades any reference to them ; appears satisfied that he was as well the previous day as he then is, asserts that he was out, and that he has no particular complaints. On that day he transacts business, takes food and exercise, and appears in every respect rational and free from any illusions or despondency ; anticipates no return of illness, and persists in making engagements for the next day for the transaction of business, although reminded and assured that he will be unfit for attending to them. On those days he distinctly remembers the transactions of previous days on which he was well, but appears to have little or no recollection of the occurrences of the days on which he was ill. He appears, in short, to have a double consciousness—a sort of twofold existence—one half of which he spends in the rational enjoyment of life and discharge of its duties ; and the other, in a state of hopeless hypochondriacism, amounting almost to complete mental aberration.

An endless variety of remedies have been used in the treatment of this case, and among others, those which are believed to be useful in periodic affections, but without marked benefit. The patient has obtained considerable advantage from change of scene and exercise in the open air. But the friends by whom he is surrounded, have not sufficient control over him to carry out those regulations as to diet, exercise, habits, and employment, which

should form the most essential parts of the treatment; and circumstances have hitherto prevented his being placed under more efficient control.

Trial of Martha Brixey for Child Murder; and acquittal on the plea of Insanity: with Remarks. By D. Skae, M.D., F.R.C.S., Lecturer on Anatomy, &c.

The uncertain state of our laws regarding the plea of insanity in criminal cases, renders every trial where that plea was made, and more particularly made successfully, of great interest. Notwithstanding the number of such trials, which have occurred of late years, and notwithstanding the opinions of the highest legal authorities given in answer to the questions submitted to them by the House of Peers, that uncertainty seems rather to have increased than diminished. This trial also appears rather to add to the difficulties with which the subject is surrounded, than to diminish them. For here, it would seem, that all the conditions which are considered essential in legal definitions of insanity were awanting, and that most of the arguments which are generally urged as evidence of insanity were inapplicable. There was no delusion: there was no evidence that the accused party was ignorant that she was offending against the laws of God and man in the act she committed, but on the contrary, she seemed perfectly conscious of offending against both;—the absence of motive could not be pleaded, for she had a motive; yet she was acquitted on the ground of insanity.

Martha Brixey, a girl of 18 years of age, appears to have been naturally of a quiet and inoffensive disposition. She lived at Greenwich, in the service of Mr Ffinch, solicitor, in the capacity of under-nurse, and was uniformly kind and attentive to the children. She was very much liked in the family, and was treated with great kindness. For some months previous to the act for which she was tried, she had laboured under suppression of the catamenia, for which she latterly received medicines from the family-surgeon. Two or three weeks before the event, she was observed to become dull and restless, and complained of a curious sort of aching pain in her head. A death had taken place in the family, and she displayed great fastidiousness and irritability about her dress, which she declared did not fit her. From the time she came home with the dress in her hand, she seemed to be in a state of melancholy and wretchedness. She had it altered several times; and although her fellow-servants saw nothing wrong with it, she persisted in her dissatisfaction with it, and "wished it at the devil, as she would not wear it." She ultimately

ripped the body of her dress from the skirt, and thurst it into the fire with the poker. For this irritability of temper Mrs Ffinch was advised to dismiss her, as unfitted for the care of children. She was accordingly warned, that if she displayed any more dissatisfaction about her dress, she would have to leave her place. On the 2d of May, she was sent to fetch the children from school; and it appeared that on that occasion she again took the dress to be altered, and was a long time away from the house. On her return, she came with the gown in her hand, and in reply to Mrs Ffinch, said she had been with it again to the dress-maker's. Mrs Ffinch said to her—"Mary, I told you last night, that if you went again, you must leave my service, and now you must leave me." The girl then began to cry, and said, she was very sorry, and hoped she would not leave, and several times asked her mistress to allow her to stop, and added, that she would never be happy again if she went away. Notwithstanding her great anxiety to remain, she displayed much waywardness in her disposition; at one time saying that the air of Greenwich did not agree with her, and that she would leave, &c., afterwards that she would not leave. On the day following, Mrs Ffinch mentioned that she had been to Deptford to see a young woman who was coming to take her place in the nursery. Martha said, she was very sorry indeed for what had happened, but hoped she would be forgiven, and allowed to stop. On the afternoon of that day she appeared quite comfortable, and was heard singing in the nursery. In the evening she said to her fellow-servant, "I need not make myself so very unhappy as I do; one would think I had committed murder, but I have not done so." She then asked if a woman was ever hung; and on being told, that if they commit murder, they were hung as well as men, she replied, that she would as soon be hung as transported, or put into a mad-house. On the morning of Sunday the 4th, the day immediately succeeding, she said to her fellow-servant in the nursery, she would not leave, for she did not like another to come in her place. At a quarter past nine o'clock, while washing the breakfast things, she said to the housemaid, "Oh, Elizabeth, I wish I was dead." On that morning, she had nursed the infant, who was put to sleep in his cot about half-past nine o'clock. At this time she asked the head-nurse whether she thought Mrs Ffinch would allow her to remain; and on being told she would not, she stood still for a minute, biting her nails, "as if in a study." About twenty minutes before ten o'clock, she was seen going into the pantry. The housemaid followed her, and saw her take a table-knife out of the box. On asking her what she was going to do with it, she replied, that she was going to cut a pencil for Miss Mary. On being told that a smaller knife would do better, she said she would take both, as the larger one would do to cut the children's bread and butter in the afternoon. She then tried the edge of the large knife with

her finger and thumb, and went up stairs carrying them both with her. Almost immediately afterwards a scream was heard. The unfortunate girl entered the dining-room, where Mr and Mrs Ffinch and a friend were sitting, and addressing her master, in a very excited state, said, "Oh, sir, what have I done? What have I done? Will you forgive me?" They all rose up, and her master cried, "What?" "Oh, sir," she answered, "I am a murderer. I have murdered the dear baby. I have cut the dear baby's throat." On rushing up stairs, the father found his child lying in its cot, quite dead, with its head almost severed from the body. The cut went back to the vertebræ. Meanwhile the girl continued addressing those around her, saying, "Good God! I have cut the dear baby's throat. What will become of me? What will be done to me? Do you think God will forgive me if I ask pardon and repent?" And she then fell down on her knees and prayed God to forgive her.

She was immediately given into custody, and after getting her bonnet and shawl, she begged to be allowed time to change her boots before she went. On her way to the station-house, she repeated the same questions to the sergeant of police; and on being asked whether she had any quarrel with her fellow-servant or Mr and Mrs Ffinch, she said, "No, for a kinder master and mistress there never were." She also asked him if he thought Mr Ffinch would forgive her in a week's time—if she would be allowed to wear her own clothes in Newgate—and if they would treat her harshly there; for if they did, she did not know what she should do, as she had always been accustomed to be treated very kindly.

On the Monday morning she wrote the following letter to her fellow-servant, Mr Ffinch's nurse:—

"Dear Mary,—Pray send me another gown and collar, and a pair of gloves. May God Almighty forgive me for the wickedness I have done. I will pray for it earnestly. I remain your sincere friend,

"Martha Brixey."

In stating the case to the jury, Mr Bodkin referred to the deliverance given by the judges in answer to the questions put to them by the House of Peers, as affording the best and most authoritative exposition of the law regarding the plea of insanity in such cases. The question put to the judges was as follows:—"What is the law respecting alleged crime committed by persons afflicted with insane delusions, in respect of one or more particular subjects or persons, as, for instance, when at the time of the commission of the alleged crime, the accused knew he was acting contrary to law, but did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some supposed public benefit?" The judges, in answer to this

question, thus replied:—"Assuming that your Lordships' inquiries are confined to those persons who labour under such partial delusions, and are not in other respects insane, we are of opinion, that notwithsanding the party accused did the act complained of with a view, under the influence of insane delusions, of redressing or revenging some supposed grievance or injury, or of producing some public benefit, he is nevertheless punishable, according to the nature of the crime committed, if he knew at the time of committing such crimes that he was acting contrary to law, by which expression we understood your Lordships to mean the law of the land." The only question, then, Mr Bodkin argued, for the jury to decide in this case, was, whether the prisoner at the time she took the life of the deceased infant was or was not in that state of mind which enabled her to distinguish between right and wrong, and to know that the act she committed was contrary to the law of God and man.

To this definition of the law regarding the criminal responsibility of the insane, which is what has been almost uniformly laid down in similar cases by the bench, Mr Clarkson, counsel for the prisoner, very properly opposed the statement, made by Lord Chief Justice Tindal to the House of Lords, when introducing the answers to their Lordships' questions. "My Lords, her Majesty's judges, with the exception of Mr Justice Maule, who has stated his opinion to your Lordships, in answering the questions proposed to them by your Lordships' House, think it right, in the first place, to state, that they have forborne entering into any particular discussion upon these questions, from the extreme and almost insuperable difficulty of applying answers to cases in which the facts are not brought judicially before them. The facts of each particular case must of necessity present themselves in endless variety, and with every shade of difference; and as it is their duty to declare the law upon each particular case, on facts proved before them, and hearing argument of counsel thereon, they deem it at once impracticable, and at the same time dangerous to the administration of justice, if it were practicable, to attempt to make minute applications of the principles involved in the answers given by them to your Lordships' questions."

The verdict of the jury formed a most excellent commentary on the difficulties referred to by his Lordship, and on the imperfection of the law as laid down by the judges for the decision of such cases; for, although there was no evidence of insane *delusion*, (considered by some judges as essential to the plea of insanity,) and every reason to believe that, as the prisoner was conscious both before and after the act that it was one contrary to the laws of God and man, she was conscious of that at the moment of its commission, yet they returned a verdict of "*Not Guilty*, on the ground of insanity;" or, in the words used by the foreman, "from the derangement of the system, which led to

great excitement in the prisoner at the time she committed the act, we are of opinion that she was not responsible for her actions."

The case, of which I have given the foregoing abstract, was evidently one of murder, committed under the influence of an irresistible impulse, the result of morbid excitement. The girl was affected with homicidal mania, or moral insanity—the *manie sans délire* of Pinel. The propriety of the verdict, I think, few will be inclined to question. Yet it is certain that the girl escaped hanging *in spite* of the law—her case is one not provided for in the legal definitions of that insanity which exculpates a murderer; many have been executed with clearer evidence of their insanity, and want of responsibility, than she displayed. Need I refer to the cases of Robert Deans, who murdered a child of which he was very fond, because he was disappointed in love, and preferred sacrificing an innocent victim to his resentment to sending the object of his unrequited love to another world, in an unprepared state, to answer for her sins, and who, on the scaffold, shewed himself to be a raving maniac; or to the case of Howison, who was executed in Edinburgh in 1831, and which must be in the recollection of most readers. The acquittal of Martha Brixey was the result of the progress of public opinion, and of more correct and comprehensive views of insanity than those which form the basis of our legal provisions. If the acquittal of this unfortunate girl is received without surprise, on what principle can we explain the public alarm which was excited by the acquittal of M'Naughten for killing Mr Drummond? Not surely on the ground that the legal definition of insanity was disregarded; for in his case there were delusions, but on the ground, probably, that the delusions were not such as would have justified the act, supposing that they had been true. This carries us back to the legal proviso, that the delusion must have been of such a nature as to interfere with the perceptions of right and wrong in the act of violence. But this was not interfered with in the case before us; yet we do not on that account condemn the verdict. Why is this? It appears to be, because we feel satisfied, that in this case the party had *no control over her acts*. The imperfection of the legal definition is almost self-evident. It is not only insufficient, and leaves many of the unfortunate subjects of insanity to suffer the last penalty of the law, but it is one of no practical avail; for it is impossible to arrive at any sort of evidence as to the moral perceptions of criminals regarding the acts which they committed, at the time of their perpetration, in nine cases out of ten. This imperfection in the laws has led to the utmost uncertainty in the administration of them—an uncertainty which cannot fail to be highly prejudicial to the ends of justice.

"One principle after another," says Dr Ray, "has been successively abandoned and resumed, either with the strongest dis-

regard of consistency, or the most extraordinary ignorance of previous decisions. Thus the old maxim, that insanity does not annul criminal responsibility in one who retains the power of distinguishing right from wrong, was abandoned in the case of Hadfield; re-affirmed in that of Bellingham; again abandoned in the trial of Martin; subsequently modified by Lord Lyndhurst; and again, in the year 1837, a jury holding in their hands the life of a fellow-man, are told by Mr Justice Parke, that as regards the effect of insanity or responsibility for crime, it is merely necessary that the party should have sufficient knowledge and reason to discriminate between right and wrong. Three years afterwards, at the trial of Oxford for shooting at the Queen, Lord Denman told the jury that the question for them to decide was, whether the prisoner was labouring under that species of insanity which satisfied them that he was quite unaware of the nature, character, and consequences of the act he was committing; in other words, whether he was under the influence of a diseased mind, and was really unconscious at the time he was committing the act, that it was a crime. On the trial of M'Naughten for killing Mr Drummond, in 1843, Lord Chief Justice Tindal instructed the jury, that before convicting him, they must be satisfied, that when committing the criminal act, he had not that competent use of his understanding, as that he knew that he was doing a wicked and wrong thing—that he was sensible it was a violation of the law of God and man."

"Since the case of M'Naughten," says an excellent writer, in the British and Foreign Medical Review (January 1845,) "from thirty to forty trials for heinous offences have taken place in this country, in which the plea of irresponsibility has been raised. This shows that it is still a matter of deep importance to the English medical jurist. * * * At one time, the legal standard of 'right and wrong' is applied; at another, it is abandoned; in one case, the absence of motive is a ground of exculpation; at another, it is not; in short, there is no consistency whatever. Some are acquitted, and others are executed, without our being able, medically speaking, so far as this plea is concerned, to discern any marked difference in the cases."

In proof of the truth of these statements, many additional cases might be referred to. The cases of Grocock, tried at last Derby winter assizes and convicted; of Laurence, tried at the Lewes lent assizes, 1844, and executed, for striking a man on the back of the head, whose face he had never seen, without any provocation; and of Dalmas, convicted for cutting a woman's throat on Battersea bridge, without any motive, and contrary to all human motives—are referred to by the writer last cited, in proof of the truth of his statement. These cases may well excite surprise when contrasted with the acquittals of Oxford, Francis, M'Naughten, and Martha Brixey.

The limits of this paper preclude me from entering more largely into the discussion of the very interesting question suggested by the preceding remarks—the plea of insanity in exculpation of murder. Many valuable contributions, tending towards a right view of this subject, have been made during the last few years. The writings of Hoffbauer, Prichard, Ray, Winslow, Crichton, and Mayo—the valuable articles on the subject in the British and Foreign Medical Review, (Nos. XIX., XXXI., and XXXVII.)—not to mention works of a more popular character, have done much to enforce the necessity of a revisal of our laws regarding the criminal responsibility of the insane. As long as murder is made punishable with death, and as long as lesser degrees of insanity are not held as affording a valid plea in exculpation of such an act, the question must be one of painful interest and extreme difficulty. The writer last referred to, proposes, as the true and only test of responsibility, that the question to be decided by the jury, on the evidence of the medical witnesses, should be, whether or not the individual had at the time *any power of control over his actions.* This test would do admirably in such a case as the one we have had under consideration, and indeed it is the only one in all cases of moral insanity. But it appears to me to be as far wrong on the one side, as the legal test of ' perception of right and wrong' is in error on the other; for, while the latter excludes cases of moral insanity, the former would exclude cases of intellectual insanity or monomania. It would be a difficult matter to convince a jury in every case of murder committed under the influence of insane delusion, in some instances committed with the utmost precaution, forethought, and craft, that the individual had no control over his actions. His acts were as perfectly under the control of his wishes, or the motives which determined them, as those of any sane man. It is in the motives—in the illusions, that in this class of cases the insanity is evinced. The motives are not such as would influence a sane man—they are the illusions of a disordered mind.

Before legal distinctions can be intelligible and correct, regarding the criminal responsibility of the insane, *two* forms of insanity must be recognised, moral and intellectual :—and before all the difficulties, and inconsistencies, and cruelties incident to the present state of the laws can be done away with, partial insanity must be much more readily admitted in exculpation of guilt than it hitherto has been. To argue that example is necessary for the security of society, and that persons, regarding whose insanity there can be no reasonable doubt, should be executed for the sake of a warning to others, is to argue from premises of a very doubtful kind; for it is very questionable, whether the class of persons (the insane) thus warned, would be at all benefited by the lesson thus read to them. Indeed, it may be doubted whether the desire of being hanged does not in a majority of in-

stances form with them the principal motive for the commission of murder.

Surgical Cases. By James Duncan, M.D., Fellow of the Royal Colleges of Surgeons of England and Edinburgh, one of the Surgeons to the Royal Infirmary, Edinburgh.

Case of Fungus of the Testicle.

In the January number of the London and Edinburgh Monthly Journal of Medical Science, a new treatment of fungus of the testicle is described by Mr Syme. It has in view the obviating the destruction of the gland, which in many cases must necessarily follow the treatment recommended by Mr Lawrence. The treatment proposed by Mr S., and now generally adopted, consists, as is well known, in the removal of the fungus by escharotics, by ligature, or by the knife. This treatment is in many cases tedious, and in those, and they are by no means few, in which the whole body of the gland is protruded, virtually amounts to castration, in so far as the diseased organ is concerned.

The treatment recommended by Mr Syme, is stated by him to be founded on an examination of the diseased structure; and its principle is thus described by him:—"This observation suggested to me the idea, that by the use of proper means the fungus might be made to retrace its steps, through absorption of the white substance and gradual approximation of the brown, and that the granulating materials of the surface might thus be enabled to complete the healing process. Pressure was obviously the agent on which reliance should be chiefly placed for producing the effect desired with this view, and the most convenient mode of compressing the growth, seemed to be inclosing it within its proper covering of the scrotum. There is no loss of substance in this part, as the fungus, issuing through a small ulcerated orifice, merely presses the integuments aside, so that they are found lying in loose folds above the dense ring that encircles the neck of the protruded mass. It must therefore be easy to obtain from this source an abundant supply of materials for the purpose."

Several objections, and, amongst others, the probability that the surface of the fungus would not unite with the superinduced integuments, naturally suggested themselves. The result of the cases already published removed these, but the weightiest one still remained, the doubt whether the gland would return to a healthy condition and regain its functions. Unless it did so, the treatment proposed would not possess any great superiority over those already in use.

There must necessarily be few opportunities of deciding this

point satisfactorily. To do so, the patient affected with the disease must already, by some means or other, have been deprived of the other organ. This is the only case from which any satisfactory conclusion can be drawn.

The following is a case of that description, and the evidence derived from it, so far as it goes, appears to me satisfactory:—

A. S. aet. 28.—Admitted into Royal Infirmary, March 30th, with fungus of the left testicle. The protruded portion is about the size of a large walnut, and appears to include the greater part of, if not the entire, testis. It is softish in consistence, and otherwise presents all the characters so well described by Mr Lawrence.

The disease commenced about four months ago. The testicle became painful and swollen. The swelling increased until it had attained the size of his fist. The scrotal integuments then became adherent, and in about two months gave way, discharging a small quantity of purulent matter. The fungoid protrusion for which he was admitted, then formed, and from that time the pain greatly diminished. Small superficial sloughs have occasionally been detached from the fungus.

The right testicle has been diseased at a former period, and no trace of it now remains. The patient has been in bad health for several years, and has been several times salivated for the treatment of syphilis.

An elleptical incision was made around the fungus, and extended upwards and downwards, the integuments were raised and brought over the growth, and retained by several stitches. This was accomplished with great facility.

Some degree of inflammatory œdema followed the operation, but this quickly subsided, after puncturing the integuments with the lancet and fomentations. On the third day the sutures were cut, and support given by means of several stripes of adhesive plaster. Partial union only, by the first intention, took place; but there was, notwithstanding, no disposition in the fungus again to protrude.

The patient left the house on the 10th of May, the wound having been for sometime completely cicatrised.

In this case we had that combination of circumstances already alluded to, which alone could throw any light upon the point in dispute; and I was consequently anxious to ascertain the state of matters in regard to the sexual desires. On inquiring at the man, he assured me that his feelings in that respect were unimpaired, and as strong as they were two years previous to the existence of the disease in either testicle; and in a communication which we have subsequently had from him, we were rather inclined to believe that these powers had been tested.

Case of Tumour of Testis, containing an osseous mass, and covered by integumentary membrane and hairs.

Some little time ago, I had occasion to operate on a congenital tumour of the testis, in a boy of eight years of age. On cutting into the tunica vaginalis, a considerable quantity of matter, mixed with hairs, was evacuated; and upon further examination, an irregular tumour was found to occupy the situation of the testis, which I accordingly removed. As this case appeared to bear some resemblance to those described by Velpeau and others, I requested Mr Goodsir to examine the tumour, which he kindly did; and the following are the remarks upon it with which he has favoured me. It does not enter into my province to discuss the physiological questions connected with such tumours; but I have thought it right simply to give the case as one of a rare class.

Mr Goodsir writes as follows:—

Structure of a Testicle removed by Dr Duncan.

A mass of an irregular ovoidal form, about the size of the last joint of the forefinger, appeared to be the testis, so much altered in texture as to present no trace of its original structure.

It consisted almost entirely of fibrous texture, inclosing fat cells in its areolæ, and, at variable distances throughout, small tubercular masses of a light yellow tough substance of a granular aspect, resembling some forms of scrofulous deposit.

Near the reflection of the tunica vaginalis on the surface of the testis, two club-shaped projections were attached, covered by a layer of a substance resembling the ordinary integument, with a quantity of fatty cuticular debris upon it. This portion of integument somewhat suddenly became continuous with the surface of the tunica vaginalis.

On the surface of the club-shaped projections, and at the angle of reflection of the tunica vaginalis, numerous long hairs were attached by bulbs.

These hairs, of one-half to three-fourths of an inch in length, were conical, pointed, and of two kinds, some having their conical pulp-cavities prolonged in the form of canals, full of cells to their extremities; others were, with the exception of their conical pulp-cavities, solid.

The integumentary membrane in which the hairs were implanted, resembled in all respects the ordinary skin of the surface of the body.

A few hairs appeared to arise from the general surface of the tunica vaginalis.

In the substance of the club-shaped projections, but particularly in the larger of the two, when it adhered to the mass of the testis, there were irregular masses of soft cartilage, presenting

all the ordinary characters of that texture-corpuscles, and a few vascular canals.

In some places this cartilage had been converted into bone, in which were visible irregular Haversian canals, and numerous corpuscules and canaliculi.

One portion of bone, resembling a sand-glass, measured half an inch in length.

JOHN GOODSIR.

College, Edinburgh, 2d June, 1845.

No. II.—REVIEWS.

Lectures on Subjects connected with Clinical Medicine, comprising Diseases of the Heart. By P. M. LATHAM, M.D., F.R.C.P., &c. Vol. I. London, Longman. 1845.

WE have rarely enjoyed the gratification of perusing a practical work on any subject in medicine so eminently lucid, simple, and graphic, as the work before us. From beginning to end it conveys to the reader the impression of one pointing out objects under the immediate observation of the reader, rather than a description of objects formerly seen and remembered. The whole lectures are emphatically *clinical*, and have all the charm and interest which attaches to pure clinical instruction. They are the substance, and in some instances the literal transcript of the Clinical Lectures delivered by the author at St Bartholomew's, when physician to that hospital.

The first four lectures are devoted to an exposition of the natural and anormal sounds, impulses, and resonances of the heart, and are characterized by that clearness and simplicity which is the prevailing feature of the work.

With respect to the extent over which the sounds of the heart, in a state of health, may be heard, we cordially agree with the author. We have long thought that the statements of systematic writers are apt to mislead on this point, by affecting a precision which is not warranted by observation and experience.

"With respect to the first sound," he observes, "I should be at a loss to mark the exact space within which healthy proportion and healthy structure always required it to be heard, and in neither more nor less. There are so many circumstances, some consistent with health in the largest sense, and some exclusive at least of its disease, which make the systolic sound of the heart more or less extensively audible, that (I am persuaded) two healthy persons would not easily be found in whom it would be

heard exactly within the same thoracic space. Whether a man be fat or lean will always make a great difference. In the one it will be kept within the precordial region, in the other it will be carried beyond it. Fat is so bad a conductor, that where it greatly abounds, it will restrict the sound to less than the entire precordial region, even to a very small part of it, so that you will not be able to hear the heart farther than you can feel its impulse, or not farther than its apex. But mere skin and bone are such good conductors, that in very thin persons the sound will spread far beyond the precordial region, and be heard at any part of the chest to which you apply your ear." —pp. 10, 11.

The description of the anormal sounds of the heart affords a very excellent illustration of the impressive and graphic style of the author. After dividing all the unnatural murmurs of the heart into *endocardial*, those which are the result of disease in the interior of the organ, and which *take the place* of the natural sounds; and *exocardial*, those which are the result of disease affecting the opposed surfaces of the pericardium, and which are independent of the natural sounds, although capable of obscuring or altogether masking them,—Dr Latham thus forcibly, and somewhat quaintly, describes their distinctive characters :—

" It would be time and trouble thrown away to dwell long upon these endocardial and exocardial murmurs, with a view of describing what they are in themselves and in contrast with each other. For after all, every man must learn them for himself by the teaching of his own ear. Touching, however, our mere perception of them as sounds, there are a few circumstances interesting enough to mention, which may chance to help the ear to a readier acquaintance with them.

" Whenever we hear any unusual sound, either for the sake of conveying our notion of what it is to another, or often for the sake of being sure that we have a right notion of it ourselves, we are apt to set about imitating it. Now, any man hearing the endocardial murmur for the first time, as it occurs in the great majority of cases, would be almost sure to try and imitate it with his *mouth*, and, what with whistling and blowing, he would presently hit upon something so very like it, as to make him pleased with his own cleverness. But, hearing the exocardial murmur, such as it is in the majority of cases, for the first time, he would never think of imitating it with his mouth ; he would rub his hands together, or the cuffs of his coat, or take up any two things within his reach—two pieces of thick paper, perhaps—and rub them together, and, what with brushing, and rustling, and crumpling, he would presently bring out a very near counterfeit of the exocardial murmur."—pp. 26, 27.

The description of the anormal sounds, indicating disease of the heart, is admirably illustrated by a clear and striking exposition of the mode in which they are produced. This is followed by an estimate, a sober and practical one, of their value in the treatment of such diseases.

Instead of a systematic description of the inflammation of the heart, Dr Latham sets before his readers, the pre-eminent signs of each of its inflammations—endocarditis and pericarditis. He directs his course by them, and their clinical history becomes, in his hands, a commentary upon the diagnostic signs, " the time and

conditions of their appearing, continuing, and ceasing;" while he surveys the other signs and symptoms, "many or few, constant or occasional, coming or going, as subordinate."

This mode of treating his subject is eminently practical and interesting. It leads him first to an examination of the mode in which the endocardial and exocardial murmurs become the diagnostic signs of endocarditis and pericarditis, and how they came to be discovered to be such. For this discovery we are in some measure indebted to the author himself, more so to the valuable researches of M. Bouillaud, but principally to the observations of Dr Watson and Dr Stokes, to whom a well merited tribute is paid by Dr Latham.

We have next in Lectures V. VI. and VII. a description of endocarditis and pericarditis, of which the characteristic signs are made the groundwork, and the circumstances in which they occur are explained, and their value estimated. The other signs of those affections—pain, excessive or irregular action of the heart, feebleness and intermission of the pulse in the former affection;—these and dulness on percussion and undulatory or vibratory movements in the intercostal spaces in the latter, with the general symptoms of both, are successively examined, and their value in the diagnosis and treatment of the diseases pointed out. According to the experience of the author, the attrition-sound of pericarditis, unlike that of pleurisy, very rarely disappears on the development of dulness, consequent upon effusion.

Far from overlooking the value of the means of diagnosis available before the discovery of the auscultatory signs, full value is attached to the labours of Senac, Morgagni, and Corvisart; but the importance of the new methods of diagnosis lies in their being available at a period of the disease when the other signs are very frequently absent.

"Of an acute and severe rheumatic pericarditis running on to its fatal termination, absolutely unattended from first to last by any symptoms except the auscultatory, the examples, I believe, are very rare; few at any time have died of it without an attempt to save them. The victims of an undiscovered and untreated pericarditis are few; but the examples (I am persuaded) are by no means rare of an acute and severe rheumatic pericarditis progressive for many days, and unattended in the meantime by any but auscultatory symptoms, other symptoms, however, arising at last; and many such cases (I am persuaded) were fatal *formerly*. The best treatment commenced as soon as the only symptoms then understood had declared themselves, came too late; and many such cases would be fatal *now*, did not the first attrition-sound from the precordial region call into instant use the remedies by which we deal with pericarditis.

"My experience tells me, that in acute pericarditis the fluttering, faltering action of the heart, and, with it, the respiratory anguish, are almost sure to occur, but that the time of their occurrence is almost always late, and that the murmur and the precordial dulness always precede them.

"But my experience tells me, that in acute pericarditis the pain, if it occur at all, almost always occurs early. The first access of inflammation generally produces it as

well in the pericardium as in other parts. Yet, early as is the pain, the murmur is often earlier."—pp. 140, 141.

The great frequency with which carditis or pericarditis is shown to take place, in connection with acute rheumatism, will startle most of our readers; and when the imminent and immediate danger of those affections, and the organic changes which they leave when recovered from, are remembered, in connection with the frightful list of diseases to which such changes predispose, it may well lead us to peruse with avidity every treatise such as this, which tends to give us more accuracy in our diagnosis, and make us more alive to the necessity of close watching, and of early and active treatment.

Of 136 cases of acute rheumatism, treated by the author in St Bartholomew's, the heart was exempt only in 46

" Heart affected in . . 90

" Seat of disease in the heart :—

Endocardium alone in . .	63
Pericardium alone in . .	7
Endocardium and pericardium in .	11
Doubtful in	9

" Deaths 3. In all of whom both endocardium and pericardium were affected.

" Here are momentous facts which go (I suspect) a good deal beyond the ordinary notions entertained by medical men of this matter. It is believed that among the sufferers of acute rheumatism an individual now and then unluckily has his heart inflamed. The thing is looked upon as an accident which, if not very rare, yet is not very common. But it appears, from the event, not of a dozen or twenty cases merely, but of a number large enough to furnish the measure of what naturally belongs to the disease, that as many as two-thirds of those who have acute rheumatism also suffer inflammation of the heart.*

" Further, the pericardium is popularly regarded as the special and most frequent seat of the inflammation which takes its rise from acute rheumatism. But it appears from cases sufficiently

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* " It has been suggested to me that, in the records of my practice at St Bartholomew's, there would probably be found a somewhat greater frequency of endocarditis and pericarditis, as the concomitants of acute rheumatism, than is usually observed; and that this might be owing to the sedulity of my clinical clerks, who were ever on the alert to gain admission to my wards of (what were esteemed) interesting cases, and that thus I might get more than my share of rheumatisms in which the heart was affected. I cannot exactly tell how this may be, but I hear all physicians of public hospitals speaking of the heart being affected in acute rheumatism with a frequency far beyond the common belief.

" The proneness of the heart to inflammation in rheumatic fever may not be at all times the same. It may belong to (what Sydenham would call) the epidemic constitution of a certain series of years."

numerous, that endocarditis occurs nine times in acute rheumatism, for pericarditis once; that simple endocarditis constitutes more than two-thirds of all rheumatic cardiac affections, and simple pericarditis only one-thirteenth; and that pericarditis is more frequently found in combination with endocarditis than alone." —pp. 144, 145.

An interesting point in the statistics of the cases above referred to, is the frequency of organic lesion of the valves as the result of endocarditis. It is thus illustrated:—

"But of these 63, of whom the endocarditis did not kill, and who, as far as general symptoms could be trusted, might be pronounced convalescent or well, auscultation still told us that, after the inflammation had ceased, the membrane recovered its complete integrity of structure only in 17, and that it remained permanently injured in 46. For of the 30 males, the subjects of rheumatic endocarditis, the endocardial murmur ceased entirely only in 8; while it remained, after they were convalescent, and as long as they continued under observation, in 22. And of the 33 females the endocardial murmur ceased entirely only in 9; while it remained in 24."—p. 147.

The frequency of pneumonia, pleurisy, and bronchitis, occurring as complications of rheumatic inflammation of the heart, is illustrated by statistical tables, which we regret our limits prevent us from citing.

The succeeding lectures are devoted to the subject of the treatment of acute rheumatism, and of its two principal complications —endocarditis and pericarditis.

The effects of blood-letting, and of opium, and of calomel purges in the cure of rheumatism, are successively examined; first, when either is used alone, and afterwards in combination, and the preference given to a judicious combination of the three, *followed* if necessary by the administration of colchicum.

"When from the pulse I have considered venesection necessary to bring down the circulation, the loss of between twelve and sixteen ounces of blood has generally been enough to answer the purpose in view; and the venesection has seldom been repeated.

"The opium, and calomel, and purgatives I have been accustomed to give in combination thus:—With the calomel administered at night, according to its quantity, I have united more or less of opium. To ten grains of calomel I have added one grain of opium; or to five of calomel I have added half a grain, continuing to give them together in the same proportions, night after night, as long as they are needed. Then, on each succeeding day, when a large purgation of the bowels has been duly obtained, I have still given the opium alone, or with saline draughts, in doses of half or one-third of a grain, every five or six hours. And thus, with the larger quantity at night, and the smaller quantity during the day, about two grains of opium have been commonly taken in the course of twenty-four hours.

"Here, then, the vascular system, and the nervous system, and the abdominal viscera are all at the same time made to feel sensibly the impression of the remedy, but none of them is subdued by it. And while blood-letting, and opium, and calomel with purgatives are all made confedrate for the cure of the disease, none of them is given in excess."

* * * *

"But in all cases of acute rheumatism, both mild and severe, the practice prevails of giving colchicum, not alone, but as an auxiliary to other remedies. To bleeding, and opium, and calomel, and purgatives, given in the manner specified, many would add colchicum. They would prescribe a grain of the acetous extract, or fifteen or twenty minims of the wine twice or thrice a day, some considering it to act sedatively, and as a special auxiliary to opium, and some specifically and with the force of an antidote, as it does in gout.

"I, too, use colchicum in acute rheumatism, but not after this manner. I reserve it for special emergencies; and then I employ it with a trust and confidence which I have in no other remedy.

"When by venesection, and by opium, and calomel with purgatives, excess of vascular action, and fever and pain and swelling are abated, yet none of them are entirely abolished, but all still linger; or when pain and swelling do not subside at all in proportion to the abatement of vascular action and fever, which are considerably reduced, then I invoke the aid of colchicum, and give twenty or five-and-twenty minims of the wine of the seeds or the root, twice or thrice a day, and I often find the disease proceed uninterruptedly to its cure.

"Again, when by the same ordinary course of treatment, fever, pain, and swelling have been made to cease entirely, and have suddenly and unexpectedly returned, then I invoke the aid of colchicum, and give it in the same way; and a few doses are commonly enough to dissipate the returning disease, and restore the conditions of health. This is a pure case of relapse. The relapse, however, very seldom reaches the severity of the original attack."—pp. 214—218.

In the treatment of the inflammations of the heart, Dr Latham does not differ in his practice from that commonly followed. He recommends blood-letting, general and local, not however to the extent pursued by some, and puts faith in the efficacy of mercury both as a remedy directly *antiphlogistic* in its effects, and also as *reparatory*,—as both subduing the inflammatory action, and removing the products of inflammation.

We regret that our limits prevent us from citing more largely from this pleasing and highly instructive volume, which we strongly recommend to our professional brethren, as well worthy of a place upon their shelves, beside the works of Andral, Corvisart, Laennec, and Hope.

A Treatise on Corns, Bunions, the Diseases of the Nails, and the general management of the Feet. By Lewis Durlacher, Surgeon Chiropodist (by special appointment) to the Queen. 8vo. pp. 196. London, 1845.

We have perused this work with much satisfaction. It is on a subject too little attended to by medical men. It treats of Hard Corns, Callosities, Soft Corns, Festered Corns, Neuro-vascular Corns, Bunions, Nails and their diseases, the management of the Finger Nails, Warts, Chilblains, and the management of the Feet—to each of which topics a separate chapter is

devoted. If it be deemed beneath the dignity of medical men to practise in this department on the usual terms, it is at least worth their while to learn so much of such subjects as to qualify themselves to give friendly counsel to their patients and acquaintances, and so save them from the malpractices of itinerant jobbers and pretenders to knowledge.

But the subjects above enumerated are excluded from regular practice with no good reason. All of them deserve to be studied with care; and it will be found that the improvement of our knowledge in such subjects, depends fully as much on just attention to the principles and rules of pathology and therapeutics, as in any other subject of medical observation.

There is not an absolute want of writers of note on these subjects. Our author refers to Lyon's "Spinae Pedum," published half a century ago, as founded on practical observation, and, bating its theories, as the best book in the English language on these subjects. But we have more recent and better known authorities to relieve us from the imputation of singularity in the cultivation of the subjects referred to. About thirty years ago, Mr Wardrobe published his "Account of some Diseases of the Toes and Fingers; with Observations on their Treatment,"* in which, among other affections, corns and chilblains are treated of. This paper contains some valuable observations. More recently, an excellent lecture by Sir Benjamin Brodie has been published on corns and bunions.† Moreover, in some of the Systems of Surgery, as in Callisens' Work and Mr Syme's Introduction, valuable observations occur. But we must stop our catalogue of authorities, in case we should run into the fault with which we are going to charge Mr Durlacher—which in truth is a fault, less of a professional kind, than one against good taste—it is in ending his introduction with a catalogue of a dozen of ancient authors, whose works he recommends to be consulted, without any reference to the place in their ponderous folios where the subjects concerned are treated of. This list begins with Hippocrates, and ends with Haley Abbas, Phases, and Alsaharavius. We cannot give Mr D. credit for having consulted the authors he here recommends to his readers; and, when we came to this list, we confess we began to harbour some misgivings as to the character of the work, which, we are glad to say, a farther perusal has dispelled. We could not help thinking of the lengthened string of outlandish names with which old Mr and Mrs Culpepper, in their midwifery, delight to astonish the greener reader at the close of each chapter. But we are dwelling too long on a venial fault.

We cite the following passage from the first chapter:—

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* London Medico-Chirurgical Transactions, vol. v. p. 129.

† London Medical Gazette. 1836. Vol. 17th, p. 775.

" Although all corns are similar in structure, they present varieties according to the parts upon which they are formed, or the tissue that becomes involved. They are classed under the following heads :—hard, callosities, soft, festered, and neuro-vascular ; by which names they will be respectively described in the succeeding chapters.

" Pressure and friction are unquestionably the predisposing (exciting ?) causes of corns, although, in some instances they are erroneously supposed to be hereditary. Improperly made shoes invariably produce pressure upon the integuments of the toes and prominent parts of the feet, to which is opposed a corresponding resistance from the bone immediately beneath ; in consequence of which, the vessels of the dermis" (a word we reprobate) " are compressed between them, become injured, congested, and, after a time, hypertrophied ; a larger quantity of lymph is thrown out than is required for the formation of the normal cuticle, so that layers are generated considerably sooner than the outer lamina is worn off, thus forming layer upon layer, which becomes interwoven, and adhere together.

" If the cause be removed, the inflammatory action ceases, and the result is simply an external induration of superficial irregular scales or laminæ ; if continued, the irritation keeps up the increased action of the papillæ, more epidermic secretion is poured out upon the under surface of the already thickened cuticle, where it coagulates, producing bulbs or projections, generally of conical shape, descending into corresponding cells or follicles of irregular depths, according to the injury caused upon the immediate parts where the external pressure is most severe. In this manner the process continues to the full development ; the surrounding congestion ceases, lymph is thrown out, which becomes organised, and forms a protective sheath or sac round each bulb to its apex, and thus the formation of the corn is completed.

" These bulbs are composed of layers decreasing more and more in size as they approach the secreting point in the dermis, where they become condensed and opake by compression, visible as white or yellowish specks, according to the colouring matter of the skin, when the outer portion of the induration has been removed.

" These irregularities, or projections, are what have been incorrectly called stems or roots.

" The rapid reproduction of the corn, after extraction in chronic cases, is owing to the sac, or sheath, filling in a very short time with a fresh quantity of epidermic secretion, which is soon converted into a corn by the continuance of the exciting cause. By destroying the sheath, the secreting vessels fills up the space, and a healthy skin is produced. If the external pressure be then removed, the corn, probably, will not form again. The presence of the sac will explain the reason why the operation of extraction can be performed without giving pain or drawing blood.

" The point of the corn will frequently press on and rupture some minute blood-vessel, producing extravasation of a red, brown, or black colour, the depth of tint depending on the length of time the blood has been effused. This will be absorbed into some of the contiguous layers, by the process of imbibition, and be visible through the thickened cuticle, although it very seldom rises to the surface.

" If the pressure should be severe, and the apex of the corn descends near the articulation of a joint, the bursa beneath will become inflamed and enlarged.

" Corns which grow between the toes' are of the same structure as all others, but become soft from condensed perspiration, their position, and the approximation of the toes. Persons of a gouty diathesis, and subject to what are called chalk-stones, have frequently a discharge of carbonate of lime (urate of soda ?) follow the extraction of a corn."—pp. 1—4.

The account just given of what at the risk of drawing a smile

from our readers, we shall call the pathology of corns, seems to be on the whole correct. But as to the connection of a corn with a subjacent bursa above referred to, we incline rather to agree with the account given by Sir Benjamin Brodie, than with that of our author. In our author's account, the corn is regarded as at last reaching a previously existing bursa; on the contrary, according to Sir Benjamin, the bursa has not a previous existence, but becomes developed in the progress of the morbid action, by which a full formed corn is produced. As this is a point of some interest, we quote the passage from Sir B.'s lecture.

"I have said that a corn is, in the first instance, a thickening of the cuticle secreted by the cutis, when it is kept in a state of constant irritation by the operation of external pressure, squeezing it against a prominent surface of a bone. But a complete corn is more than this. A bursa or bag of synovial membrane, similar to those bursae which are of original formation, but of a very small size, is formed between the thickened cuticle and the cutis; and it is this combination of thickened cuticle, with a subjacent bursa, which constitutes a perfect corn. This is a fact which you may easily verify for yourselves, as the opportunities of dissecting corns are abundant in the dead-house of the hospital." *

We quote again from our author's chapter on Callosities :—

Callosity is the term applied to "the thickening of the cuticle in large layers on the soles of the feet," when they are produced by pressure alone "a corn corresponding in situation to the projection in the shoe, forms about the centre of the induration."

"In most feet subject to this complaint, the bones at the articulations of the great and little toes are very prominent, and the integuments covering them form thick projections, so much so that the intermediate space constitutes an arch. In flat feet, thinly covered with flesh, the bones are distinctly visible, so that the finger can be placed between each. In this case, callosities not unfrequently form on their under surface.

"In moist fleshy feet, a corn forms about the centre, between the inner and outer metatarsal bones; it is deep seated, and is shaped like a cone, the apex pointing inwards, and extending down to the dermoid tissue beneath. I have seen them occasionally of an extraordinary depth."—p. 19.

Callosities also form on the ball of the great toe, and round the edge of the heel.

Soft corns occur between the toes, owing to the toes being closely pressed together, chiefly by wearing very narrow soled shoes.

"The first symptom is a burning sensation between the toes, as if the parts were scalled, frequently followed by the formation of a blister, which is seldom observed, until the serum irritates the true skin, and occasions pain. If the serous fluid is not evacuated or absorbed, a gelatinous concretion forms, which ultimately becomes a corn; or if the serum is discharged, and the new epidermis be not healthily reproduced, it thickens into layers, and a corn is generated."

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* London Medical Gazette, 1836, vol. xvii. p. 776.

"The primary indication may likewise be known by a sensation as if gravel or a small stone was between the toes, attended by itching and smarting pain, and sometimes by a slight cracking of the skin.

"In severe cases, the symptoms commence by inflammation—the skin being but slightly thickened—on some prominent point or articulation, and a corn is soon developed in the centre of induration. It is recognized by being of a circular form, and of a yellowish brown, or dirty red colour.

"If it be not soon extracted, ulceration will take place, the foot become swollen, and the inflammation will extend along the absorbents up the leg, sometimes even to the glands about the groin. Great pain is experienced in the part affected during the formation of matter."—p. 35.

A soft corn sometimes also has the form of a split pea, or shows a small circular elevation of the skin, or it is broad and flat, containing extravasated blood.

Festered corns are corns attended with inflammation and suppuration. They form chiefly over the joints of the middle phalanges of the toes, when the integuments over these are much stretched by an extreme curvature of the toes downwards and inwards, and when much pressure or friction is at the same time applied to these projecting joints. There is at first redness over the joints, and great sensibility, the epidermis "becomes slightly thickened, semitransparent, and less laminated than in any other species of corns." Inflammation supervenes, and a corn is developed about the centre of the induration. A suppuration takes place, red streaks run up the foot, and, in the worst cases, ulceration may involve the periosteum, and proceed even to the caries of the bone.

Neuro-vascular corns form on the projecting parts of the toes in persons of some constitutions.

"When fully developed, the epidermis covering the affected part is slightly thickened and semitransparent, having villi or nervous fibrillae clearly visible, running in ziz-zag whitish lines within the induration, and small corns appearing between them like white specks, corresponding in form to the cells or follicles they occupy.

"Although these corns are as insensible as any other cuticular thickening, the intermingled nervous filaments are so exceedingly sensitive to pressure, that the softest leather of any shoes can scarcely be borne, and the least touch in attempting to remove any part by an operation, gives the most excruciating pain."—p. 66.

The description given by our author of what he terms "Neuro-vascular corns," and the cases he cites, correspond pretty nearly with the disease described so well by Mr William Wood, under the name of painful subcutaneous tubercle, which has also been treated of under the name of Neuroma or Neuromation, on the supposition that it is a tumour or growth on a nerve. Our author has made no reference to the similarity between his neuro-vascular corns and the neuroma or painful subcutaneous tubercle, which is to be regretted, as his experience, aided by the descriptions

given by Mr Wood and others, might have materially tended to improve our knowledge of this still obscure disease.*

"The vascular excrescence is a deep-seated spongy or vascular substance, forming a circumscribed tumour, not projecting much beyond the level of the thickened cuticle; when fully developed, the whole of the surface is studded with red and black specks, and the surrounding integuments are inflamed and swollen.

"In some cases the minute extravasations are not distinctly defined; the excrescence then appears as a softened tuft, the vascular fibres composing which seem to be of unequal length. When an attempt at extirpation is made with the knife, hemorrhage to a considerable extent immediately follows, all the minute vessels pouring forth their contents very profusely."—p. 76.

A bunion is, according to our author, "an enlargement or thickening of the common integuments over the first joint of the great toe, seldom affecting both feet at the same time, caused either by compression, or by an unnatural obliquity of the great toe outwards, by which the position of the joint between it and the metatarsal bone is changed."

The disease is trifling at first, but the cuticle over the swelling is apt to become studded with small superficial corns, and, if neglected, may become of very serious consequence by the effusion of serum, suppuration, or by involving the periosteum, the bones, and the joint itself. A similar disease affects the corresponding joint of the little toe. The term bunion is in general much more vaguely used. It appears that in the limitation just stated, the French use the word "oignon," to denote the affection; and it seems possible that the English word bunion may be a corruption of this word. "The disease does," our author says, "in a measure resemble a skinned onion in smoothness and roundness." We cannot enter farther on our author's account of bunion, which is, on the whole, complete and instructive. A similar difference of opinion occurs here as in the case of corns, namely, whether the bursa be primarily the seat of the disease, or only involved in it during its progress. Our author regards the disease as extending to the bursa, while Mr Syme, for example, as we think correctly, describes bunion as a disease of the bursa over the ball of the great toe.

We cannot take time to follow Mr Durlacher into the diseases of the nails, and into the rest of his chapters; but as many of his observations are valuable, we may extract some of them for the periscope of this or the succeeding number of this Journal.

With regard to the prevention of corns and the allied affections, it is commonly supposed that nothing is more easy, provided the person subject to them takes pains to wear large

* See Edinburgh Medical and Surgical Journal, vols. xi., xvii., xviii.; Craigie's Pathology, p. 292; Syme's Surgery, p. 437.

enough shoes, so as to avoid cramping his feet. It is no doubt true, that many people who now suffer from corns would live free from this misery, would they consent to give their feet a little more room. In short, no doubt exists, without the aid of statistics, that corns prevail in proportion as the fashion of the day requires the feet to be confined within a narrow space. But it is equally obvious that there are many individuals, of both sexes, so predisposed to corns, or rather so susceptible of them, from the original conformation of their persons, that they could escape on no other condition than the giving up of walking altogether, and keeping their feet uncovered. Hence, as men must walk, and civilization requires that the feet be covered, there will be corns in spite of the strictest obedience to all the wise saws current for the avoiding of them.

The remainder of this article we propose to devote to a review of the methods of treatment suggested by such surgical authorities as have condescended to speak of corns, in connection with those recommended by a professed chiropodist like our author.

Cutting, Scraping, &c.—Scraping, or else the mere removal with a cutting instrument is the proper treatment of simple induration, not situated over a projecting bone, and of callosities in general, after which a piece of soap plaster is to be applied over the cut surface; if the exciting cause can be avoided, the induration hardly returns. In the more complete corn, formed over a projecting bony point, extraction, by dissecting round between what Durlacher calls the sac and the corn with a pointed instrument, is necessary, care being taken so to incline the instrument inwards, that it shall follow the narrowing of the corn as it deepens. When chemical means are to be employed for getting rid of the corn, it may be simply shaved thin with a fine edged instrument, or scraped down with a fine steel or fish-skin rasp, as Brodie recommends.

But removal by proper instruments is not merely the proper treatment in hard corns, indurations, and callosities, but also in soft and festered corns, though in these some previous preparation and other modifications of the treatment often become necessary, as will be noticed hereafter. When there is pus present, in any kind of corn, it must of course be evacuated.

In the ordinary form of painful subcutaneous tubercle, by the consent of all surgical authorities, removal of the little tumour is the only effectual remedy; or, as Mr Syme says, "which no less easily than quickly and safely relieves the patient from it."

What Mr Durlacher, however, says on this subject, is apt to raise some doubt if we were right in pronouncing his neuro-vascular corns to be the same with the painful subcutaneous tubercle, or the Neuroma and Neuromation of other authors. Or perhaps his name is of greater latitude, and includes some other

kinds of painful tumours, besides the simple Neuroma or Neuromation.

"I am fully of opinion that this is the species of corns, which, when cut unskilfully, or improperly treated in persons of inflammatory constitution, and particularly in aged people, has been productive of very serious consequences, and even in some instances of death, from the resulting mortification. The latter termination occurs more especially with persons advanced in life, in whom the lower extremities have already less vitality than other parts of the enfeebled frame, and consequently, are unable to resist the effects of the additional irritation, caused by an unskilful operation.

"The first treatment should be by palliative remedies, particularly during the inflammatory state: the application of lint, dipped in cold water, covered with oiled silk, will generally be found sufficient for the purpose, together with rest, directions being given to avoid all pressure.

"When the irritation has ceased, the thickened cuticle may be carefully removed without giving much pain, if the nervous fibrillæ are not touched by the instrument, after which soap plaster may be applied, at the sametime guarding the projecting joint from the pressure of the shoe by mechanical means.

"In chronic form, which is always unattended with inflammation, but where the epidermis is much thickened, it should be scraped off, until the white lines and intermediate specks are visible. The corns should then be very carefully picked out from between the filaments, great care being taken in the operation to avoid pricking them or producing hemorrhage, as it would be attended with excruciating pain, and might cause great irritation and inflammation; the wetted lint should be afterwards applied for a few days, or until the soreness and pain cease, and then a small piece of soap plaster should be placed over the corn, and worn continually.

"With the usual caution against pressure, perfect relief will thus be obtained."—pp. 67—69.

Antiphlogistic, emollient, and soothing applications.—These require no observations, the indications for their use being in general so apparent. Mr Durlacher appears to be very judicious in his frequent recommendation of hot water fomentation, poppy-decoction, linseed-meal poultices, spiritous lotions, and water dressing, when the attendant irritation forbids the radical cure.

Nitrate of silver.—The lunar caustic is much recommended by surgeons in the treatment of corns. Sir B. Brodie says, in speaking of hard corns, the corn may be rubbed with nitrate of silver, and after this application has been continued for a few days, it may be readily peeled off. Mr Wardrobe advises as much of the corn to be removed as can be done safely with a sharp knife, or by tearing, and then, after immersion for some time in warm water, to rub the surface over with the lunar caustic. Mr Higginbottom gives similar directions, his plan being however somewhat more particular. It is not in the first edition of his work, but may be seen in Cooper's Surgical Dictionary, Art. *Corn*. Mr Syme thinks that the best treatment for hard corns is to touch the part again and again with acetic acid, till the whole is

scraped out, and then to apply the nitrate of silver to the exposed surface. Mr Durlacher makes no mention of nitrate of silver in the treatment of hard corns, but gives several instances of its utility in the ulceration which sometimes attends obstinate callosities; and he makes much use of it in the treatment of the soft, the festering, and the neuro-vascular corns. In the case of the soft corn, he applies the caustic after the removal of the thickened cuticle, and the extraction of the corn, if there be one present, unless the part bleeds, in which event the application of the caustic is delayed till the bleeding stops. For his method of using it in the two other kinds we must refer the reader to the work itself.

Potassa fusa, aqua potassæ.—These are hardly spoken of by writers on the diseases of the feet, unless in bunions, in which potassa is recommended by Mr Liston; and it appears to have been sometimes used by Mr Durlacher in these with advantage. We are persuaded, however, that the aqua potassæ is one of the secret applications made especially to soft corns, in which it is probably of service by its effect on the thickened epidermis. When the parings of a hard corn are moistened with aqua potassæ, they quickly swell up and become quite soft.

Corrosive sublimate, red precipitate ointment, mercurial plaster.—Mr Wardrobe recommends a concentrated spiritous solution of corrosive sublimate to be applied two or three times with a hair-pencil after the removal of the corn by cutting or tearing, and soaking the toe in hot water, or as a substitute for his use of lunar caustic above noticed. This method is not mentioned by our other authorities, notwithstanding its apparent efficacy, and the ease with which it can employed. Mr Durlacher appears on some occasions to have used the red precipitate ointment with advantage in cases of ulceration of a more obstinate kind. Mr Wardrobe commends it highly in ulcerated chilblains. Mercurial plaster is one of the popular applications to corns.

Strong acids.—Sir B. Brodie prefers the strong nitric acid to nitrate of silver for destroying the hard corn, without the previous use of the knife. He applies it for some days successively, by means of a probe, armed with lint, after which the corn may be peeled off. He employs the same acid to remove the thickened cuticle in the soft corn, applying it so sparingly that it may merely penetrate the epidermis, without affecting the parts beneath.

It was stated above, that Mr Syme recommends the acetic acid for the removal of the hard corn previous to the use of the lunar caustic for its eradication. Mr Durlacher says that persons labouring under corns should be cautioned against the rash use of such applications 'as nitric acid, aromatic vinegar, &c.; and, in illustration, gives the case of a lady, who by the advice of a friend, applied aromatic vinegar to a soft corn, by which the skin

around was destroyed, and much swelling, inflammation, and a feverish state produced. Here the aromatic vinegar was plainly applied too freely—so that this case is no argument against the plans advised by Sir B. Brodie and Mr Syme.

Diacetate of copper.—A plaster consisting of diacetate of copper, six drams, ammoniacum and yellow wax, of each two ounces, is found to remove hard corns if applied sufficiently often. If the first application be insufficient, it should be renewed at the end of a fortnight.

Mechanical means.—One of the simplest methods of relieving and even curing corns, is mentioned by Sir B. Brodie, as practised by some chiropodists. A piece of buckskin leather, spread with adhesive plaster, is put on the toe, on which the corn is, a hole being cut in the plaster, corresponding to the corn. The pressure is thus taken off the corn, and thrown on the adjacent parts; and if it be worn constantly, the corn often at last disappears. A hard corn on the sole of the foot, which proves exceedingly troublesome, is best treated on the same plan.

"The hard cuticle being removed, a broad piece of buckskin leather is to be applied, having a hole in it, where the corn is situated. But a thin piece of calico, spread with adhesive plaster, and having no hole in it, is to be applied first; that is, between the leather and the foot. Without this last contrivance, the flesh of the foot, when the patient walks, bulges or projects into the hole of the leather, so as completely to fill it up, and the patient's condition is rendered rather worse than better. The calico, with the adhesive plaster, prevents this inconvenience, at the same time that it does not prevent the leather answering the intended purpose of taking off the pressure off the corn, and throwing it on the surrounding parts. I may observe, by the way, that the same method is applicable to some other affections of the lower surface of the foot, as well as to corns."—Sir B. Brodie, in Med. Gazette, 1836, vol. xvii. p. 778.

Mr Samuel Cooper recommends similar contrivances as a compress, composed of from eight to twelve pieces of linen smeared with an emollient ointment, in which there is a hole cut corresponding to the corn. And in the case of a corn on the sole of the foot, a felt-sole with a hole in it of the size of the corn or induration.

For the permanent cure of soft corns it is often necessary to bring the toes which have become displaced to their proper position. The little toe is most frequently displaced, and hence the most common situation of a soft corn is between that and the fourth toe. It may often be brought into its place by encircling it with a stripe of adhesive plaster, and then carrying the remainder of the stripe quite round the foot; or a very thick piece of buckskin leather may be inserted between the fourth and little toe, spread with adhesive plaster on the side next the latter, and made of such a size that it may be sufficient to lap on its upper and under surface. Sir B. Brodie describes a contrivance, made by the bandage-makers, to remedy displacement of the toes.

"It consists of a thin plate of metal, covered with thin leather, or a piece of strong leather, fitted to the lower surface of the foot; not to the whole of the surface, but extending from the extremities of the toes nearly to the tarsus. Slits are formed in this plate of leather or metal, and tapes are passed through these slits, forming loops above, by means of which the toes are bound down and retained in their proper places. In many cases the same object may be attained by simpler means. A stripe of linen, spread with adhesive-plaster, about two-thirds of an inch in breadth, may be passed over the toes which are too elevated, and under the others, the extremities of the plaster being made to cross each other over the metatarsus. If this be neatly applied, it will keep the toes parallel to and on the same level with each other. Whichever of these methods be employed, it is necessary that it should be persevered in for a considerable time."—Sir B. Brodie, in Med. Gaz. 1836, vol. xvii. p. 773.

The last resort in such cases is the amputation of the offending toe.

Mr Durlacher recommends both the above methods spoken of by Sir B. Brodie, advising stiff pasteboard, padded with wadding, and covered with silk, instead of a metallic plate or piece of strong leather in the former case.

In our author's concluding chapter on the management of the feet, there are many useful precepts of a prophylactic kind—yet equally applicable to the cure of corns of all kinds when they have actually arisen. We regret that our limits prevent us from making some extracts from this part of the volume.

We close this article with the expression, for the second time, of our very favourable opinion of this work. We regard it as an able, faithful, and judicious view of the whole subject, by one who has profited by a long experience among those who are most liable to affections of this kind. As to the literary merits of the work, notwithstanding a few slight blemishes at the very threshhold, it comes up to the best standard of medical works. The style in which it is written is beyond what we were entitled to expect, and would do credit to any Fellow of the College of Physicians.

Sixth Annual Report of the Registrar-General of Births, Deaths, and Marriages in England, for 1842. London, 1845. 8vo. Pp. 730.

In the fourth number of this Journal, that for August of last year, Dr Alison, the distinguished Professor of the Practice of Medicine in the University of Edinburgh, published a paper, entitled "Observations on the best mode of Registering Deaths." That paper had for its object, to enforce the plan recommended by a committee of the Royal College of Physicians of Edinburgh, in opposition to that adopted by Mr Farr, to whom the Registrar-General of England and Wales has committed the direction of that department of his inquiries. We are reminded of Dr

Alison's views by the recent publication of the Registrar-General's Report for 1842, and by observing that Mr Farr still perseveres in that method of registering deaths, against which, as a means of statistical knowledge, concerning diseases, Dr A.'s objections apply with so much force.

Mr Farr's plan is as simple as possible; it consists in entering in a single column the name and the duration of the disease which has proved the cause of death. Did the skill and means of knowledge belonging to every one employed in the registration correspond to this simplicity, the plan could not fail to afford the most valuable information. But as Dr Alison observes, "it is obvious that to *require*, or even to *invite*, a declaration of the cause of death, in the same mode, in all cases whatever, is to make the statistical statements to be founded on those registers an almost certain source of fallacy, and of erroneous doctrine."*

The plan which Dr Alison advocates is less simple, but is certainly adapted to guard against some of the fallacies of Mr Farr's method. In it there are two principal columns, each subdivided into two—or instead of one there are altogether four columns. The first of the two principal columns is headed, "Duration and seat of the disease," one of its subdivisions being marked "Acute," and the other, "Chronic." The seat of the disease is to be entered in one or other of these subdivisions, according as it was acute or chronic; that is, according as its duration fell short of or exceeded six weeks, while the precise duration in days is also to be added. The second principal column is headed, "Name of disease," and its two subdivisions are marked respectively, "Disease causing death," and "Previously existing disease or cause." It is obvious that when the name of a disease is stated, its seat is for the most part implied. But every one in the least conversant with the vagueness of statistical information drawn from popular sources, must perceive at a glance, that the object of assigning a column for the seat and duration, besides that for the name, is to afford the reporter a choice of entering the disease by its seat, which is rarely undiscovered, or by its name, which must often be little better than a random guess. To force every one, no matter how slender his means of knowledge of the case, to pronounce on the name of the disease, which has caused death, is to take away all motive to accuracy, and to shut out the hope of future improvement. The very existence of two columns, in either of which the cause of death may be entered, would keep constantly before the minds of the persons concerned, whether medical or non-medical, the necessity of balancing with themselves whether their information entitled them to fill up the second column or only that column concerning the entry of which there could be no doubt.

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* Northern Journal, vol. i. p. 227.

Oddly enough, it appears by Mr Farr's observations on the plan advocated by Dr Alison, contained in the fourth annual report of the Registrar-General, that he altogether misapprehended its object. This we do not ascribe to any want of clear-headedness on the part of that gentleman, but merely to inadvertence. Yet we confess we would rather not see one to whom so important a trust is committed, as the direction of the statistics of fatal diseases, guilty of inadvertence on any occasion whatever connected with the business in which he is engaged.

We are as fully impressed with the value of statistical inquiries towards the advancement of knowledge, as it is possible to be. But that very conviction has always kept us even hypercritically jealous of the mode in which such inquiries are conducted. And this jealousy, by the past experience of the world, is not groundless. It is easy to play at statistics; columns, figures, and rows of names cost little. There is perhaps no pursuit to which men oftener betake themselves without being fit for it; there are few studies, besides, in which incompetency is so long of being found out. The world is made up of those who do, and those who play at doing—and the form of statistics is one of the easiest modes of playing at doing.

But we beg Mr Farr's pardon; our remarks have not the slightest reference to him. We believe him to be able and trustworthy; and we trust that he deserves the encomium passed on him in this report by the Registrar-General.

"Nothing can exceed the diligent and assiduous attention with which Mr Farr devotes his whole energies to the performance of this important task which is assigned to him as compiler of abstracts. From his medical knowledge, scientific acquirements, and intimate acquaintance with statistical subjects, he is peculiarly well fitted for the undertaking; and the skilful method which he adopts in arranging the mass of figures annually submitted to his consideration, and the results which he learnedly deduces from the multitude of facts annually recorded, tend greatly to the advancement of the science of vital statistics."—Report, p. xviii.

We are glad to remark in the report of the Registrar-General, that strenuous exertions have been made to promote greater accuracy in the returns, and that four inspectors have been appointed.

"The inspectors (among other points enumerated) are required to see that the ages and professions of those who die are duly registered—that exertions are used to impress upon persons giving information of deaths, the importance of producing a certificate of the causes of death, in the hand-writing of the medical men who attended the deceased in their last illnesses—that errors are properly corrected, noted, and numbered—that the proper ink is used, and that no erasures are made—that the certified copies, forwarded quarterly to the General Register Office, for the purpose of being there deposited, indexed, and rendered accessible to the public, are the exact and literal transcripts of the original entries—with many other points which it is unnecessary here to enumerate."—Report, p. xiv.

The report contains a great deal of curious detail on the subject of marriages, births, and deaths; and we are pleased to see returns of the same description from several of the great European states, introduced with a view to comparison with the statistical tables of England.

We will not venture to criticise the tables on the cursory inspection which we have been able to make of them; or to say whether the mass of information which they contain might not be brought into more concentrated points. We content ourselves with quoting Mr Farr's observations on the public health of 1842.

"The mortality in 1842 was nearly the same as in the previous year. The mortality by diseases of the zymotic class was 4062 in 1842, and 4049 in 1841 to a million living. In 1840 it was 4947.

"Small-pox and scarlatina present the greatest variations in the five years over which the abstracts extend, for 16,268 persons died of small-pox in 1838, and 2715 in 1842. The epidemic of scarlatina attained its maximum in 1840, and afterwards declined.

"In 1838, there died from small-pox 16,268; in 1839, 9131; in 1840, 10,434; in 1841, 6368; in 1842, 2715.

"In 1838, there died from scarlatina 5802; in 1839, 10,325; in 1840, 19,816; in 1841, 14,161; in 1842, 12,807.

"Or for every million living, there died from small-pox, in 1838, 1101; in 1839, 604; in 1840, 679; in 1841, 408; in 1842, 172.

"And for every million living, there died from scarlatina, in 1838, 393; in 1839, 683; in 1840, 1289; in 1841, 908; in 1842, 809.

"The reduction in the mortality from small-pox since 1840, was probably the result, at least in part, of the vaccination act; which has not, however, effected all the good that may be anticipated, as an epidemic has, since 1842, broken out in the metropolis, and proved fatal to great numbers. The deaths in France from small-pox, were 3317 in 1842, or not more than 91 to a population of a million. The deaths in Austria from small-pox, were 4619 in 1840; 5189 in 1841; and 4411 in 1842, out of a population of 21,571,594; while the deaths in England, where vaccination was discovered by Jenner, were 10,434 from small-pox, in 1840; and 16,268 in 1838, out of a population under sixteen millions! Diarrhœa, dysentery, and cholera were fatal to 7622 persons, which is considerably above the average; and the excess may be ascribed perhaps to the higher temperature of the year. Influenza, on the contrary, and probably for the same reason, was less prevalent than in the previous year; 1659 deaths were referred to that head in 1841, and 883 in 1842. Fifteen deaths from hydrophobia occurred in 1842, while seven only were registered in 1841; but 24 persons died of hydrophobia in 1838." [We omit what Mr F. says of the mortality in childbed, which is less in 1842 than in the four previous years, and also a note on blindness from small-pox—the number of persons at present blind from which, in England, he estimates at from 4000 to 5000, most of them having become blind since vaccination was within the reach of all.]

"The table of the number of deaths, and the mortality in the five years, 1838—1842, affords great facility for a comparison of the facts, and requires no further comment.

"The notes contain the supplementary diseases, which so rarely cause death, as to require no place in the general tables, and present several singular combinations of causes, which are curious and not altogether uninstructive."—p. 505.

We cannot but think it would have been a useful addition to this volume, as the only very accessible permanent record of the labours of the Registrar-General and his assistants, to have given some meteorological tables for the several districts, or if that be impracticable, at least to have repeated the yearly, quarterly, and weekly meteorological tables, printed along with "the summary of the weekly tables of the mortality in the metropolis."

To conclude, we are heartily glad to see this system of national statistics, so long deferred, at length in full operation, and, if not as perfect as it may be, at least in the way to become more exact and useful. We trust we shall soon see a like system of statistical inquiry extended to Ireland and Scotland. The Registrar-General, speaking of the continued deficiency of any such registration in Ireland and Scotland, notes these "as the only countries now in Europe, where it has not been deemed advisable to record and analyze such facts, with the exception perhaps of Hungary, Spain, Turkey, and Greece."

Part III.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

The Structure of the Human Placenta. By John Goodsir, Esq.

In our last number we presented our readers with an extract from the very excellent series of anatomical and pathological observations recently published by the Messrs Goodsir. Our last extract was on absorption, ulceration, &c., we now cite a portion of Mr John Goodsir's very instructive account of the human placenta.

I.—OF THE STRUCTURE OF THE TUFTS AND VILLI OF THE PLACENTA.

1.—*Of the Configuration of the Tufts.*

"A placental tuft resembles a tree. It consists of a trunk, of primary branches, and of secondary branches or terminal villi, which are attached as solitary villi to the sides of the primary branches, and to the extremities of the latter, in which case they generally present a digitated arrangement. The villus, when solitary, is cylindrical, or slightly flattened, or somewhat club-shaped; when digitated, each division may be much flattened, or is then generally heart-shaped. The digitated villi are only solitary villi grouped together at the extremity of a primary branch."

2.—*Of the External Membrane of the Tufts.*

"The trunk, the primary branches, and the terminal villi of the tuft are covered by a very fine transparent membrane, apparantly devoid of any structure. This membrane may be described as bounding the whole tuft, passing from the trunk to the branches

and from these to the villi, the free extremities of which it closely covers. Its free surface is smooth and glistening—its attached surface is somewhat rough."*

3.—*Of the External Cells of the Villi.*

"Immediately under the membrane just described is a layer of cells.† They are flattened spheroids, slightly quadrilateral in outline, from the manner in which they are packed together. When a tuft is viewed in profile, under compression, its edges exhibit the appearance of a double line, which leads the observer to suppose that its bounding membrane is double, with the cells just described situated between the two laminæ. In the space between the two lines, the nuclei of the cells may be seen in the form of dark oval spots, and the septa formed by the walls of contiguous cells are also visible.

"At variable distances the space between the two lines widens out into a triangular form, the base towards the external membrane, the apex towards the centre of the villus. This wider space is produced by a larger group of cells, which appear to be passing off from a spot in the centre of the mass. The groups of cells I am now describing are germinal spots. They are the centres from which new cells are constantly passing off, to supply the loss of those which have disappeared in the performance of their important function.

"As in the case of the intestinal epithelium, I am inclined to believe that a fine membrane lines the internal aspect of the layer of cells. I have not been able to isolate it; but the very sharp outline in a profile view of a villus confirms me in my belief of the existence of such a membrane."

4.—*Of the Internal Membrane of the Villus.*

"When a villus, under gentle compression, is viewed by transmitted light, there is perceived under the structures already described, and immediately bounding the blood-vessels, and other parts to be afterwards examined, a membrane finer and more transparent than the external membrane, but strong and firm in its texture. This membrane is most distinctly seen when it passes from one loop or coil of the blood-vessel of the villus on to another. It separates very easily from the internal surface of the layer of external cells. I am not disposed to believe that it is attached to this layer, but am of opinion that the spaces which frequently exist between them, even in villi which have undergone no violence, are due to the presence of a fluid matter, the nature of which will be afterwards considered. Be this as it may, pressure very easily separates this membrane from the external cells, the latter invariably remaining attached to the external membrane, the former continuing in every instance closely rolled round the internal structures of the villus, and following them in all their changes of position."

5.—*Of the Blood-vessels of the Tufts.*

"Within the internal membrane, and imbedded in structures to be afterwards described, are situated the blood-vessels of the tuft. These vessels are branches of the umbilical arteries and veins.

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* "Professor Reid, 'On the Anatomical Relations of the Blood-Vessels of the Mother to those of the Foetus in the Human Species.' Ed. Med. Surg. Journal, 1841, page 7."

† "Mr Dalrymple, 'On the Structure of the Placenta.' Med. Chir. Trans. London, vol. xxv., pages 23, 24."

"In the trunk of the tuft, the artery gradually diminishes and the vein increases in size. In some of the primary branches the same rotation holds. In others of the primary branches, and in all the villi, the vessel retains the same mean diameter throughout. This species of blood-vessel, although it cannot be considered as either artery or vein, cannot nevertheless be denominated in precise anatomical langauge, a capillary. It differs from artery and vein in retaining throughout the same mean diameter; and from the capillary, properly so called, in its greater calibre, containing four or six blood disks abreast. It is also peculiar in exhibiting sudden constrictions and dilatations, like an intestine.

"These changes in form are most remarkable at the spots where the vessel makes sudden turns, coils, or convolutions. Like a capillary, however, this vessel may divide and again become single, and may send off a division to a vessel of the same kind. All such divisions and anastomosing vessels, however, preserve the same mean diameter, and are in this respect distinguishable from arterial and venous branches.

"As regards the general arrangement of the vessels, it may be observed, that—

"1. One vessel may enter a villus, and returning on itself, leave it again.

"2. Two vessels may enter a villus, may anastomose, and leave it in one or two divisions.

"3. One, or more may enter, may each separate into two or more divisions, which may reunite and leave the villus as they entered.

"Many other modifications occur, but the general rule is, that one vessel enters, and leaves the villus without dividing.

"As regards the particular arrangement of the vessels within the villus, we recognize those leading varieties:—

"1. The simple loop, a vessel turning closely on itself.

"2. The open loop, a vessel turning on itself, but leaving a space within the loop.

"3. The wavy loop, resembling the first, except that the vessel is wavy instead of being direct.

"4. The wavy open loops.

"5. The contorted loop, the contortion being generally at the extremity or sling of the loop; the limbs of the loop being straight or wavy as the case may be.

"6. The various modifications which arise from combinations of the five foregoing forms, in single, double, triple, or quadruple or anastomosing loops. The most common forms are the simple and contorted loop. The simple loop, and the wavy loop, are found in cylindrical villi. The open loop, and the wavy open loop, occur in the flattened and heart-shaped villi. The contorted and other varieties of loops exist in the club-shaped and tuberose villi.*

"Lastly, It must be stated as a fact first recorded and represented by Professor Weber, confirmed by the observations of Mr John Dalrymple, and to the accuracy of

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* "Mr Dalrymple, in his Paper on the Placenta, in the Med. Chir. Trans., has described with great accuracy the manner in which the foetal vessels ramify and coil in the tufts of the placenta. I am indebted to Mr Dalrymple for specimens of his injections of the placenta; and to Dr John Reid, for a portion of a placenta injected by Professor Weber of Leipsic, and have satisfied myself of the accuracy of the descriptions given by these anatomists. My own observations have been made on the unprepared placenta. The drawings of the foetal vessels in Dr Reid's Paper are plans, as the only point he was anxious to establish was, that the villi terminated in blunt extremities unconnected by cellular or other textures, the foetal vessels returning upon themselves."—Reid, in Edinburgh Medical and Surgical Journal.

which I can testify, that the same peculiar vessel, or umbilical capillary, may enter and retire from two or more villi before it becomes continuous with a vein."

6.—*Of the Internal Cells of the Villus.*

"Within the internal membrane, and on the external surface of the umbilical capillaries, are cells which I have named the internal cells of the tuft. When the vessels are engorged, these cells are seen with difficulty. When the vessels are moderately distended, and the internal membrane separated from the external cells by moderate pressure, the cells now under consideration come into view. They are best seen in the spaces left between the internal membrane and the retiring angles formed by the coils and loops of the vessels, and in the vacant spaces formed by these loops. These cells are egg-shaped, highly transparent, and are defined by the instrument with difficulty; but their nuclei are easily perceived. They appear to be filled with a transparent highly refractive matter. This system of cells fills the whole space which intervenes between the internal membrane of the villus and the vessels, and gives to this part of the organ a mottled appearance."

(*To be continued.*)

SURGERY.

MR SYME ON AMPUTATION AT THE KNEE.

We extract from the London and Edinburgh Monthly Journal of Medical Science for May, two cases of amputation at the knee, with some excellent observations on that mode of operating, by the distinguished Professor of Clinical Surgery in the University.

"There are few operations in surgery which have excited so much discussion, or afforded room for the exercise of so much ingenuity, as amputation of the thigh. The danger immediately attending its performance, and the inconvenience of its imperfect result in rendering the stump uncomfortable, have suggested various contrivances and modifications of procedure, with the effect certainly of restraining the hemorrhage, diminishing the patient's suffering, and promoting union of the wound. But the stern evidence of hospital statistics still shows, that the average frequency of death is not less than from 50 to 70 per cent., while it cannot be denied that many of the survivors suffer from uneasiness connected with protrusion of the bone. Having from an early period of my practice devoted much attention to the subject of amputation,—having seen the circular incision give place to the flap operation,—and having witnessed the results of these methods variously modified, in the hands of many surgeons possessing every degree of operative skill, I am at length led to the conclusion, that there is something radically wrong in the principle of the operation. This error I believe to be, dividing the thigh-bone through its shaft instead of the condyles or trochanters. But before attempting to establish the advantage of operating upon the latter principle, it may be proper to inquire how far the operation so conducted would attain the objects for which its performance is required.

"The most frequent occasion for amputation of the thigh is afforded by diseases of the knee-joint. Next to this may be ranked compound fractures of the leg and thigh; and then, tumours growing from the bones of the leg and thigh. Now, in regard to diseases of the knee-joint, it is well ascertained, that the warrant for amputation lies in the bone, and not in the soft parts, which, however, much altered through scrofulous degeneration or suppuration, readily admit of restoration to their natural condition, as is clearly shown by what happens after excision of the elbow, or amputation at the ankle-joint. In so far, therefore, as removal of the disease is concerned, it is plain that amputation through the condyles of the thigh-bone would in this case prove sufficient. As

to compound fractures of the leg, it will be admitted that if the integuments and muscles admit of the limb being removed at the middle, or lower third of the thigh, they cannot present any obstacle to a few inches more of the bone being preserved, while similar injuries of the thigh obviously require amputation at the trochanters. The same observation will apply to tumours of the bones, those of the tibia and fibula not requiring any more of the thigh-bone to be removed than may be suggested by convenience, and those of the thigh-bone itself demanding the highest practicable point of section. From this analysis it appears that taking merely the morbid condition into account, all the cases admitting of amputation at or below the middle of the thigh-bone, would admit of the operation being performed through the condyles.

"In proceeding to consider the relative advantages and disadvantages of amputating through the shaft and condyles of the thigh-bone, it may in the first place be remarked, that this, the largest member of the skeleton, contains the most extensive medullary cavity, and possesses the thickest mass of dense osseous tissue. Dense bone dies more readily than that of a spongy or cancellated structure; and the action of a saw, to say nothing of ruffling the periosteum, must always be apt to cause exfoliation, which by impeding union of the soft parts, delays union, and opposes its perfect completion, by increasing the scope afforded to contraction of the muscles. It would, however, be a narrow view to suppose that the direct effect of local injury is alone concerned in causing death of the bone after amputation; and there can be no doubt that inflammation of the medullary membrane may co-operate, if it does not sometimes act exclusively in its production. The most conclusive evidence in support of this opinion, is presented by those conical-shaped exfoliations, extending up the interior of the bone, sometimes to the length of several inches, which are occasionally extracted from stumps. One of these in my possession, taken from the humerus, is five inches long. And I believe the thigh-bone would be more fruitful of such exfoliations if amputations through it were not so fatal. But if the medullary membrane be liable to inflammation, suppuration of its texture, and inflammation of the veins cannot fail to be the frequent consequence, especially in hospitals, where, notwithstanding every precaution, certain descriptions of injuries will always be apt to excite phlebitis, and other forms of spreading inflammation. But when the bone is divided through the condyles, nothing more than the epiphysis being concerned, the medullary membrane is not at all disturbed, while the cancellated texture is not liable to exfoliate, either from its proneness to die from injury, or through inflammation of any other texture. It may, therefore, be expected, that the operation would prove less fatal, than when performed in the usual way; and that the stump would be less apt to prove imperfect, through protrusion of the bone. These expectations derive encouragement from the results of amputation at the ankle-joint, to which I was led by similar considerations. Of twelve cases in my own practice, and in nearly as many more in that of other practitioners, who have been induced to adopt it, this operation has not in a single instance been followed by either death of the patient, or exfoliation of the bone; and so far from selecting favourable cases for the purpose, I have repeatedly removed the foot, in circumstances where I should have declined amputating the leg as altogether desperate. But the two following cases more directly support the expediency of an operation which I venture to recommend, as a not less safe and advantageous substitute for amputation through the shaft of the thigh-bone, than amputation at the ankle is now found to be for removing the leg below the knee.

"Case I. *Disease of the Knee-Joint—Amputation at the Knee—Recovery.*—Peter Patterson, aged 21, from Orkney, was admitted on the 29th of January 1844. He stated that his left knee had been occasionally painful during the five preceding years,

and at length so much so, as to render the limb nearly useless for the last twelve months. The joint, which from the commencement of his complaint, had been somewhat enlarged, during this latter period of its duration had become much increased in size, and greatly contracted. Blisters, and other ordinary means, had been employed without any permanent advantage. On examination, the leg was found so contracted that it could not be extended beyond a right angle with the thigh, which was much emaciated. The tibia and thigh-bone admitted of motion in a lateral direction; and there was a large abscess pointing on each side of the ligament of the patella. No improvement followed evacuation of the matter. On the contrary, the local uneasiness increased, and the general health declined. It was therefore resolved to amputate the limb, which, influenced by the considerations above explained, I did in the following manner, on the 2d of March.

"Having applied a tourniquet, so as to compress the femoral artery where it enters the popliteal space, I made an incision across the knee on a line with the upper edge of the patella,—then pushed the knife from one side to the other under the joint,—cut a flap from the calf of the leg,—and finally sawed through the condyles of the thigh-bone, so as to remove the whole articulating surface, which was ulcerated and carious.

"On bringing the edges of the wound together, I found the flaps were scarcely sufficiently long, as they required a little stretching to meet, and when stitched appeared more tense than is usually consistent with adhesive union. It was therefore with considerable surprise, and no less pleasure, that we saw the healing process proceed without retractation of the covering from the bone. The edges of the *skin* indeed separated from each other to the extent of nearly two inches, but the subjacent textures remained adherent, until the superficial sore gradually contracted and cicatrized. The recovery, though thus rendered slow, was ultimately completed, and the patient returned to his distant home on the 31st of May.

"The result of this case tended to confirm the expectations that had been previously formed with regard to the advantage of amputating through the cancellated extremity instead of the shaft of the thigh-bone, since there could be no doubt that exfoliation of the surface to any extent, however small, would have been attended with separation of the flaps and projection of the bone.

"Case 2. *Disease of the Knee-Joint—Amputation at the Knee—Recovery.*—Jane Marshall, aged 22, was admitted on the 20th December, on account of disease in the left knee. It admitted of hardly any motion, was very painful, and over the patella exhibited two small openings which admitted a probe to pass into the joint. She had been suffering from this complaint nearly three years, in the course of which the frequently repeated application of moxa and various other means were said to have failed in affording any relief. After her admission the symptoms obstinately increased,—at length preventing sleep, destroying appetite, and threatening, before long, to prove fatal. In these circumstances it was resolved to amputate the limb on the 6th of March.

"Profiting by former experience, I on this occasion made the anterior semilunar incision on a line with the *lower* edge of the patella, and had the integuments retracted before cutting into the joint above this bone. In other respects the operation was conducted as the first one had been, and when the edges of the wound were approximated, they came easily together, presenting a proper degree of fulness, without any straining or tension. The union was nearly completed by the first intension without any local or constitutional disturbance; the flaps, instead of showing any tendency to retraction, rather becoming more full and soft; and the patient presenting the aspect of one who had sustained some trivial injury, rather than undergone a capital operation. On the 14th day she was sitting by the fire, and took the dressings off without any assistance.

"This case should, I think, remove any doubt that may have existed as to the safety of amputating at the knee, and consequently as to the expediency of doing so with a view to avert the danger of operating through the shaft of the thigh bone. It is upon this ground that I wish to found the operation, and therefore I have said nothing of some other advantages which might be mentioned,—such as the greater length of stump which, especially in females, must be desirable for the sake of appearance, and may, perhaps be made available for using a support admitting of flexion at the knee,—or the facility afforded to employing the tourniquet, which causes serious embarrassment in removing the limb at any higher point. Some surgeons have objected to the tourniquet, that it may be managed, or rather mismanaged, so as to increase instead of restraining the hemorrhage. But any inconvenience from this source may be easily prevented by ordinary attention,—while on the other hand it is certainly desirable to obtain a sure command over the circulation, not liable to be disturbed through fatigue of the fingers effecting manual compression, or involuntary movements of the patient, and which leaves the principal assistant at liberty to tie the vessels. I may add, that there has long seemed to me considerable reason for suspecting, that pressure in the groin is not altogether free from risk of causing inflammation of the vein, when there is a predisposition to such derangement, since I have repeatedly witnessed the marks of inflammatory action in such cases, solely, or chiefly in the inguinal region, when examination was instituted after death. I am persuaded also that the patient's sufferings will be diminished by amputating at the knee; and that the operation would prove less disagreeable to the surgeon than the one in common use.

"I may here remark, that the posterior flap must be made very long, and indeed to the full extent of the fleshy part of the gastrocnemii muscles,—care being taken, however, to avoid preserving more than a moderate portion in regard to thickness.

On the External employment of Cod Liver Oil in Scrofulous Ophthalmia.

By M. Brefeld.

The author treats of the employment of cod liver oil in topical applications, in the treatment of some scrofulous diseases; he praises very highly the following ointment for the cure of scrofulous ulcers, which follow inflammation and suppuration of the lymphatic glands:—℞ *Cod liver oil*, 16 parts; *yolk of egg or lard*, 12 parts; *liquid subacetate of lead*, 8 parts; to be mixed together and made into a homogeneous ointment. Pledgets of lint are to be smeared with this, and applied to the ulcerations. In the case of *scrofulous ophthalmia*, especially where there is *inflammation of the eyelid with photophobia*, M. Brefeld recommends that the free edges of the eyelids should be anointed with the pure cod liver oil. M. Cunier has frequently had recourse to the external use of cod liver oil in scrofulous ophthalmia, accompanied with great intolerance of light, with a profuse discharge of tears, and with swelling of the eyelids; he combines it in this case with the alcoholic extract of belladonna, of which he prescribes *one part* to *two* of the oil. Introduced between the eyelids by means of a pencil properly charged with it, the cod liver oil acts beneficially in scrofulous ulcerations of the cornea, and hastens in a remarkable manner the absorption of opacities of that membrane. In the interciliary ulcerations, this oil is also very useful; M. Cunier employs it in such cases, in the forms of the following ointment:—

℞ Oxid. hydrarg. rub. . . .	gr. iv.
Ol. jecor. aselli	℥j.
Cerati Edin. (Cerat d'Edimbourg) . .	ʒij.

This ointment is very useful in opacities of the cornea, following vascular pannus, in cellular pannus, atonic ulcerations, &c.—From " Journal fur Kinder Krankheiten," in Annales d'Oculistique—Mars. 1845.

In a paper on MUSCAE VOLITANTES, in the number of the London Medical Gazette, for May 16th, by Dr Jago, we find the following observations:—" The more I consider their connected chain-like character, their figures remaining always extended, their branches thrown out in so many different directions, and to such great lengths, the different parts of these figures changing their relative positions but very little, so that each musca has, so to speak, a home in the vitreous, to which after each disturbance it finally returns, the more I feel disposed to regard them as fringes, or processes of the hyaloid membrane, or as deposits in it. In this case increase of these may result from inflammation of this membrane." We are sorry that we cannot agree with Dr Jago, in the various views which he has taken of this very curious subject. Muscae volitantes we consider, along with the late Mr Tyrrell, to be caused by a partial distension, or a varicose state of some of the vessels of the choroid, which by pressing upon the retina, disturb its functions, and so give the patient the idea of a foreign body constantly moving in or before the eye. Those of our readers who are interested in the subject, will find, perhaps, the best account of muscae volitantes which has yet been given, in Mr Tyrrell's work on diseases of the eye, vol. ii. p. 15.

MATERIA MEDICA.

Argenti Oxidum.—In our number for November (vol. ii. p. 53) we noticed Dr Lane's proposal to use the oxide of silver instead of the nitrate, on the ground that it possesses all the medicinal effects of the latter without the inconvenience of blackening the skin. Since that time, several notices have appeared of the advantages of this form of silver as a medicinal agent. We are informed that M. Serre of Montpellier regards the oxide as anti-syphilitic, in doses of from half a grain to six grains in the day—that Dr Golding Bird has tried it in a great number of cases, regarding it as a tonic, and in some degree sedative, and especially useful in menorrhagia—that Dr Clendinning considers it useful in epileptic and gastralgic affections, and that its efficacy has been proved, and no unpleasant symptom produced, not only in gastrodynia and menorrhagia, but also in pyrosis, hemorrhage from the bowels, diarrhœa, irritable bladder, and colliquative perspiration. The chief source of information regarding this new medicinal agent, is a little work recently published by Sir James Eyre, entitled " Practical Remarks on some Exhausting Diseases, particularly those incident to Women." The chief purpose of this little work appears to be to explain the utility of the oxide of silver in gastric disorder, pyrosis, hæmatemesis, and hæmoptysis, and atonic menorrhagia. He says that in these diseases " the oxide of silver, given in half grain doses thrice daily, will prove more effectual than any medicine which has yet been employed."

Since Sir James's pamphlet was published, Dr Allnatt has supplied some additional testimony to its utility, in a paper printed in the London Medical Gazette, (2d May 1845.) Dr Allnatt's case is an extreme instance of chronic leucorrhœa, in which the remedy is reported to have been very beneficial. Dr Allnatt is inclined to sing a pæan on the discovery of an innocuous preparation of silver not apt to impart a cerulean hue to the skin. But unfortunately, in the next number but one of the Medical Gazette, Dr Lane himself comes forward complaining of the omission of his name by Dr Allnatt, and admitting his knowledge of a case in which the skin became discoloured un-

der the use of the oxide. In this case, however, the remedy was used in grain doses three times a day, for more than twelve months.—(Medical Gazette, 16th May 1845.) In the number of the same Journal for May 23, Sir James Eyre also admits his knowledge of a case in which, after the use of the oxide, for many months the skin became blackened, but affirms that nothing of this kind had been threatened in the many cases in which he had continued the use of it for 8 or 10 weeks. The cases in which the nitrate of silver discolours the skin are almost uniformly those in which the employment of it has been kept up for months together. It will, however, be a considerable advantage gained if subsequent experience prove that the oxide is materially less prone than the nitrate to produce this effect. In this expectation, all things considered, we are not sanguine. In the mean time, since the utility of the oxide, in some cases, seems to be pretty certainly established, it becomes a proper subject for medical observation to determine by cautious induction, how far, and in what respects, its therapeutic effects differ from the better known properties of the nitrate.

Argenti Nitras Crystallizatus.—In our number for September (vol. i. p. 347) we noticed Trousseau's proposal to treat the more severe diarrhœas of children with injections of a solution of nitrate of silver, the medium strength being two-thirds of a grain to three ounces of water, stating at the same time that we had tried the treatment and had found it serviceable. Trousseau's practice was to give it by the mouth at the same time that it was used in the form of enema. An account has since been published of the successful use of the same remedy in this disease by Dr Romberg of Berlin. In Romberg's practice, the crystallized nitrate was used; the precise quantity employed at each dose does not clearly appear—the quantity given in Trousseau's practice, by the mouth, was one-sixth of a grain in 24 hours, in small and often repeated doses. In Romberg's practice no enemata were used. Twelve cases of acute and chronic diarrhœa in children, from 9 months to 12 years old, were treated with complete success, and without any subsequent ill effects.—(Dr Henoch, in Journal fur Kinder Krankheiten.)

Bebeerinæ Sulphas.—Dr Douglas Maclagan has been engaged for some time in collecting facts bearing on the therapeutical effects of the sulphate of bebeerine, and on the best method of preparing that sulphate for medical use. Our readers will remember that this alkaline principle is obtained from the greenheart tree of British Guiana, called also Bebeeru, whence the name Bebeerine was given to the alkali by Dr Rodie, who first pointed out its existence, and showed it to be possessed of anti-periodic virtues. In Dr Maclagan's first memoirs on the subject, he was unable to pronounce on the botanical name or place of the Bebeeru or greenheart tree. He now announces (Edinburgh Med. and Surg. Journal, April 1845,) that this tree is determined by Schomburgk to be a species of Nectandra, to which, in honour of the discoverer of bebeerine, Dr Rodie, he has given the specific name Rodiei, Nectandra Rodiei.

Dr Maclagan is now engaged, along with Professor Tilley of Birmingham, in an investigation of the ultimate chemical constitution of bebeerine; and he has sent a portion of it to Professor Liebig, for analysis in his laboratory. Dr M. at first supposed that the bebeeru contained another alkali besides bebeerine, for which he proposed the name sipeerine; but this he now believes to be merely a product of the oxidation of bebeerine. Considerable progress has already been made in the manufacture of a sulphate for medical use, by the exertions of Mr Macfarlane and Mr Brown of this city. The sulphate which they prepare at present, is not exactly neutral, like that prepared by Dr Maclagan, and described by him in the Transactions of the Royal Society of Edinburgh, but has an excess of base, in consequence of which it does not dissolve per-

fectly in water without the addition of a few drops of sulphuric acid. Mr Macfarlane thinks he will be able to sell this sulphate of bebeerine at about half the present price of sulphate of quinine, which is sold just now at 12s. 6d. per ounce.

Dr Maclagan regards the sulphate of bebeerine as agreeing with the sulphate of quinine in its tonic and anti-periodic effects. The dose appears to be much the same as the dose of sulphate of quinine. It is reported to be less apt to disturb the head. But though several of Dr Maclagan's correspondents make this remark in its favour, one of them, Dr J. H. Bennett, rather contradicts the statement. "The action of the medicine," he says, "appeared to me in every respect similar to that of quinine. The relative power of each of course is only to be ascertained by more extended trial. But so far as their actions, as an anti-periodic and as a stimulant, are concerned, they appear to be identical. The same congestion of the brain was experienced in the above case (the case of old intermittent in which Dr B. had prescribed it,) after taking scruple doses of both drugs. Indeed, from what I have observed of its therapeutic effects in this instance, I have no doubt that bebeerine possesses all the valuable properties of quinine in an equal if not in a superior degree."

Among Dr Maclagan's correspondents besides, who testify to the good effects of this sulphate, are Dr Watt of George Town, Demerara; Dr Nicolson, deputy inspector of hospitals, Madras; and several medical officers at the same Presidency, Drs Dempster and Anderson, Mr Dorward and Mr Falconer; and at home, Professor Simpson and Dr Macfarlan. These gentlemen attest its usefulness in various forms of periodic fever, intermittent headache, and neuralgias.

Thus a good "prima facie" case has been made out in favour of the beneficial therapeutic results of sulphate of bebeerine, sufficient to warrant the employment of it in all cases where quinine fails of effect or causes unpleasant feelings, and in charitable institutions, where the expense of quinine cannot be afforded. To Dr Maclagan the thanks of the profession are due for the zeal with which he has perseveringly followed out a very difficult inquiry, and for the activity which he has shown in collecting evidence from all quarters as to its effects in the treatment of diseases.

Carduus Nutans.—No complaint is oftener heard in medicine, than that there are still by a great deal too many inert substances retained in our pharmacopoeias. This is a complaint for the druggist to make, who feels himself obliged to keep many little used medicines. The medical practitioner has no better ground to complain than the trouble of making himself acquainted with their inertness. And this is hardly a proper plea for a member of a learned profession to argue on. It may be cast up to him that his knowledge should be negative as well as positive—that he should know the history of his art, and the medicines which were used in former times, without having deserved the reputation they sustained. But the real ground of difficulty is, that it is impossible to purge the pharmacopoeias without throwing out useful along with inert substances. When we hear any one crying out more loudly than his neighbours to retrench the pharmacopoeia, we cannot help thinking of the fate of fox-glove in the last century —how often it was thrown out from the London and from the Edinburgh pharmacopoeia—and how long it was before its real therapeutic effects came to be recognised. But while our pharmacopoeias are retrenched with the moderation which is alone becoming in such a case, see how our periodicals groan with revived remedies. Here, in one of the most trust-worthy of the German journals (Buchner's Repertorium), we have grave evidence in favour of the efficacy of a common thistle as a diuretic, as curing an inveterate dropsy, after every thing else had failed. The carduus nutans is the thistle here commended. It was used in decoction, made by boiling a handful of the cut and dried herb in an imperial pint and a half of water, this being drunk by tea cupfulls; and the

efficacy of the remedy is said to have been since confirmed by many further trials. We do not doubt that this thistle may have contributed in a small measure to the cure of dropsical swellings. Many thistles were formerly of repute in medicine ; and dropsy is one of the diseases in which they were recommended on account of their bitter and diuretic qualities. We cannot positively affirm that the carduus nutans is one of these, but the Arabian thistle, with which the carduus nutans, in the account under review, is confounded, is well known in the older medical books by the name of Spina Arabica. The carduus marianus is described in Murray's " Apparatus Medicaminum" as " hydropicis salutarem."

The carduus nutans, or the musk thistle, grows plentifully not far from Edinburgh, along the coast eastward from Musselburgh, where it seems almost to take the place of the cnicus arvensis (the common thistle) in point of abundance. If any of our readers in that neighbourhood be disposed to try its efficacy as a diuretic, we shall have great pleasure in publishing their observations.—See Buchner's Repertorium.

Rhamnus Frangula.—In the same periodical, the berry-bearing buckthorn or black-alder is also reported to have cured an obstinate dropsy. It is the bark of the root, in the form of decoction, that is recommended by Gumprecht in hemorrhoids and now in dropsy. It has been long known as a hydragogue cathartic and diuretic, and was long since rejected, on account of its violence and griping quality. Linnæus says of it—" In constipatione bovum, certa medicina pronunciatur." We say let the oxen enjoy all the benefit of it.

PATHOLOGY AND PRACTICE OF PHYSIC.

1. *Acute Phthisis in an Infant Five Months Old.*

If the following case can be relied on, it presents a singular instance of the early development of tubercles :—

" *Acute Phthisis.*—R——, ætat. 5 months, for the first six weeks of his life, was not suckled, the mother having no milk ; after this, however, he took the breast, and though there was a plentiful supply of milk, he still remained weak, and puny. On his admission into the wards of Professor Trousseau, at Necker Hospital, the 31st January 1845, the little patient presented the following symptoms :—cough, which was not by fits, and had none of the characters of pertussis ; no diarrhœa ; mucous râle ; here and there, sub-crepitant rhonchus. A blister was applied on the chest. 21st Feb. —The sub-crepitant râle had disappeared ; the mucous râle alone existed ; in other respects, the child was much the same, the cough being paroxysmal. 22d.—Appearance of several aphthæ, which yielded to an application of the sub-boras sodæ. 23d.—Fever intense ; dyspnœa. 24th.—Sub-crepitant rhonchus in both lungs ; blister on the back of the thorax. 25th.—Face pale ; body cold ; dyspnœa extreme ; alæ narium considerably agitated ; pneumonic furrow highly marked ; pulse frequent ; sub-crepitant rhonchus not so minute ; no bronchial respiration ; patient cannot take the breast, and swallows with difficulty. Draught, with syrup. ether. ℥j. No change ; died at 7 P.M. *Autopsy*, fifteen hours after death. *Thoraæ.*—The lungs were crowded with an innumerable quantity of small tubercles, not yet softened ; in one of the lobes there existed a tubercular mass, in its nascent state, about the size of a bean ; both in the inferior lobes, almost all in the middle lobe, and the posterior and inferior portion of the upper lobes, were of a red colour, were easily torn, and seemed to be affected with red hepatization. All the lymphatic glands of the bronchi were tuber-

cular, but not tumefied. *Abdomen.*—Spleen full of tubercles; mesenteric glands not swollen, but containing tubercles; tubercular granulations in Peyer's glands; liver, kidneys, and stomach, healthy. *Cranium.*—Nothing abnormal; no granulations in the pia mater."—Med. Times, May 24, 1845.

2. *Lefevre, Corrigan, and other recent authorities on Scarlatina.*

The medical periodicals for a month past abound with accounts of scarlatina, from some of which we propose to draw a few extracts. In the London Medical Gazette there is a report of the Lumleian lectures, delivered at the Royal College of Physicians, by Sir George Lefevre. Two lectures appear to have been devoted to scarlatina and its sequlae, which the report extends through the numbers for May 2d, May 9th, and May 16th. In the Medical Times of May 10th, and May 17th, is reported that portion of a course of 12 lectures on diseases of the skin, by Dr Corrigan of Dublin, which treats of scarlatina. In the London Medical Gazette for May 23d, Dr Thomas Mayo, of the Marylebone Infirmary, publishes an article on scarlatina, with collapse, in continuation of a paper printed in the previous volume on the same subject. And to these we add an account by Dr Stratton, in the last number of the Edinburgh Medical and Surgical Journal, of an epidemic of scarlet fever and scarlet sore throat, which prevailed in some districts of Canada, in 1843-44. From Sir G. Lefevre's lectures we extract the following passages on the purple form of scarlatina:—

"Dr Currie has stated, there is a species of scarlatina to which the name of purpurata ought rather to be given, for the efflorescence is of a purple, not of a scarlet hue, in which, although the throat be deeply and extensively ulcerated, the pain and difficulty of swallowing are comparatively small, for the passage is kept open, and the sensibility of the parts destroyed by the progress of gangrene.

"In such cases extreme feebleness and rapidity of the pulse, and great fœtor of the breath, appear even in the commencement of the disease. The heat does not rise much above the standard of health; great debility, oppression, headache, pain in the back, vomiting, and sometimes purging, accompany its rapid progress; the patient sinks into a low delirium, and expires on the second, third, or fourth day.

"It outsteps in rapidity, and it equals in fatality, the purple confluent small-pox. Happily it occurs rarely; I have not seen it more than five or six times in upwards of twenty years of practice.

"An important circumstance is added in a note:—

"'Three persons in one family were attacked. One child had it in a mild form, another severely, with whom the father slept. He was in his office of business on Friday, and was dead on Monday evening.'

"Of the disease thus detailed by Dr Currie, I have met but one instance in which the whole of this history was carried out. Analogous to it, but somewhat less fatal, and modified perhaps from the effects of climate, the following has been my experience of a malignant form of scarlatina.

"A child complains of headache and sickness, and desires to go to bed. If there be no suspicion of the nature of the ailment, it is probable that some domestic remedy is administered, which the child immediately vomits, and in doing so complains of its throat. The night is passed without sleep; there is some degree of stupor from the commencement. The day following, or within twenty-four hours from the first complaining, a few spots are observable upon the forehead, the alæ nasi, the cheeks, and the inside of the forearms. There are seldom any discernible upon the trunk or below the sternum at this period. This eruption is not diffused, but elevated, of the size of a strawberry seed, red at the apex, with a broad livid base. It has the local character of measles, although all the constitutional symptoms are wanting. There is no

catarrh, no cough, no coryza, but there is a degree of dyspnœa: there is an effort in the performance of the respiratory process.

"The eye has a peculiar bright lustre; the pupil is dilated, and the little sufferer—for it is chiefly in children that I have seen this affection—has an anxious look; it seems conscious of its fate, and looks up for relief. I have not noticed strabismus nor any inordinate motion of the pupil. Upon inspecting the throat, the tonsils are found livid, and particularly in the centre; they are but slightly elongated, and not to that degree which is found in the anginosa. There is congestion in the whole mucous membrane of the palate and fauces; deglutition is difficult, not painful; but there is indisposition on the part of the patient to perform any voluntary act; as soon, however, as fluid has reached the stomach, it is for the most part rejected, and that with very little effort. The tongue presents nothing very striking, but there is reluctance to protrude it. There is nothing indicating any serious affection of the larynx or trachea, no œdema of the glottis—the impeded respiration seems more dependent upon want of power to raise the intercostals; muscular motion is in a great measure paralyzed, and the child sinks down in its bed.

"The secretion of the urine is scanty; perhaps altogether suspended. The hands and fingers offer a singular appearance, they are of a purple hue, and the digital extremities very much swollen; the nails perfectly black. The pulse at the commencement may be a little full—it is always hurried—and soon fails in strength, increasing in frequency. There is no well-marked rigor, but the patient complains of cold, and keeps under the bed-clothes. The feet soon lose their warmth, and spots appear upon the calves of the legs, of the nature of those before described. As the disease advances they become more general all over the body. Vomiting is frequent, of which the most distressing symptom seems to be that it compels the patient to raise its head. If diarrhœa occur, it hurries the catastrophe. The sensorium is but little impaired, but it is difficult to make the patient speak; if it does so, its language is coherent. The history of this disease is often terminated in forty-eight hours, perhaps even in less time.

"This form, from the local symptoms simulating measles, and the constitutionl ones scarlatina, usurps with German practitioners the indefinite title—Neither one nor the other. Weder das eine noch das andere. If the symptoms are less aggravated than are here described—for it is not universally fatal—should the child rally from the first attack, the serous membranes are more frequently deranged subsequently than the mucous. There is often effusion into the pericardium, thorax, and the peritoneum. Anasarca is a constant sequela. In some cases effusion takes place into the ventricles of the brain; this may be by slow degrees, constituting hydrocephalus, or it may be very sudden, and at a moment when the patient seemed approaching to convalescence.

"When the desquamation takes place, which is not for weeks after the commencement of the attack, the skin of the arms comes off like a leather glove. The fingers are excessively sensitive for a long time afterwards, the nails and hair fall off. I have not known the grandular system affected, as in the scarlatina anginosa, nor are the eyes, ears, or fauces, subject to subsequent inflammation. The kidneys are a long time before they regain their normal action; I have seen many cases of this spurious but malignant form. Dissection reveals but little."

One or two passages from Sir G. L.'s account we quote, which refer to the dropsy apt to attend on scarlatina:—

"The effusions into the chest as into the ventricles, or into the arachnoid, may be sudden, as in the case before stated, or by slow degrees, constituting a chronic form of hydrothorax.

"Inflammation of the pleura is a frequent occurrence, and is often attended upon what is denominated an epidemic constitution of the disease, rendering it often very

fatal. This has led to the free use of the lancet, and although the more distressing temporary suffering has been so relieved, the system has not rallied from the loss of vital power which it has sustained, so that the patient has rapidly sank, or that debility has succeeded which gives rise to dropsical effusions.

"These effusions are not to be considered as, generally speaking, the result of the debility subsequent on the eruption, but as a tertiary action of the specific poison; they occur in the mildest forms of the disease, where no depletion has been practised, and analogy affords proofs of such consequences arising from specific poisonous actions.

"There is frequently considerable tenderness of the peritoneum at the very commencement of the disease, which continues often, and increases during its progress, leading to serous effusion into the cavity, and causing ascites. When this is combated by leeches at the commencement, such consequences are often avoided.

"The cellular membrane is the connecting medium of the whole system. It is everywhere present and pervades all structures. If its ubiquity were to be proved by diseased function, this would be accomplished by scarlatina. It is found infiltrated in that small portion which lies in the hollows of the arachnoid, and wherever there is a particle to be found, it is demonstrable by infiltration.

"It is subject to different degrees of inflammation in the progress of this disease. The most common affection is œdema, an affection different from that anasarcous state which is the result of debility and enlargement of viscera. It does not commence, as in these cases, in the most dependent situations, uninfluenced by the laws of gravity, but it frequently commences in the head and face, and soon spreads all over the body. It is attended with considerable pain, and is the result of inflammation of the cellular tissue. A more decided state of inflammation is when the cellular membrane takes on the adhesive form, and involves the neighbouring parts, causing a sense of hardness and induration, often in the muscles of the neck, so as to produce exquisite pain in all attempts at motion. This gives rise to a species of wry neck from the twisting of the muscles, which is found to prevail in severe epidemics; copious effusion of coagulable lymph unites the parts into one morbid mass. It may now proceed to slow and partial suppuration, and is one of the most aggravating causes which protract convalescence. When these tumours break spontaneously, or are opened by the lancet, a sanious scrofulous discharge is kept up for weeks; at other times ulcerative inflammation is produced, which may extend the whole length of the neck from the angle of the jaw to the clavicle. I am acquainted with a lady whose neck is scarred in this way, as if she had been burned. These local affections are generally accompanied with constitutional fever; sometimes the inflammation is so vehement that gangrene immediately ensues, and so extensively as to terminate at once the patient's existence."

In connection with these observations of Sir G. L. on abscess of the neck, we quote the following statement from Dr Corrigan's Lectures :—

"There is another variety of scarlatina anginosa, which, as far as I am aware, has not been sketched by any writer, but which I shall endeavour to do so for you, as far as my own observation will allow me. On the 5th, 6th, 7th, 9th, or 12th day, either during the progress or after the disappearance of the eruption (it is uncertain when it may occur), a child ill of the disease will present the following symptoms :—you will be told that it has been sleepless for the last few nights; it has become irritable; and whines incessantly; you will find its pulse to have risen in frequency while it has become weaker than natural.

"The parts beneath the angle of the jaw begin to swell; this continues to increase. If you examine the parts in twelve hours after, you will find it to have increased more; look at the throat now, and you see nothing there beyond the usual concomitant of the affection, or the throat may be perfectly natural; in twelve hours more, you will find

the swelling to have increased still farther, and to have extended itself up towards the ear. It continues to get larger and larger, until the angle of the jaw becomes completely obliterated from the swelling of the parts beneath it; and this gives the child a peculiar appearance somewhat like that of an old member of the monkey family. In this state of things when drink is given to the child, it is returned through the nose, owing, in all probability, to the extension of this peculiar swelling to parts about the pharynx. This swelling, when pressed upon by the fingers, gives the fluctuating feel of fluid to them. This arises from the natural œdematous sensation which extravasation of serum in any part gives rise to, when the finger is pressed upon it; this it is that takes place here, and not only does this infiltration of serum take place within the cellular tissue, immediately outside the fascia, but also the parts beneath it become the seat of this effusion, even to the cellular substance forming the matrix of the muscles of the neck. With this state of the parts, the skin covering this enormous tumour is sometimes red, and quite as often of the natural appearance. There is no value to be set upon this. Matters continue to get worse from day to day until the child dies from inflammation and subsequent sloughing of the cellular tissue covering the tumour; when this occurs, it frequently leaves the subjacent muscles as free from every trace of cellular tissue, and as clean as ever you saw them exposed by an expert anatomist in the dissecting-room: or the child may die without this sloughing at all, probably owing to the pressure which this tumour exerts upon the vessels of the brain, which produces a state of congestion in that organ which quickly kills, or it may be carried off, solely by the irritation which this large tumour excites. Death here, cannot be owing to any impediment which may exist for the passage of air through the trachea, for although the extravasation of serum may travel toward the trachea, and larynx, producing distension of the cellular tissue in their neighbourhood, still this never takes place to such a degree as could lead us for a moment to suppose that death could be owing to this cause. If, tempted by the feel of fluctuation, you should be led to make an incision into this tumour, you only give vent to a very small quantity of dirty serum, and this cut, instead of proving beneficial, will be highly injurious. Recollect that it is no common abscess that you have before you. You have the cellular tissue underneath the jaw, distended with serum, which is diffused all through the surrounding textures. Here an incision, owing to the seat of the effusion, will not serve to set it free; it cannot do it; and, by having made an incision, you will have added very much to the irritation already existing, by superadding a new source of mischief—a wound, which the constitution, already sinking under the previous affection, will not be able to hold up against. This is not a common abscess, which has limits set to it by the extravasation of lymph, by which the matter becomes encysted, and the walls of the cyst become thinned to allow the escape of the matter. Here you have no bounds set to the tumour. It reaches from the ear down below the angle of the jaw, involving all the tissues above and beneath the fascia in its progress. During the prevalence of the epidemic of scarlatina, we made it a rule in the Whitworth hospital, where we had a good many cases of this kind, never to open the tumour. Conviction of the necessity of this forbearance of the lancet was forced upon my notice at length, from observing the invariably fatal results of these cases where large incisions had been made. Therefore it was, that this rule was adopted by us, never to open tumours of the kind, but to leave them to nature. Indeed, you may as well do this as anything else, for such is the fatality of the disease, that in all my experience I can call to mind but one case which did not prove fatal; and in this solitary instance the disease was not fully formed. When once it is so, all that you can do to save the patient is of no use, perfectly unavailing; and in these cases, you may as well leave them quietly to their fate. I may safely say, that ninety-nine cases out of a hundred such are surely fatal.

I have been frequently told by persons, that they have repeatedly cured patients labouring under this form of scarlatina. If so, their success has been greater than mine; for, as I have already told you, out of a very large number of such cases, I can call to mind *but one recovery*. I am inclined to think, that for the one in question, they have mistaken another and quite different affection. I mean inflammation of the glands under the jaw and ear, from which recovery so often takes place. But this is not the form of disease of which I have been speaking. In glandular inflammation after scarlatina we have circumscribed swellings, the swollen glands feeling like so many eggs under the skin, and if the skin covering them become affected, it is merely by an extension of the inflammation from the body of the gland to the cellular tissue in question.

But in the form of inflammation which I have mentioned, as proving so generally fatal, we have none of that circumscribed tumour; on the contrary, it extends along the whole track of tissue from the ear to the jaw, and in place of pus being secreted, as in glandular inflammation, as I have said before, nothing but a dirty serum is found. such glandular abscesses we can open readily and beneficially. Why is this? Because the boundary of such an abscess has been distinctly defined, the matter collected in it has not become diffused through the cellular tissue, as in the form of which I have spoken, but becomes a regular encysted abscess, which, when opened, freely discharges the matter within it. I repeat, that the form of diffuse inflammation of the cellular tissue of the jaw and ear, accompanying this variety of scarlatina, is, I may say, invariably fatal. As we cannot cure it, our object should be to try if we cannot prevent it. Indeed, with regard to this latter step either, I do not know what to say; as all we can do will prove but of little service. The plan of treatment which I have found most useful is as follows: before detailing it, you must bear in mind, that unless you can put it into operation at the onset of the disease, it will not be of the slightest use. On the first appearance of swelling under the jaw, you must apply leeches to the tumour, in the manner in which I have mentioned when speaking of a variety of croup. The leeches here must not be put on in large numbers; this would not answer: apply them in relays, three or four at a time, in such a manner as that there shall be from the part a continual weeping of blood, in order that by this means of depletion you may guard against any engorgement of the vessels of the part, which would otherwise be sure to arise. Unless, as I have remarked, you apply the leeches early in the disease, your efforts will be completely fruitless. The only preventative of this form of diffuse inflammation which I can recommend to you, is the early application of leeches, and in ninety-nine cases out of one hundred, even these fail in checking its progress.—Med. Times, May 19, 1845.

We can bear witness to the accuracy of Dr Corrigan's description of this fearful form of abscess, and to the terrible mortality among those in whom it takes place. The clean dissection of the muscles referred to in his description, particularly of the digastric and upper portion of the masseter is no exaggeration. The tendency to this fatal form of abscess after scarlatina, as to the more obstinate kinds of dropsy, we have always considered to be a part of what Sir G. Lefevre, in one of the above quotations, terms the epidemic constitution of the disease.

Dr Stratton, speaking of the dropsy which occurred in some of his cases says, "These dropsical cases could always be traced to insufficient clothing, and too early exposure to cold, by going out sooner than they ought." We have no doubt, that by such causes dropsical symptoms which could easily have been removed with a little care, are sometimes aggravated to a fatal character. In the autumn of 1832, an epidemic scarlatina prevailed in Edinburgh, with unusual disposition to subsequent dropsy, and though the dropsy was for the most part easily subdued, yet many cases proved fatal amongst the children of the inferior orders. We well remember, that of the children who were

cut off, many had been allowed to return to school exposed to all the variations of the weather, while they were found on examination to be labouring under dropsy of the abdomen or thorax, or both combined. The older authorities, while they describe the eruption as appearing on the fourth day of the fever, and as fading on the seventh, pronounce the fourteenth to be the day on which the dropsy shows itself. In this statement there is something fanciful, yet it suggests a good practical rule, namely, to examine the feet with some care about the 14th day from the commencement, and if there be the slightest oedema, which might otherwise from its slightness escape attention, to confine the child for a longer period within doors than might otherwise be deemed necessary. We are confident this rule would have saved many lives on the occasion just referred to. The principal cause of death, in nearly all the cases in which we were allowed an inspection of the body, was an inflammation of the lungs—of that kind which some French authorities have described as peculiar to children, or that in which the inflammation is disseminated, that is occurring in several distinct portions of the lung, with interposed healthy structure, and at the period of death is found still in the first stage of mere inflammatory engorgement, notwithstanding that the disease may have lasted for several weeks. We cannot imagine that at this early age the fatality of dropsy after scarlatina can often depend, as has been taught, on grandular degeneration of the kidney.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

The use of Quinine in Infantile Remittent; of Sulphate of Copper in Croup; and of Alum in Pertussis.

In the fifth number of Guy's Hospital Report for April of the present year, we have, by Dr Golding Bird, an interesting communication, illustrated by cases and clinical observations on some of the diseases of children, on which we propose to make some remarks. As very properly observed by Dr Bird, "it is difficult, in this country at least, to procure reports of this class of affections, since the plan of affording accommodation in hospitals for children suffering from disease has been adopted only in a few instances, and on a limited scale." The communication before us possesses the advantage of having been drawn up from materials furnished by 75 cases of various diseases of children, treated under the superintendence of Dr B. in wards set apart for the purpose at Guy's Hospital. The first communication embraces the management pursued in 16 cases of remittent fever, of which 5 are detailed; and of this last all were speedily relieved, except one which terminated in hydrocephalus—no uncommon sequela in protracted or mismanaged cases. The writer is of opinion that remittent fever, arising in children from errors in diet, worms, &c., is quite a different affection from that originating in malarious influence. We do not mean to deny the occurrence of the disease in children from the latter cause, but deducing our inferences from the symptoms of the cases detailed by Dr Bird in support of his opinion, we can perceive no difference; and, moreover, all of them, by whatever cause produced, would seem to have yielded to the same plan of treatment. Were it not that we might be considered hypercritical, we could easily show that the cases considered as arising from malaria owed their origin to the ordinary causes. As very frequent causes of remittent fever, Dr B. has altogether overlooked the influence of protracted lactation and personal neglect. For subduing this disease, hyd. c. cret. at bedtime, followed up by mild laxatives, were found particularly useful, while quinine, during the remissions, proved of marked efficacy. On the great utility of this last medicine in such cases, we quote the following important observations from Dr Bird:—"I have

often been astonished to observe how almost specifically the quinine has acted in some of the severest cases. In one instance where there was an ardent hot skin, with face almost scarlet, a sharp pulse almost too rapid to be counted, and delirium; in fact, every symptom of fever so intense, as, in the minds of some of the pupils who were with me, to justify most active antiphlogistic treatment; and yet the next morning a remission having occurred, he bore the quinine in 2 grain doses, and within 5 days was convalescent. In no case of this affection have I ventured to administer quinine until the remissions were well marked; and whenever this was the case, I have never been disappointed in the effects of this valuable drug."

The second part of the report embraces some observations on *croup*, 3 cases of which are detailed, one of them produced by an unusual cause in a child 4½ years old, viz.: swallowing some pyroligneous acid. One of these, in a boy 15 years of age, proved fatal; but the disease was in an advanced stage before any treatment was adopted. For subduing the complaint the usual remedies, as leeches and antimonials were employed, with an agent not at all familiar to us in such cases in this country, and originally recommended by Dr Schwabe of Germany, viz., sulph. cupri, regarding which the following sentiments are expressed by Dr Bird:—"After subduing the local inflammation by moderate blood-letting, I gave a trial to the sulphate of copper in nauseating doses; and under its influence the white membrane-like film covering the tonsils vanished, and the child did well." Dr Bird takes no notice of the practice of opening the jugular vein in croup, a plan infinitely superior to leeching, since the necessary quantity of blood is abstracted in as many minutes as leeching would require hours, whereby protracted irritation on the part of the patient is avoided. From the sentiments of Dr Bird, it would appear that croup is a rare disease in London—4 cases only having been brought to the hospital during 1844.

The next portion of the report is devoted to the consideration of syphilis in infants. Six cases are detailed, all of which were successfully treated with hyd. c. cret. and iod. potass. The rapidity with which syphilis disappears in infants must have struck every practitioner; but it is extremely difficult to effect its perfect removal, which Dr Bird has failed to notice. In one instance, Dr Bird endeavoured, but unsuccessfully, to subdue the disease by giving iodine to the mother alone. We have known very distressing results from experiments of this kind: the mercury, we are quite satisfied, would have answered perfectly without the iodine, which, with due deference to Dr B., we consider worse than useless.

The only other point deserving of notice in this report is an eulogium on the use of the *sulphate of alumina* in pertussis, regarding which we shall give the author's own words:—"After all inflammatory symptoms have subsided, and when, with a tolerably cool skin and clean tongue, the little patient is left severely distressed by the more or less copious secretion of viscid mucus from the bronchi, each attempt to get rid of which produces the exhausting and characteristic cough, the *alum* will be found of great value. I have not yet met with any other remedy which has acted so satisfactorily, or given such marked and often rapid relief to the child. The dose is from 2 to 6 grains, combined with ext. conii, in children from one to ten years of age, every four or six hours. The only obvious effects resulting from its use were, diminished secretion of a less viscid mucus, with marked diminution in the frequency and severity of the spasmodic paroxysms."

Ergot of Rye superseded—A new Remedy for reviving Labour Pains.

The Medical Gazette for July 19th, 1844, contains a communication from some one in Edinburgh, regarding a case of parturition in a cow, in which the action of the vi-

terus became suspended, and the animal was in great suffering. This happened in the vicinity of the town, and Professor Dick of the veterinary art, who was called, recommended from 6 to 8 quarts of tepid water to be thrown into the uterus, which was accomplished with every expedition, by means of the flexible tube used for the stomach pump. Within five minutes after the injection of the water, a strong contraction of the uterus supervened, and the calf was speedily and safely expelled alive. This remedy, we are told, has in two instances been tried in the female of our own race, with equally satisfactory results.

Vaginal Hysterotomy.

The Edin. Med. and Surg. Jour. for July 1844, contains a case in which, owing to the joint interference of a quack and of the patient herself, irritation of the margins of the os uteri, and consequent closure of the aperture was produced, after attempts to procure abortion. After being in violent labour for 24 hours, without any progress, Dr Bedford, the reporter of the case, was called. In the brim, through the uterine parietes, the foetal head, but no os uteri, could be traced. In the centre of the brim two fleshy bridles, and a roughness could be felt. With a probe pointed bistory, an incision was made into the most dependent part of the uterus, and also through its posterior lip. The uterus contracted violently, dilated rapidly, and in ten minutes a living child was produced. This woman had two living children formerly, without any more suffering than what is usual in ordinary labours.

Two cases of removal of the Uterus.

In the Provincial Medical Journal, June 12th, 1844, a case is related in which, during the removal of the placenta, the uterus was inverted, but reposition was effected. She became pregnant again in due time thereafter, and a second time, in extracting the placenta, the uterus was inverted. On this occasion the organ could not be replaced; and in about a month after delivery, when it was reduced to nearly its pristine size, it was included in a ligature which was placed on the cervix uteri, progressively tightened, and on the sixth day excised from its attachments. In little more than a month after the separation of the uterus, the patient was enabled to superintend her domestic concerns; and she has since this period not only enjoyed good health, but even performed conjugal duties without inconvenience.

The *second* case of this kind happened in a maiden lady of 60. Here the uterus had been protruded beyond the os externum for more than 20 years. On the niche of the tumour a ligature was applied, and a mass at once separated, of the shape of the uterus, and weighing about two pounds. The tumour was much altered in its structure, its cavity was obliterated, and its aperture was nearly cartilaginous. The patient seemed to suffer so little from the operation, that the day following she declared that she felt as well as she did at the age of sixteen.

Protracted Lactation.

In the New York Journal for September 1844, the case of Mrs T. S. is related by Dr Green. She has been the mother of four children, born at intervals of about $4\frac{1}{2}$ years betwixt each. All the children were nursed until they were old enough to run about; and although she has now been nine years a widow, she is obliged to have her breasts drawn daily, owing to the secretion being so copious.

FORENSIC MEDICINE AND MEDICAL POLICE.

Treatment of Asphyxia from various Causes. By M. Raspail.

Asphyxia by vacuum, strangulation, and occlusion.—The first and most pressing demand is to remove the obstacle which opposes itself to the introduction of the air, to cut the cord which strangles, or withdraw the foreign body or parasite which blocks up the trachea. An emetic in these cases is often successful. This result obtained, we hasten to rub the body of the patient, the neck, between the shoulders, on the chest and abdomen with an aromatic ointment, and place a compress of *sedative* water over the region of the heart, on the cranium, and around the neck. Our *sedative* water which has ammonia for its base, has the property of penetrating speedily into the circulatory current, and there dissolving the coagulated albumen, in fact, of impregnating the blood with ammonia and sea-salt, which are two of its most powerful vehicles. We may also gently inflate the lungs with hot air, containing the vapour of myrrh, camphor, &c. to re-establish the respiratory movements, and obviate all tendency to decomposition. Directly the patient gives a sign of life, make him swallow hot broths, and strongly spiced liquids.

Asphyxia by submersion.—Dry the body ; then bathe it with the strongest camphorated spirits ; the alcohol which passes by imbibition through the living tissues, removes from the blood the aqueous quality which it acquires from too long a stay in the water ; now the circulation is arrested as much by excess as by deficiency of its menstruum. Also inflate the lungs with impregnated camphorated spirits.

Asphyxia by the vapour of charcoal and acid emanations.—Abundant lotions of the sedative water, so as to redissolve by the vehicle of the ammonia the congestions caused by the chemical action of the acid vapour. Constant frictions along the course of the spinal marrow and the abdominal region with camphorated liniment ; insufflation of air rendered slightly alkaline with ammonia.

Asphyxia by ammonical gas, sulphureted hydrogen, and other basic gases.—Several frictions with camphorated or aromatic vinegar ; application of camphorated spirits to absorb the aqueous portion of the blood, and to diminish its liquidity ; acid lotions to neutralize the exaggerated effects of the alkaline vehicle, and to decompose the poisonous gases by precipitating their bases.

Acid exhalations and emanations ; marsh miasmata.—In the new process of gilding by dipping, and in the manufacture of vitriol and other acids, the workman is constantly surrounded by an atmosphere of nitric or hydrocholoric acid which he respires through all his surfaces. The trades in which mercury is employed, are perhaps less injurious than this. Mercury attacks the nerves ; acids corrode the parietes of the intestinal canal and of the chest. The men should here take care to work only under low and glazed chimneys, and to be surrounded by free currents of air. They should also frequently bathe their hands with ammoniacal water, and wear a cravat impregnated with it round the neck, so that the mouth and nose may be constantly enveloped with a vapour capable of saturating the acid emanations and neutralizing their effects. A mask might also be worn, in such cases, containing similar antidotes. Those who labour in sewers and on marshy grounds, should adopt similar precautions, or employ *cigarettes*, containing particles of chloride of lime. The smoking of tobacco, otherwise very *hygienic*, can here serve only as a vehicle and auxiliary to the corrosive action of the acids and the miasmata. Fires on the borders of marshy grounds purify the air, not only by decomposing the chemical principles of the miasm by the flame, but also by converting them into a saponaceous compound by the essential oil, and neutralising them by the pyroligneous acid which is disengaged.—Physiology of Health and Disease, &c.

Part IV.—MEDICAL MEMORANDA.

DEATH OF BRESCHET.

After a long and painful illness, Professor Breschet departed this life on the 10th of May 1845, in the 63d year of his age. Gilbert Breschet was born at Clermont, Ferrand, in 1783, and received the rudiments of his education at the college in that town; after which, having made choice of the medical profession, he came to Paris to pursue his studies. In 1808 he was named *eleve externe* at La Charité, and in 1809 was appointed *interne* to the Hopital St Antoine; in 1812 he received the degree of M.D., and on this occasion, in his thesis on acute dropsy, he showed that the disease was not always owing to an asthenic cause, but sometimes due to the augmentation of the vital properties of the serous membrane, and that in these cases antiphlogistic remedies were indicated; in 1818 he was nominated physician to the Bureau Central; in 1819, *chef des travaux anatomiques* at the Faculty of Medicine; the preparations made on this occasion are still to be seen in the museum of the Faculty; in 1820, the surgical wards of the Foundling Hospital were confided to his care, and in the same year, on the organization of the Academy of Medicine, he was included by his Majesty among its members (section of pathological anatomy); in 1822, he was appointed surgeon to the Hotel Dieu; in 1830, consulting surgeon to his Majesty Louis Philippe; in 1835, he was elected by 47 suffrages, member of the Academy of Sciences, in the section of medicine and surgery, a place vacant by the death of Dupuytren; and finally, on the 22d July 1836, he was named by *concours* professor of anatomy at the University of Paris. His death will probably raise many a hope, and cause, perhaps, many a disappointment among the candidates for the places he has left vacant.

Breschet published several important works, alone or in conjunction with others. —Alone: Memoire sur l'Ectopie de l'Appareil de la Circulation, et particulierement sur celle du Cœur, 1826. Repertoire General d'Anatomie, et de Physiologie Pathologiques, et de Clinique Chirurgicale, 1826. Recherches Anatomiques, Physiologiques, et Pathologiques sur le Systeme Veineux, 1829. Recherches Anatomiques et Physiologiques sur l'Organe de l'Ouie et sur l'Audition, dans l'Homme and les Animaux Vertebres, 1836. Etudes Anatomiques, Physiologiques, et Pathologiques de l'Œuf dans l'Espece Humaine, et dans quelques unes des Principales Familles des Animaux Vertebres, 1833. Memoires Chirurgicales sur les Differentes Especes d'Aneurismes, 1834. Recherches Anatomiques et Physiologiques sur l'Organe de l'Audition chez les Oiseaux, 1836. Recherches Anatomiques et Physiologiques sur l'Organe de l'Ouie des Poissons, 1838. Histoire Anatomique et Physiologique d'un Organe de Nature Vasculaire decouvert dans les Cetacées, 1836. Le Systeme Lymphatique considerè sous les Rapports Anatomique, Physiologique, et Pathologique, 1836. Memoire sur une Nouvelle Espece de Grossesse Extra-Uterine, 1826. Recherches et Observations sur l'Aneurisme faux Consecutif du Cœur et sur l'Anatomie des Arteres, 1827. Memoire sur un vice de Conformation Congenital des Enveloppes du Cœur, 1826. Memoire sur une Nouvelle Methode de Traiter et de Guerir le Cirsocele et le Varicocele, 1834. Du Perione ou Membrane Caduque, de l'Hydro-Perione ou liquide contenu dans cette Membrane; de la Nutrition du Foetus pendant les premières periodes de la Gestation, 1832. Recherches Anatomico-Physiologiques et Chimiques sur la Matière Colorante du Placenta de quelques Animaux, 1829. De la Dessication et des Meilleurs Moyens de Conservation des Pieces Anatomiques, 1819. Translation of Hodgson's Treatise on Diseases of the Arteries and Veins, with Notes, 1819;

and of a work of Gluge's—Quelques Recherches sur la Structure des Membranes de l'Œuf des Mammiferes, 1837.—With Dr Jourdan, Translation of Meckel's Anatomy, with Notes; and with Dr Raspail, Anatomie Microscopique des Flocons du Chorion de l'Œuf Humain, 1828. Most of these works are accompanied by plates. Finally, several articles in the Dictionnaire de Medicine—the second edition now under publication—and numerous reports made to the Academies of Sciences and Medicine.—Medical Times, May 31, 1845.

DEATH FROM A NATURAL CAUSE, APPARENTLY FROM AN INJURY.

To the Editor of the British American Journal.

Dear Sir,—I am induced to offer the following case for publication in the forthcoming number of your journal, under the impression that it presents several points of interest, and may assist in coming to a correct opinion in cases where persons die after receiving bodily injury.

Yours, &c.

A. H. David, M.D., Edin.

While playing on the 17th December 1841, Peter Chailans, aged 21, received what was described as a very slight blow on the left side of his head, from the open hand of one of his companions, which staggered him for a moment, but he was soon able to walk home to his house, a distance of 150 yards. I first saw him in the evening, five hours after the accident. He was then seated in a chair, but appeared restless—could answer quite coherently—his pulse was full, but not quick—and I could trace no sign of external injury. His bowels not having been moved for some three or four days, I immediately gave him ten grains of calomel, with two drops of Ol. Tiglii, and desired cold applications to be kept to his head for the night. From the circumstance of his residing at a considerable distance from me, I only saw him towards noon of the following day; on my entrance he was walking about, and seemed apparently quite well; he did not complain of any pain, and only remained within doors at my suggestion that he had better remain quiet for the day, as the medicines he had taken were exceedingly powerful. They had produced the desired effect. Being suddenly called to him in the night, I found him insensible and incoherent, with the pupils dilated and insensible to light, his hands extended, endeavouring to get hold of imaginary objects before him, and shivering as if with cold. This shivering lasted about an hour, when he became sensible, and only complained of intense pain over both eye-brows. I bled him to syncope, and ordered repeated doses of calomel, under which treatment, and one dose of castor oil to regulate his bowels, he became much better, till the morning of the 21st, when he suddenly became comatose, and died within eight hours.

Having succeeded in obtaining permission to examine the head, I did so most carefully fourteen hours after death, and could trace no fracture of the skull, nor engorgement of the cerebral vessels, and no effusion under the membranes, but on cutting into the substance of the brain, and laying open the ventricles, found them much distended, with at least six ounces of limpid fluid; and with the exception of the septum lucidum, which was soft and easily torn, there was not the slightest appearance of inflammation to be found in the ventricles, or indeed any other part of the brain, which was firm and perfectly healthy.

This case is interesting from the fact, that had no post mortem examination been allowed by the friends of the deceased, the unfortunate man who struck the blow, would in all probability have paid for his amusement with his life, had the case come before the coroner, from the aversion that both coroners and their juries have to post-

mortem examinations, when they can find any probable cause to account for death, which in this case would have been attributed to concussion of the brain from the blow. I assured the friends that the morbid appearances were not the result of the blow the man had received three or four days previous to his death, but the result of some latent disease which had been going on for months before he received the injury.

I based my opinion upon the authority of the late Dr Abercrombie, who mentions in his work on "Diseases of the Brain," cases given by Morgagni and Heberden, and one by Professor Turner, where large quantities of serous fluid have been found in the ventricles after death, without incommoding the patient, or there having been any alarming symptom during life, to call the attention to the state of the brain. When effusion takes place suddenly into the ventricles, we find, besides the ordinary appearance of recent inflammation, generally some serous alteration in the structure of the brain.—British American Journal, Montreal. No. 1.

Alcoholic odour of the fluid in the ventricles of the Brain.—Dr Bradley, of Illinois, was summoned before a coroner's inquest, held on the body of Samuel Page, as a medical witness. The deceased was found about two miles from the village, in his waggon, with his feet hanging over the foreboard, his body resting upon a bag of grain, and his head upon the bottom of the waggon. He was totally insensible, and his breathing stertorous and difficult. He was taken to a neighbouring dwelling, where he died in about ten minutes. He had been drinking for several days previous, but was not an habitual drunkard. He had left a grocery store a short time previous to being found, partially intoxicated, without mittens or any other "extra over-clothes," though the weather was somewhat below the freezing point.

On dissection, six hours after death, dark fluid blood poured forth from the sinuses of the brain, to the amount of eight or ten ounces. The brain exhibited excessive vascular turgescence; in the corpora striata, a small amount of sanguineous extravasation was detected, and in the lateral ventricles some serous effusion. Verdict, "death from apoplexy caused by intemperance."

The effused fluid found in the ventricles yielded strongly the alcoholic odour.—This was so apparent, that it was readily recognized by every member of the jury.—Illinois Med. and Surg. Journal.

Needle in the Gall-bladder. By J. Allen Tebbetts, M.D., of Andover, N. H.—A boy, two years of age, who had previously been remarkably healthy, was attacked with abdominal disease, the exact character of which it is impossible to learn, so imperfectly is the case recorded, but which terminated fatally in about ten days. On examination after death, "the stomach and small intestines showed appearances of congestion, with slight inflammation. The spleen, pancreas, kidneys, bladder, and large bowels, appeared perfectly normal. The liver was nearly twice as large as natural, highly congested, and also showing some appearances of inflammation. The gall-bladder was distended to more than twice its original size, with very dark-coloured bile, and containing a common sewing needle, highly polished, about one quarter part of its length (the pointed extremity) being gone. There was no appearance of the needle being corroded, the point merely showing signs of recent fracture. The inside coat of the gall-bladder was completely disorganized, from the inflammation which the needle probably produced. The examination of the brain and thoracic organs was not continued. When or how the needle came there is altogether unknown."—Boston Med. and Surg. Journ., Aug. 7, 1844.

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Part I.—ORIGINAL ARTICLES.

Case of Inversion of the Uterus occurring at the Fourth Month of Utero-gestation. By Ebenezer Skae, M.D. Ed. Leven: Fife.

All the recorded cases of uterine inversion, so far as I am aware, appear to have been consequent to parturition at an advanced period of utero-gestation; this accident, in most of them, being produced by the employment of injudicious force in attempting to remove the placenta. The greater proportion indeed of such instances, as are reported by the earlier writers on the subject, are ascribed to the ignorant conduct of midwives and others, in pulling at the umbilical cord, when the placental mass has not readily separated, with such an amount of traction as to drag down the uterus in a state of inversion; and these authorities intimate their belief, that such an event must in every case have been produced by this dangerous and unjustifiable practice. Subsequent writers, however, have pointed out the occurrence of this unfortunate accident under circumstances which entirely excluded the possibility of its resulting from mechanical violence of this nature, inasmuch as it was found before the separation of the child by division of the cord; at other times, when the funis had been so putrid as to break by the slightest traction, and moreover in cases even where the child was expelled after the death of the mother in the absence of all manual interference. Other recent authorities on the subject, under the impression that the accident may happen with the best management on the part of the practitioner, have gone so far as to assert that it is by no means of such unfrequent occurrence as is generally supposed, and that in many instances when it does happen, the accoucheur, from a dread of his professional character being injured by the circum-

stance, endeavours to conceal it from the patient and her friends, and under the influence of this feeling, he is withheld from the immediate adoption of those vigorous measures which are necessary to obviate what has happened. While it may be fairly inferred, that the great majority of cases which take place are produced by imprudent interference, there appears sufficient evidence to establish the fact that it is an accident which may occur, without necessarily implying any injudicious treatment on the part of the practitioner. The following case affords strong corroborative proof of this view of the question, from the remarkable circumstance that inversion happened, in the absence of all foreign interference, at such an early stage of pregnancy as the fourth month, a period at which there is every reason to believe there is much less liability to the accident than after parturition at the full term of utero-gestation, when the ligamentous connections of the uterus, the highly developed and relaxed state of the vagina, os internum and cervix, and the accommodating condition of the other pelvic viscera, all constitute so many predisposing causes to the occurrence of inversion. It took place under the following circumstances :—

I was requested, on the evening of Saturday, the 25th of January last, to go and see a Mrs F. (wife of a labouring man, residing in this neighbourhood) who, I was informed, was very ill, in consequence of having had a miscarriage. On visiting the poor woman, I found her in a state of great distress and exhaustion. She complained of severe headache, of intense pain in the back, both iliac regions, but especially the left, extending down the thighs anteriorly, and even affecting both ancles. The pulse was small and weak, and ranged between 120 and 130, the skin cool, and covered with a clammy moisture. She stated that she experienced constant down-bearing pain, attended with flooding, and a sensation of something having fallen down within her. I was farther informed, that in consequence of considerable bodily fatigue which she had undergone two or three weeks previously in removing her family from Queensferry to this place, she had been seized with flooding on Wednesday the 15th (ten days before) ; that on the following day, abortion had taken place, after being four months pregnant ; that on Saturday the 18th, she had felt so well as to get up and attend to some household matters, but that the flooding had afterwards increased to such an extent, as subsequently to necessitate her confinement to bed ; that in consequence of feeling very weak, she had that morning (Saturday 25th), about ten o'clock, taken some wine and water, which she immediately vomited ; and in the act of vomiting, which was severe and continued, she was sensible of something falling down within her ; and from that time up to the present—half-past ten o'clock, p.m.—that sensation continued, along with down-bearing

pain, flooding, much general uneasiness, and extreme prostration of strength.

On introducing the fingers of my right hand into the vagina, I found the passage nearly filled with an elongated and somewhat irregular spherical tumour of pretty firm consistence, and having shreds of membrane attached to it; and on passing one or two fingers up to the os uteri, I could trace the neck of the tumour entering within it, and having an equally firm attachment, as it were around the whole circumference of its inner margin, the os internum itself being open to the extent of two inches in diameter, and being otherwise in a dilatable condition. Without withdrawing my right hand from the passage, I examined with my left the hypogastric region externally, and by this means satisfied myself of the absence of any intervening body corresponding to the uterine tumour. Having now no doubts as to the mass within the vagina, consisting of the uterus in a state of almost complete inversion, I immediately grasped the organ, and by moderate but steady and continued compression, in the direction of the os uteri, manipulating with my fingers as occasion required, I succeeded, in the course of some fifteen or twenty minutes, in returning the the whole mass within it. In endeavouring, however, to push the fundus up to its normal position, the resistance and accompanying pain were so great as to deter me from persevering, and I desisted from the attempt, contenting myself for the present with having returned the whole organ within the os tincæ. The poor woman appeared to experience immediate and great relief from what I had done, and expressed herself to that effect. Before leaving her, I ascertained that the hemorrhage had ceased, and ordered cold applications in the event of its recurrence, and trusted her to the effects of an opiate and absolute quiet till I should visit her next day. The following morning, I found Mrs F. continuing apparently better: she had slept none during the night, but had felt tolerably comfortable. On examining per vaginam, however, I found the fundus uteri projecting a little beyond the os tincæ, which had contracted considerably since my previous examination; but I was able with little difficulty to myself, and only trifling pain to my patient, to push it upwards to its relative position within the pelvis. Recovery was slow, but uninterrupted; and, with the exception of slight occasional pain in the left ilium and both ancles, she is now in perfect health, and has menstruated naturally since the occurrence.

Mrs F. is thirty-six years of age, she is somewhat above the average stature of females, and appears to be of spare and relaxed habits of body. According to her own account, she has generally enjoyed good health. She has been married sixteen years, and in the course of that period, has been eight times pregnant, inclusive of the abortion in question. Utero-gestation went on to the full period in the first six pregnancies, the first five children

being born alive. In her seventh pregnancy she had an abortion at the third month of gestation, which happened about six months prior to the one under consideration. She has been attended by midwives in all her labours, with the exception of the fourth, when she employed a medical man. She states, that to the best of her knowledge of such matters, her sufferings during parturition have never been attended with any unusual severity, and that in no instance was there any undue force employed in removing the after-birth.

In this very remarkable case there can be little doubt as to the accident having happened twelve hours previous to the time of the organ being returned. The immediate cause of its occurrence must have been the forcible contraction of the abdominal walls which play such an important part in the act of vomiting. According to the statement of Mrs F., it was during the violent retching that for the first time she was sensible of something falling down within her. Up to this period she had complained principally of hemorrhage and accompanying debility, but after the vomiting her sufferings were greatly aggravated, and continued to increase in severity, till the displaced organ was returned. The continued hemorrhage, which had been going on during ten days previously, had produced a very relaxed state of the os uteri, which no doubt was greatly favoured by constitutional predisposition; and such a condition of the parts was but little calculated to offer resistance to the escape of the uterus, forced down, as it must have been, by the powerful action of the diaphragm and abdominal muscles on the contained viscera.

The general symptoms presented by the case were of a similar character to those which have been usually met with in cases of inversion occurring as a sequel to parturition at the full time, with this difference, that they were exhibited in a less formidable degree than we should expect to find them in the latter circumstances, especially when the whole uterus and vagina have been inverted; and this difference in degree is readily accounted for, when we take into consideration the much greater amount of development of the organ at the full period of gestation, than at such an early stage as the fourth month. The symptoms of inversion, after ordinary parturition, also must be greatly modified by the extent to which the organ is inverted; and accordingly, it is found, that when the inversion is only partial, the accompanying symptoms are of a much less aggravated character, and the accident itself is of a much more manageable description. Partial inversion may occur in a greater or less degree, from mere protrusion of the fundus beyond the os internum, to the entire displacement of the body of the viscus. I may here mention an example of partial uterine inversion which I met with about six years ago, and which serves to illustrate this point. It happened in the hands of a midwife, in consequence of her having used un-

justifiable traction of the funis, with the view of extracting the placenta. I found, on examination, the fundus uteri filling the cavity of the pelvis, having completely protruded beyond the os tincæ, and having the placenta still adhering to it with considerable firmness. The patient exhibited symptoms of exhaustion to some extent, and complained of down-bearing pain, extending along the loins, iliac regions and thighs; there was hemorrhage also, but not in any material quantity. In this case the separation of the placenta and return of the displaced fundus were speedily and easily accomplished, and no bad symptoms retarded recovery, although, since that period, the patient has suffered from prolapsus uteri.

When the organ is completely inverted, dragging down the vagina with it, as has happened in several cases, the symptoms, as may be readily supposed, are of a very alarming and formidable character; for, in addition to her aggravated pain and general suffering attending this imminently dangerous degree of the accident, the extreme prostration of the vital powers, resulting from the immediate effect of the shock sustained by the system, is exhibited by the most urgent indications of exhaustion. A feebly perceptible and rapid state of the pulse, pale and cadaverous expression of countenance, along with a cold clammy state of the surface, and occasional syncope or convulsions, all indicate the very imminent danger in which the patient is placed, which, if not speedily removed by the vigorous employment of measures calculated to obviate the effects of the accident, may eventually terminate in death.

The history of Mrs F.'s case affords a very instructive lesson on the importance of forming a correct diagnosis in all accidents of this description; for it is very evident that an erroneous estimate of the nature of the event may lead to such dangerous practice, as must almost inevitably prove destruction to the life of the patient. Indeed, there is too much reason to fear, that mistakes under such circumstances have oftener than once led to fatal consequences. The principal source of embarrassment in the case under consideration, was the resemblance of the mass within the vagina to a polypus or other morbid growth from the uterine cavity, for its bulk was too great to lead to the supposition of its being the placenta at such an early period of gestation. After taking into account, however, the absence of the hypogastric uterine tumour, the shreds of membrane which were attached to the surface of the body in question, and especially its connection and relations to the os uteri, along with the history of the occurrence and the concomitant symptoms, I had no hesitation in concluding that it was a case of inversion of the uterus, and in treating it accordingly.

Leven, Fifeshire, 14th June 1845.

Case of Menstruation in an Infant, commencing a few days after birth. By W. H. Whitmore, Esq., Surgeon, Cheltenham. Communicated by William Campbell, M.D., Consulting Physician Accoucheur, Lying-in Hospital, Edinburgh, &c. &c. &c.

Among the family of Mrs M., a respectable individual of this town, was a female child who, from a few days after birth, had her catamenia regularly at periods of three weeks and two or three days, until she had attained the age of four years and some months, when she died after an illness of forty-eight hours' duration. She was attended on the occasion by the late Dr Christie, an eminent physician of Cheltenham, who for more than a year before her decease, had satisfied himself of the fact. The detailed particulars were communicated to me by Dr Christie, by whose permission I had an opportunity of witnessing the examination of the body. When laid out for dissection, its great development was very striking—equalling that of a girl ten or eleven years of age. The mammæ were unusually large, the mons veneris collapsed, but well covered with hair, the labia pudendi sparingly so, though these organs themselves were of unusual size for a child. The development of the pelvis, and of all the deep-seated genitals was very considerable ; and the lower limbs were proportionately large.

She was of a fair complexion ; and her hair, which was of a dark-brown colour, was very plentiful. In the absence of her periodical ailments, she would enter into all the amusements of young persons of her own age ; but when she was indisposed, she was exceedingly reserved, and would withdraw from all her playful occupations. When interrogated by familiar acquaintances as to her reason for absenting herself on these occasions from the amusements of other children, she would answer that she was indisposed ; but when the same question was proposed to her by those with whom she was not intimate, she would merely blush, without making any reply. There were other young females in the same family, but in them the function referred to manifested no irregularity. I deem it quite unnecessary to refer to other cases of premature menstruation, for they have have been frequently observed, and the periodical literature of our profession abounds with them.

History of a somewhat unusual Case of Spasmodic Affection of the Windpipe. By Robert Paterson, M.D., F.R.C.P., Physician to the Leith Dispensary, &c.

E. S—, a healthy looking girl, about 18 years of age, and lately arrived from a remote district in the north of Scotland, where she was born and brought up, has always enjoyed good health, and has escaped the most of the diseases of childhood. The menstrual functions are and have always been quite regularly performed. Towards the end of the month of May 1844, she was exposed rather suddenly to much cold and damp, shortly after which she experienced several violent rigors, subsequently to which she passed a restless and feverish night, with cough and hoarseness. The usual domestic remedies were had recourse to for a few days, but without effect; and she was visited professionally on the 8th of June following. The symptoms which presented themselves at this time were those of fever, accompanied with pain in the throat, hoarseness, and a frequent dry cough. There was no expectoration. Tongue foul. Pulse upwards of a hundred. Chest sounds well on percussion all over. The respiration is also natural, and no unusual sound is to be heard through the stethescope over larynx or trachea. She was bled generally, and ordered leeches to throat, and purgative medicine.

From this period up to the 22d of July, her symptoms continued rather to increase in severity, in spite of frequent local bleedings, large blisters, issues, calomel and opium, &c. On the evening of the day above mentioned, she was sitting up in the bed, conversing with her friends, when a sudden alarm of fire was given in the neighbourhood. Her friends rushed out of the house to see and make inquiries regarding it; and, upon returning, they found to their amazement that she had completely lost her voice. She spoke in soft whispers, and stated that upon their going out and leaving her alone in bed, she became much alarmed, and that upon calling for her mother, whom she supposed she heard in the next room, she then found her voice was gone. Her other symptoms were not improved after this event. The hoarseness was now of course away, but the hacking cough which was formerly mentioned, gradually became converted into a most peculiar kind of bark, very much indeed like the bark of a dog. There was first a full inspiration, generally accompanied with a crowing sound, which again was immediately followed by 3 or 4 forcible expirations, accompanied with a hoarse bark, which made it not unaptly be compared by all who heard it to the hoarse bark of a dog.

The symptoms which we have previously described, along with the peculiar barking cough, became daily more aggravated; and, on the 23d of August, the following was the state in which this

patient was found :—Her countenance was expressive of anxiety, but not emaciated—pulse weak, about 100—breathing rapid, and accomplished with difficulty—inspiration long, and sometimes accompanied with a wheezing sound; every few seconds 3 or 4 expiratory attempts occur together, and are accompanied with the peculiar barking noise which has been already described.

The breathing is subject to exacerbations, and they now occur regularly every 24 hours. These paroxysms generally begin about 6 p.m., and continue till midnight. They are so severe as often to render it necessary for her to seize hold of the bed-post, or the nearest fixed object, to enable her to breathe. Shortly after midnight, it generally happens that the breathing becomes calmer, and she then sinks into a short and disturbed sleep, but unaccompanied with noisy respiration. There is no discharge of limpid urine after the paroxysm. The menstrual function is not so regular. The tongue is now clean, and bowels natural. Upon examining the throat externally, it is slightly painful to the touch, but no swelling, thickening, ulceration, or other disease, internally, can be discovered, either by the sight or touch.

For about a week longer, the symptoms of this case began gradually to assume a more serious character. The paroxysms becoming of longer duration, more frequent, and threatening suffocation, it was therefore thought advisable to make an opening in the trachea. Before doing so, however, it was most fortunately considered possible that the disease might be chiefly nervous, and that it would be well to try the effects of remedies against this class of diseases, before having recourse to the operation of tracheotomy. This view of the case was further promoted by the fact, that by directing the patient's interest (even during a paroxysm) to an interesting topic of conversation, and without paying any attention to her, the difficulty of breathing seemed to cease for a time. According to this view of the case, therefore, croton oil and carb. of iron, were administered daily—the issues were healed up—she was put upon a better diet—and recommended to be kept as cheerful as possible.

At first, the effect of these remedies seemed slight. They were, however, perseveringly employed, and, ere long, a decided amendment became visible. The daily paroxysms began to diminish in duration and frequency—she slept longer and more quietly—she had less noise in breathing—and the barking cough became less severe. In about 3 weeks from their commencement, the daily paroxysms had entirely disappeared, and she was otherwise much better. The barking cough only came on when she was agitated; but the voice, completely absent at first, began to manifest itself in a soft whisper, soon in a little chirping sound, and so on gradually till the 6th day of November, when she spoke in as perfect a voice as she had ever previously been possessed of. Her general health soon improved, the uterine functions

were performed regularly, and she is now in the enjoyment of perfect health again.

During the course of this tedious and perplexing case, I was kindly assisted by the valuable advice of Dr Combe of Leith, and Drs Duncan and Paterson of Edinburgh. It had a duration of 6 months in all, nearly three months of which were passed under a state of the most severe suffering. The termination of the case proved its purely nervous character, but at first it was considered to be of an inflammatory nature. It therefore becomes interesting, as well as instructive, shortly to review the history and symptoms of such a case, so that we may, if possible, distinguish what are the symptoms which would lead us in future to determine whether cases of a similar description are to be treated as nervous or inflammatory. The disease, in this instance, set in, upon a constitution unimpaired and healthy—it set in, after sudden exposure to cold and damp—it set in, with rigors and symptoms of pyrexia; and the course it followed for a time, was precisely that of an inflammatory disease. On the other hand, the patient was a young female, extremely nervous—the aphonia came on after a fright—the paroxysms were followed by quiet sleep—and the difficulty of breathing disappeared when the patient's attention was occupied otherwise. The latter symptoms were probably perfectly sufficient to mark the disease as chiefly nervous. I am still disposed to think, however, that the commencement of this girl's disease may have been inflammatory, and it would be a question in future, how far, in a case of a similar description, we would be justified in at once having recourse to the remedies fitted for nervous diseases to the exclusion of those for the treatment of inflammatory action.

Severe and rapid blistering has been found effectual in frightening away the disease in cases like the above. Here, however, it was had recourse to early and severely without the slightest benefit. The symptoms, however, which we have enumerated, led to the belief that no organic disease existed—led also to the trial of the remedies which were latterly found effectual—and led to the happy termination of a case, of as perplexing a nature as is rarely met with in practice.

Leith, June 21, 1845.

Part II.

SURVEY OF THE RECENT LITERATURE OF THE HISTORY AND TREATMENT OF DISEASES.

The Editor of the Northern Journal of Medicine has much pleasure in presenting his readers with part of the first of a series of "Reports on Diseases," which it is intended to continue regularly in the future numbers.

It is proposed that these shall be of a character calculated to be interesting to all classes of readers; but they are especially intended for those who, amid the pressure of important avocations, have little leisure, or, from other causes, have not the opportunity of keeping their information up to the present state of advancement of medical science. Many valuable additions to medicine now appear in our periodical literature; and as these isolated papers are often overlooked, and even when read, are ill calculated to make a permanent impression on the memory, it has been thought that the selection and arrangement of what is most important in our recent information on particular subjects, would confer a boon on the profession. To those anxious to extend their knowledge, it would be useful as an index, directing them to the most important sources of information; to those wishing a summary of our present knowledge, it will present a ready aid; while to those who are engaged in incessant practice, and who, often at a distance from any extensive library, wish to obtain additional information in reference to some particular case, these reports will be advantageously referred to as containing a digest of the most important and most recent information.

The Editor of the Northern Journal flatters himself that he possesses peculiar facilities of carrying out this plan, for as many of the stated contributors to the Journal are engaged in the teaching, as well as the practice of medicine, they are compelled constantly to add to their knowledge the most recent information, and thus are the more easily prepared to furnish these digested reports.

No. I.—*Bright's Disease of the Kidney.* By Alex. Wood, M.D., F.R.C.P., Lecturer on the Practice of Medicine.

PART I.—LITERARY HISTORY.

I. Synonymes.—Albuminous Nephritis (Rayer); Granular Disease of Kidneys (Craigie); Renal Disease, accompanied with secretion of albuminous urine (Bright, Gregory); Granular Degeneration of the Kidneys (Christison); Cachectic Inflamma-

tion of the Kidneys (Copland); Dropsy from Disease of Kidney (Darwall); Albuminuria (Martin-Solon).

It is a general opinion, that comparatively little importance attaches to names, but it is evident, that in all cases where a name conveys an erroneous impression, it is objectionable. If it be true, as many allege, that the disease in question is not a true inflammation of the kidney, then the name given by Rayer conveys a false impression; if Dr Corrigan is correct in maintaining that there are two distinct diseases of the kidney erroneously classed together, as Bright's disease, only one of which exhibits the granular deposit (Dublin Journal, vol. xxi. page 142), then the name adopted by so many authors, of granular disease of kidney, is liable to the same objection. If there are *functional* or sympathetic diseases of the kidney, in which the urine contains albumen, then the name used by Bright and Gregory would apply to many affections not usually recognised as cases of Bright's disease; while it would, in certain cases, exclude the very disease to which it was intended to apply, as both Drs Bright and Christison have remarked, the occasional total disappearanee of albumen from the urine in the progress of the disease.

The other synonymes which we have given, are all open to objections of a similar kind; and therefore we have preferred adopting a name, which implies nothing more than that Dr Bright was the first clearly to describe that particular disease.

II. Literary History.—As to speak in general terms, there are three phenomena, the coincidence of which evidently denotes the existence of Bright's disease, so each of these having been observed separately, constituted a distinct step in the discovery, the merit of Dr Bright consisted in his being the first to point out the relation which they bore to one another. These are, 1*st*, The dependence of certain forms of dropsy on diseases of the kidney; 2*d*, The existence of albumen in the urine in certain forms of dropsy; 3*d*, The referring of those cases in which dropsy and albuminous urine were coincident to certain particular and definite organic alterations of the kidneys.

Let us examine the records of each of these in detail.

1. *The dependence of certain forms of dropsy on diseases of the Kidney.*

Although Dr Bright seems to assume that the connection between dropsy and disease of the kidney had attracted "little attention" (Reports, vol. i. p. 2), and although the neglect into which the doctrine had fallen in modern times fully justifies him in doing so, yet among the ancients the fact was well known, and its importance duly recognised.

"Dropsies," observes Hippocrates, "succeeding to acute mala-

dies, are always formidable * * *. Some of these *proceed from the flanks and loins*, others from the liver. In the first variety, the feet swell, and the patient suffers from obstinate diarrhœa, which however fails either to reduce the swelling or diminish the pain of the flanks and loins."—(Hippocrates Prognostics, § 21.) Galen, Aetius, and the Arabian physicians speak still more distinctly; Sauvages speaks of an anasarca urinosa, though he believes it generally to be connected with calculous disorder.

Many authors had drawn attention to the existence of dropsy, in which neither liver nor spleen were affected. (See Caesarean Academy, Dec. 3, a. 5 and 6, Obs. xiii. 168, &c.) To these Morgagni refers, and describes affections of the kidney accompanied with dropsy; in particular, in the case of a man who died suddenly with dropsical effusion, viz. anasarca of the left lower extremity, ascites and hydrothorax, he thus describes the appearance of the kidneys:—

"Renis tandem utriusque structura intima confusa apparuit; neque deerant parvæ cellulæ humoris plenæ quarum aliqua (nam cæteræ aliquanto interiores latebant) ex parte se in superficie ostendebat."—(De Sedibus, &c. epist. xlii. 11); and of another case cut off by the same disease, he remarks:—

"Ren uterque inæquali erat superficie et maculis albis hic illic qua subsidebat variegata."

But even in the Sepulchretum of Bonet we find cases which might have led Morgagni to this investigation, among others, from Timæus, that of the illustrious Baron Stielke, who, after being long affected with arthritic pains, was seized with jaundice, and died of ascites. The following is the account of the morbid appearances:—

"Defuncti corpus apperui, ubi præter alia notatu digna inveni. 1. Calculum in vesica fellis, icteritiæ causam, &c. 2. Hepar maxima quidem ex parte salvum, sed croceo colore tinctum conspiciebatur. 3. Cor, pulmones, lien, ventriculus, mesenterium et omentum naturaliter fuere constituta. 4. Intestina maculis nigris et livescentibus hinc inde distincta. 5. *Renes flaccidi et quod notabile, adeo parvi ut magnitudinem nucis juglandis vix æquarent.*"—(Lib. III. § xxi. Obs. viii.)

Lastly, to come down to modern times, we find in the "Clinique Medicale" of Andral, the description of the case of a young woman, 20 years of age, who died of double hydrothorax, ascites, and anasarca.

In describing the dissection of her body, M. Andral, after remarking the sound condition of liver, spleen, pancreas, and digestive tubes, continues—

"But there was another organ which presented a change, which must not be lost sight of; that organ was the kidney, of which the external cortical, and part of the tubular substance, consisted merely of a whitish granular tissue, divided into small masses or

grains, which were separated by the remains of the reddish tissue natural to the kidney. In several points, however, some cones of the tubular and mammillated substance were observed to be still intact. Did this particular alteration of the kidneys cause any obstacle to the free secretion of the urine, and consequently contribute more or less directly to the dropsy ?"—(Spillan's Andral, p. 278).

It is evident that the narration, in this case, goes no farther than to follow up what had been done from the time of Hippocrates, viz. to trace the connection between dropsy and kidney disease, and perhaps to describe a little more fully than Morgagni the appearance of the kidney; not a word is said of the existence of coagulable urine, and yet, strange to say, it has been made the foundation of an attempt to deprive Dr Bright of his claim to be considered the original observer of the disease,—an attempt which we are sorry to see countenanced by Andral himself in those editions of his great work which have appeared subsequently to the publication of Dr Bright.

This petty jealousy is unworthy of the position of Andral; for surely the extent of his observations in the case we have quoted as little justify the foot-note he has subsequently annexed to them, as they do the following passage which we quote from a French periodical. It is from the pen of M. le Docteur Fabre. After quoting Andral's case, he proceeds :—

" Que manque-t-il à cette description pour être une excellente observation de néphrite albumineuse ? La mention de l'albumine dans les urines. N'est-il pas naturel de penser que ce fait si remarquable et le maniere si précise dont M. Andral avait posait la question ont excercé une grand influence sur les recherches subséquentes de Bright, * * * * * * * * * * *. *La France peut donc à bon droit revendiquer une large part de l'honneur de la découverte.*"—(Bibliotheque de Med. Prac. tom. ii. p. 364).

2. *The existence of Albumen in the Urine in certain forms of Dropsy.*

Cotungo is generally admitted to have been the first to draw attention to the occasional presence of albumen in the urine. Setting out from the fact that the serum of ascites coagulates by heat, and observing the diminution of effusion, which often accompanied increase of the urine, and believing the general opinion of the time that the peritoneal effusion made its way out by the kidneys, he was curious to inquire whether it communicated to the urine its own property of coagulability. He made the experiment, and discovered the coincidence of dropsy and coagulable urine. —(De ischiade Nervosâ Commentarius, 1770, p. 24). Cruickshank, in 1797, remarked, that in general dropsies the urine coagulated by heat and the addition of nitric acid, and attempted

by this test to distinguish those dropsies which depended on organic alterations of the viscera.—(Rollo on Diabetes, p. 438.)

Nysten, in 1811, described the occurrence of albumen in the urine in a case attended by him, (Recherches de Phys. et Chemie. Pathologique, p. 253), and Dr Wells read a paper before the Medico-Chirurgical Society of London on 4th June 1811, in which he distinctly pointed out the coagulability of the urine in cases of dropsy, not secondary to scarlet fever, and even described the morbid appearances of the kidneys in some of these cases. This paper we shall again have occasion to refer to.

Lastly, in Dr Blackhall's work on Dropsy, the second edition of which was published in 1814, the first chapter is entitled "Dropsies distinguished by the urine as it is coagulable by heat or not coagulable," &c. In the same work we find chap. vi. headed "Of the Anasarca and General Dropsy, with Coagulable Urine."

3. *The referring of those Cases in which Dropsy and Albuminous Urine were coincident to certain particular and definite organic alterations of the Kidney.*

In the paper read by Dr Wells before the Medico-Chirurgical Society of London in 1811, before alluded to, we find the following passage:—

"I shall now mention what was seen in the body of another person, a soldier, 47 years old, who had likewise died dropsical, and in whose urine a considerable quantity of serum (albumen) had been present." Then after describing the state of the thoracic viscera, he proceeds, "The kidneys were much harder than they usually are. Their cortical part was thickened and changed in its structure, from the deposition of coagulable lymph, and there was a small quantity of pus in the pelvis of one of them. I do not conclude, however, from these appearances, and those which were found in the former case, that the kidneys, when the urine in dropsy contains much serum, are diseased. The morbid appearances in the kidneys might be altogether unconnected with the morbid secretion, and if they were not, a diseased action of the secreting vessels, which was in those cases induced by an organic disease of the glands, may probably arise from various other causes."—(Transactions of a Society, vol. iii. p. 219).

This passage shows us how near an approach Dr Wells made to the discovery which has since rendered the name of Dr Bright so universally known, and might convince M. Andral that an English physician, many years previously, was after all much closer to it, than even he, who would willingly claim some of the merit of the discovery.

In 1827, Dr Bright published the first volume of his "Reports of Medical Cases," in which, among his "cases illustrative of some of the appearances observable on the examination of dis-

eases terminating in dropsical effusion—and first of the kidney," he recounts sixteen cases, in which anasarca, with coagulable urine, was proved by necroscopical examination, to have been connected with what he then termed "granulated kidney."

In the observations on these cases, Dr Bright describes "three forms of disease of the kidney, passing almost into each other, and usually attended with decidedly coagulable urine, and two other deranged conditions of the kidneys in which the coagulation is sometimes observable."—(p. 69.)

The subject soon attracted attention. Dr Christison published an admirable paper in the Edinburgh Medical and Surgical Journal for 1829. Two years after, Dr Gregory, in the same Journal, still farther illustrated the subject. In 1837, the first volumes of the elaborate work of M. Rayer appeared in Paris, and the existence of an acute variety of the disease was first made known. In 1838, M. Martin-Solon published in Paris his treatise de l'Albuminurie ou Hydropisie causée par la Maladie des Reins, &c., who, besides enriching our literature with some valuable cases of the disease, and remarks upon them, has added much to our knowledge of the interesting class of cases in which the urine is coagulable without the presence of disease of the kidneys. The succeeding year, Dr Christison published his masterly monograph, which proved that the Edinburgh School still kept its place in advance of Modern Pathology.

To be continued.

Part III.—REVIEWS.

1. *A Practical Treatise on Midwifery.* By M. Chailly, M.D., &c., Paris. Translated from the French, by G. S. Bedford, M.D., &c., Professor of Midwifery, University of New York. Illustrated with 216 Wood-Cuts. 8vo. New York, 1844. Pp. 530.
2. *Traité Pratique des Accouchmens.* Par F. J. Moreau, Professeur des Accouchmens, &c. Tomes 1 et 2. à Paris, 1841. A Practical Treatise on Midwifery, by F. J. Moreau, Professor of Midwifery, &c.
3. *The Principles and Practice of Obstetric Medicine and Surgery, &c., with* 110 *Plates.* By Francis H. Ramsbotham, M.D., &c. Second Edition, 8vo. London, 1844. pp. 732.

Although we entertain a high opinion of the ingenuity and industry of our Gallic brethren, yet, apart from all nationality, we

give a decided preference to the third of the Works which head this article. After affording a vidimus of the arrangement of each of these publications, we shall next proceed, by contrasting parallel portions from some of the more important chapters of each work, to give the reader an opportunity of judging of the correctness of our sentiments. M. Chailly divides his work into four parts, viz. *First*, the Organs concerned in Generation and Parturition; *secondly*, true and false Pregnancy; *thirdly*, Labours; *fourthly*, the Accidents and Diseases in the Puerperal State, and the Diseases of Children.—Professor Moreau treats of his subject under three heads, viz., *First*, the Organs concerned in Parturition; *secondly*, the Physiology of these Organs, their Diseases, and those of Pregnancy; and, *thirdly*, Labours.—Dr Ramsbotham considers his subject in the following order, viz., *First*, the Anatomy of the Pelvis and its Organs; *secondly*, the Operative department of the Art; *thirdly*, the Diseases in the Puerperal State; *fourthly*, those of Pregnancy; and, *fifthly*, there is a highly interesting Appendix added, which embraces an Historical Account of several very important objects appertaining to Midwifery. Although, in writing, the arrangement of a subject may be of little consequence to those who are familiar with it; yet to the uninitiated, a systematic connection of the various topics to be considered, must be of the first importance. We cannot certainly approve of the plan pursued by the two first authors, for subjects are separated, and treated of in different divisions of their respective works, which have a natural connection, and ought to have been included in the same division; while again, other topics are included in the same division, which have scarcely any relation with each other. M. Chailly, for example, describes the anatomy of the organs concerned in midwifery in one division of his work, while the physiology of these organs is considered in a separate division; and M. Moreau not only separates the anatomy from the physiology, but groups the latter and the diseases in the gravid and unimpregnated states together. We are far better satisfied with Dr Ramsbotham's arrangement, which is more natural and more easily followed, and consequently his work, as far as it goes, is much better adapted to the wants of the student, than either of the other publications under review.

It is supposed by some members of our profession, but we earnestly hope the opinion is by no means generally entertained, that systematic works on midwifery should be as devoid as possible of anatomical and physiological details. To such sentiments we are decidedly opposed for various reasons, and, among the rest, because it cannot for a moment be supposed, that men who neither study nor practice the obstetric art themselves, can describe the structure of the organs, nor treat of their functions, with that degree of interest and accuracy which is to be expected from those who devote their time to the study and practice of this department of

the profession. Be this as it may, M. Chailly, in the first sentence of his preface, states, that "the practical part of midwifery is what I particularly endeavour to present in this work; I have imbodied in it as briefly as possible, but always in sufficient detail, all the precepts, the excellence of which I have been enabled to test."

To afford the reader an opportunity of judging of M. Chailly's sufficiency of detail, we shall furnish his sentiments on the *sacro-coccygeal symphysis*, which, in an obstetrical point of view, is one of the most important joints of the pelvis. "The coccyx is united to the last bone of the sacrum by means of a fibro-cartilage, strengthened by anterior and posterior ligamentous fibres, which, stretching to all the pieces of this bone, unite them firmly to each other. The ossification of the fibro-cartilages, which are interposed between the various portions of these bones, does not take place until the female is somewhat advanced in age; this circumstance, which permits the coccyx to recede as it is pressed upon by the head of the foetus, at the time it is passing through the inferior strait, increases the length of the anterior-posterior diameter of this strait," p. 5. Compare with the foregoing the descriptions by Dr Ramsbotham of the same subject. "The coccygeal joints are of great value in the process of labour. Their mobility much facilitates the exit of the head by enlarging the outlet of the pelvis in the anterior-posterior direction. The increase of space thus gained, amounts to an inch or more; for the point of the bone may be bent backwards to a line continuous with the sacrum, or even beyond, so as to form an angle outwards. Occasionally, indeed, the coccyx becomes anchylosed to the sacrum, and its own joints are destroyed by a deposition of osseous matter between the separate pieces, so that their mobility is lost, and the bone becomes, as it were, a portion of the sacrum itself. Such a consolidation must offer a considerable impediment to the expulsion of the head by contracting the pelvic outlet; and this, though a rare, is therefore another cause of lingering labour. It is most usually met with in women bearing a first child late in life, and those who have been accustomed to sit through the principal part of the day, as is the case with milliners. When the coccyx is in this state, it will sometimes break in labour: this may happen as well during a strong, unaided uterine contraction, as under the employment of instruments," p. 13. The practical value of the latter quotation is so superior to that which precedes it, that there is no room for comparison. We are, upon the whole, well pleased with the observations of Professor Moreau on the same point (p. 9), though they are not equal in importance to those of the English author.

Our three authors differ most materially in their sentiments regarding the changes experienced, on the approach of, or during parturition, by the pelvic joints; and, as this is a subject of great

importance, we shall carefully consider their respective opinions. Hippocrates believed that a partial separation of the bones of the pelvis happened during parturition; and Galen, with Aetius and Avicenna, adopted the same views. In the 16th century, however, this opinion was called in question; and Fernel, among others, denied the probability of such a change. A case occurred in Paris in 1579, which, while it corrected the opinions of some that denied the occurrence of the changes referred to, ought to have modified the sentiments of both parties; but there were still some who refused their assent. The case in question was that of a female aged 24, who, for the murder of her infant, was executed 10 days after delivery. This was deemed a most favourable opportunity for setting at rest a question which had long excited intense interest; and, accordingly, many men of eminence repaired to witness the examination of the body, which, as far as a solitary illustration could be relied on, was quite conclusive of the opinion that a partial separation of the pelvic bones happens during labour, or on the approach of that process. In our own times, there are individual members of our profession, who entertain very opposite opinions on this subject; but we must confess that we feel at all times disposed to receive, with a respectable degree of caution, the opinions not only of the pure anatomist and physiologist, but also those of such of our brethren as are not practically conversant with this department, or who are mere spectators, but are not called upon to explain those phenomena which frequently present themselves to their notice during their avocations in practice. Dr Ramsbotham, writing on this subject, observes (p. 20), "such a separation may possibly take place in the lower animals, but it is certainly not usual in the human subject," &c. M. Chailly, while he admits the alleged change, positively denies that it confers any advantage on the patient; and he states (p. 3), that "he has convinced himself by numerous experiments made on the pelvis of women recently delivered, that the fact is not so;" the author does not inform us what was the nature of these experiments. M. Moreau is not only decidedly of opinion that a certain degree of relaxation of the pelvic joinings takes place, but believes that a woman may be benefited by such a change; and concludes his sentiments as follows:—"Mais si nous remarquons que, dans la majeure partie des cas, le volume de la tête du foetus est inferieur à l'etendue de la cavité osseuse qu'elle est destinée à parcourir, nous verrons que cette utilité n'est pas aussi grande qu'on l'a pretendu, et qu'elle ne seroit tout au plus evidente que dans quelques cas rares, où la tête et le cercle osseux du bassin sont dans des rapports tellement, qu'une difference de quelques lignes, en plus ou en moins, peut permettre ou empêcher la terminaison de l'accouchment," p. 44.

That the change in question, if not constant, is of frequent

occurrence, we have often satisfied ourselves, not by any experiments, but by ocular inspection in females who died in childbed. In some instances the degree of relaxation is little more than observable—in others, sufficient for the back of a thick knife to be insinuated betwixt the connected bones; but in a third set of cases, the separation may not be at all obvious. Were the relaxation more extensive than we have just stated—were it to amount to half an inch or more at any one of the symphyses, but more especially if several of the joints were thus affected, we should consider the change, certainly not as an effort of nature to relieve the parent, but as a state of disease, which would assuredly increase her sufferings. We by no means wish it to be understood that a female with a pelvis considerably reduced below the natural standard would be benefited by the very trifling degree of separation referred to; but we certainly coincide in opinion with M. Moreau, that, under particular circumstances, immediately to be specified, the amount of amplification of the pelvis resulting from very trivial relaxation, even of its different symphyses, must be productive of the happiest effects. The pelvis may be considered as a hoop for example, the circle of which, as was satisfactorily shown by Baudelocque in his experiments in connection with the Sigaultian operation, would not be materially enlarged, even by a considerable separation, at any one of the pelvic joints in particular, as, for instance, that of the pubes. But if this latter joint, and those resulting from the connection of the ilia with the sacrum on each side were all to yield, as most certainly happens in a majority of cases, on the approach of, or during parturition, though not to a greater extent than two lines each, the amplification of the pelvis generally would be much more extensive than would result from relaxation at one particular point. It must be well known to men engaged in obstetric practice, that cases are met with in which the pelvis affords no surplus space for the transit of the foetal head; and in which, as must be obvious to any one capable of reflection, were the volume of the latter increased by no greater extent than would arise from surrounding it with a towel, or the capacity of the former reduced in the same ratio by being lined with a similar material, the result, without the trivial separation for which we have been contending, might be destructive to the foetus. Finally, in further support of our sentiments regarding this important question, we may state, that in those distressing cases where we are obliged to have recourse to the painful alternative of destroying the foetus before a separation betwixt it and the parent can be affected, in some instances a mere perforation of the cranium without the removal of any portion of its bones, or of its contents, except the blood which is effused after the use of the perforator, is quite sufficient to enable the uterine efforts to complete the delivery, trifling though the reduction of the head must be, consequent on its col-

lapse from the mere effusion of blood; thus showing clearly, as has been observed by M. Moreau, the momentous influence which may be exerted by the most trivial enlargement or confinement of the pelvis.

The works of M. Chailly and Dr Ramsbotham are almost entirely devoid of physiology. We do not, however, think the more highly of them for this omission. M. Moreau, on the contrary, enters largely on the subject, though some of his opinions are antiquated; and we regret, for example, to observe his credulity in regard to the properties of the catamenia, and that he considers this fluid in all respects the same as venous blood. On the former point, after referring to the extraordinary credulity of the ancients respecting the morbific influence exhaled by the menses, he observes at (p. 468), "De toutes ces opinions, la dernièr seule pourroit pentêtre n'être pas denuée de fondement et s'appuyer sur quelques faits, si toutefois on peut dér montrer qu'il n'y a pas eu simple coïncídence." If there was the slightest foundation for this extraordinary notion, we should really pity the inhabitants of large towns who must be constantly breathing a pestiferous atmosphere, since in such localities there must be thousands of women in a state of indisposition every day of the year. In speaking of the resemblance of the catamenia to venous blood, he says, "le sang des règles ne differs en rien de celui qu'on retirerait de la veine le cette femme ou tout autre," p. 469. M. Moreau, however, does not explain how it happens that healthy menstrual fluid does not coagulate, while venous blood invariably does; neither does he notice that the blood and the catamenia differ chemically—the latter, as was first pointed out by Lavagna, containing little or no fibrine, which we have ourselves corroborated. Notwithstanding the foregoing absurd opinions on this subject by our author, he, however, repudiates, and very properly, the speculations of Negrier, Gendrin, and Dr Girdwood, to the merit of priority in which, from his avidity for originality and fame, Dr Robert Lee lays claim, viz. that the performance of this function is influenced by the descent of Graaffian vesicles, and consequent uterine stimulation.

For the management of natural labour, there are ample directions by each of the three authors, those by Dr Ramsbotham being not only by far the fullest, but the best suited to prevent our offending female delicacy. When summoned to a female in labour, M. Chailly, p. 204, recommends to the practitioner "always to supply himself with the forceps." However proper it may be to act on this advice in provincial practice, we should consider it most useless and objectionable counsel for such of our brethren as live in towns; for in a practice of nearly 26 years' duration, we could not name a single instance in which a patient under our care suffered any detriment during the time required for procuring instruments. Were the practitioner, as above in-

culcated, invariably to furnish himself with instruments, the consequence, it is our firm belief, would be their occasional use to save himself time and trouble; and it is quite unnecessary to point out how injurious such conduct might prove to the patient, and sooner or later to the medical attendant himself. The last named author, although he cautions the practitioner, except under particular circumstances, against exposing the patient, and having too many persons in the lying-in room, nevertheless practises the touchée while the woman is erect, but prefers however the recumbent posture, while, as appears from a wretched woodcut representation, he delivers her lying on her back, thereby rendering exposure unavoidable. M. Chailly, instead of a temporary couch during labour, as recommended by M. Moreau, very properly prefers that the patient should, from the first, be placed in that bed which she is to occupy during her confinement. If there be no other objection to the plan of M. Morcau, there is this obvious one—the impropriety of disturbing the patient so soon after delivery, which, in a case where the uterus had been enfeebled from any particular cause, might be followed by hemorrhage. We have heard of instances of uterine effusions having been renewed, and even proving fatal, from a woman merely changing her position from one side to the other in bed.

The descriptions by these two writers, of the manner in which the foetus traverses the pelvis, are, to ourselves, tiresome to a degree, notwithstanding the interest, it may be presumed, which we feel in the subject; while their divisions of parturition, with that passion for generalization so characteristic of French writers, is so minute, as to perplex the uninitiated. The same portions of Dr Ramsbotham's writings are as superior to those of the other two authors as any thing can be conceived; his matter is rich in substance, his precepts for the management of the sex during delivery chaste and delicate, his division of the subject of parturition very simple and easily followed, and his detail ample.

In selecting for criticism some of the more important chapters, we shall next consider the opinions of our three authors regarding the management of brow and face presentations. At p. 163, Dr Ramsbotham expresses himself as follows:—"Inasmuch as a considerably greater space is required under a presentation of the brow than when the vertex depends; inasmuch as there exists such a disposition to convert the case into a face presentation; and inasmuch as the labour is usually protracted, and attended with a proportionably increased degree of pain; it would naturally follow that we should endeavour to place the head in a more favourable position," &c. And, again, the author observes, "This object can frequently be gained, if the position be detected soon after the rupture of the membranes, and before the head has perfectly engaged in the pelvic cavity." M. Moreau, p. 91, vol. ii., after informing us that every author to the time of Baude-

locque, agreed in the opinion that these labours were very difficult, and dangerous for the foetus and for the parent, and that all, or almost all, advised these presentations to be modified, and when this could not be accomplished, to terminate the case artificially; he then goes on to state, "C'est contre cette manière de voir que nous nous sommes élévé dans nos premier cours publics, et que nous n'avons cessé de le faire depuis. Il ne faut pas croire cependant que, dans tous les cas, la nature soit assez puissante pour les terminer seule et sans l'intervention de l'art." M. Chailly, at p. 390, observes, "Before the time of P. Patal, the opinion was generally received, that the presentation of the face was not susceptible of spontaneous termination; it was he therefore who first laid down the principle, that not only could the expulsion, in this case, be terminated by nature alone, but that this presentation is favourable to the mother and child, and should be placed in the category of natural labours; to this latter doctrine Deleurie became a convert, but by Deventer, Roederer, and other continental practitioners, to the time of Madame Lachapelle, it was rejected. Baudelocque, Gardien, and Maygrier, though they considered spontaneous delivery in such cases possible, nevertheless recommended an effort to be made to rectify the position of the head. Madame Lachapelle stated as a principle, that such labours should be left to nature, because 42 out of 72 cases terminated favourably." Naegele, Stoltz, P. Dubois, and Velpeau, are also said by our author to be in favour of trusting deliveries of this character to nature. M. Chailly then concludes by observing, that,—"In truth, if we merely consult experience, and consider the diameters concerned in the descent and delivery of the face and vertex, which have nearly the same dimensions, we shall naturally be induced to admit the spontaneous termination as possible, provided always the chin passes under the pubic arcade; for it would be otherwise if it passed into the concavity of the sacrum. Thus, although I concur with Madame Lachapelle as to the manner in which things take place in the majority of cases, yet I cannot consent to class this delivery among natural labours; I should fear, in doing so, that I might inspire young practitioners with too great security; and as this expulsion, although most usually spontaneous, frequently compromises the life of the foetus, and calls for the interference of art, it has appeared to me more rational to comprise it among labours that are spontaneous, and often natural."

Although we cannot in too strong language deprecate the doctrine promulgated by M. M. Moreau and Chailly, and favoured by some others of our brethren whose opinions are calculated to influence the timid and inexperienced, yet as human life is held in less estimation on the continent than that of the lower animals in some other countries, as may be inferred from the recklessness with which the most terrific instruments are used, and for-

midable and useless operations recommended; as for instance the huge obstetric forceps employed, and the tremendous force exerted with it, by the operator using both hands for the purpose of traction; the introduction into the uterine cavity for crushing the bones of the foetal cranium into fragments, of the cephalotribe, a contrivance, the danger inseparable from the employment of which, no man can contemplate without horror; and the frequent, but in almost every instance unnecessary, and invariably most dangerous practice, of making incisions into the os and cervix uteri, both in the unimpregnated and parturient states; —we say, that if men will still persist, on insufficient grounds, in these objectionable practices, we confess that we are in no way astonished at the temporizing systems advocated in brow and face presentations by those two writers. In Paris, M. Moreau enjoys a high reputation and great confidence among the better ranks; and we are astonished indeed beyond measure that the astounding sacrifice of human life, confessed to by Madame Lachapelle, as resulting from her procrastinating plan—42 children only having been preserved out of 72—should not have corrected his judgment, and induced him to protest emphatically against the conduct of those who persist in acting on the doctrine herein referred to. We cannot for a moment doubt that this lady had made a candid confession, in stating the number who suffered martyrdom for her principles, and that her removal from the responsible situation which she occupied was an event to be rejoiced at. As to M. Chailly, he tells us, that his work is based on the experience of 14 years, in situations that afforded him practical advantages, which, as we think, could not be surpassed, and that with the observations he was enabled therein to make, he has incorporated the opinions of M. P. Dubois, than whom we are ready to confess there cannot be a more accomplished practitioner. We certainly cannot compliment M. Chailly on the manner in which he has improved, what we have no hesitation in pronouncing enviable advantages, and instead of being guided by the spirit of Madame Lachapelle, or being the servile imitator of M. Dubois, we should have been much better pleased if he had acted a little more on his own responsibility; but it is quite clear that he will yet require a few years to mature his judgment, if indeed it be susceptible of improvement.

From the strictures we have made on brow and face presentations, it may readily be inferred, that we concur entirely in opinion with Dr Ramsbotham, from whose writings, in addition to what we have already borrowed from them, a very brief quotation will most satisfactorily establish the correctness of our sentiments. In stating the plan which he is accustomed to pursue, in endeavouring to rectify the position of the head in these cases, the author at p. 163 observes,—"It only requires that steady pressure should be made upon the brow with the extremity of the finger during the urgency of pain, so that the forehead may be arrested

at the spot to which it has attained, and the power of the uterus be expended upon the back part of the head. It is then usually observed, that the head is bent forward on the neck as on a hinge." That this practice, when resorted to at a proper period, will most generally succeed, we are fully satisfied; but that it will equally fail, if not adopted until after the rupture of the membranes, and the descent of the head to a considerable extent into the pelvic cavity, is not less certain; for although we may succeed in giving the face a posterior inclination, yet as we cannot also change the position of the body, owing to its being closely embraced by the contracted uterus, the head, whenever the counter-pressure is removed, will resume its former unfavourable position. We never intended to deny that the action of the uterus, in occasional instances, will accomplish the required change without artificial interference; but as no one can predict whether this change shall happen or not, while it is certain that when the unaided efforts of the parent have not succeeded, such labours, with very few exceptions, will be protracted and painful for the mother, and dangerous to the foetus, we do most solemnly protest against the system of non-interference.

On the management of the face presentation, we cannot do better than to introduce Dr Ramsbotham's sentiments, who, at p. 166, remarks—"But suppose, on watching the case, we find no advantage gained—no alteration in the position of the head—no advance from hour to hour—what then is to be done? We must here also act upon the same unerring principles before laid down—wait till symptoms require our interference, and then use that instrument which seems most applicable to the emergency. For it is impossible by any counter pressure to make a beneficial change in the situation of the head under a face presentation. We cannot cause the head to turn upon the neck so as to approximate the chin to the chest, by the pressure of the finger; nor can we, indeed, succeed in producing the same alteration by the introduction of the hand over the vertex, the adaptation of the points of the fingers to the occiput, and the application of gentle traction, as some have recommended. The vectis, then—provided any instrument be required—will be found the most appropriate. Face and ear presentations, indeed, appear to me the only cases in which the forceps does not possess an absolute superiority over the vectis." To show the success of the management pursued by our author, it would appear that, of 141 face cases, all except 7 were born alive, while by Madame Lachapelle's temporizing principles, as already stated, 30 of 72 children were still-born.

In perusing the portions of their respective works, devoted by each of the three authors to the important subject of Uterine Hemorrhage, it is but justice to state, that M. Moreau's observations are judicious, and his practice very much in unison with

that which is pursued by those of our own countrymen, who are respected for their experience and the soundness of their principles. In the work of Dr Ramsbotham, as was to be expected from the extensive opportunities which he has for so many years enjoyed for maturing his opinions, further enriched, as these must be, by the valuable precepts derived from his distinguished father, we have a sound body of doctrine on the subject, the perusal of which we would earnestly recommend to such of our brethren as have not yet seen this publication. This portion of M. Chailly's performance we unhesitatingly condemn ; for here again, when the os and cervix uteri are of an unyielding texture, repeated scarifications of those parts are recommended upon the authority of P. Dubois. We should have thought, and we state not from hearsay or hypothesis, but from long residence and actual observation, that for the females of France, from their less vigorous frame than that of our own countrywomen, such interference would be much less necessary than for females in Britain. We have no hesitation in declaring, after a long and extensive career of experience, that, in our opinion, this practice is an unnecessary experiment, and that we anticipate nothing advantageous from a perseverance in the employment of it. It is very remarkable, and tends not a little to corroborate our sentiments, that M. Moreau, although he recommends venesection, and all the ordinary means, does not even mention this doubtful practice, though occupying a considerable portion of the same field with M. Chailly. We do not mean to deny that cases may be met with, in which, from changes induced by disease, such an indurated condition of the os and cervix may be brought about as to require, in the event of any untoward symptom arising during parturition, the scarification of these parts ; but to use a familiar phrase, the occasions, as must be conceded by every man of experience, are few and far between.

We do not, in any of the three authors under review, find the slightest allusion to the supposed advantage, in placental presentation, of detaching and extracting the mass previously to the expulsion of the foetus ; nor is the spontaneous expulsion of the placenta antecedently to the birth of the child even noticed by either of our Gallic authors ; but Dr Ramsbotham gives numerous references to such cases. Recently Professor Simpson, of this city, has recommended that the placenta, in the labours referred to, should be detached and extracted before the foetus, and considered this plan to have originated with himself; but as, according to the old adage, there is nothing new under the sun ; so Dr Radford of Manchester writes, that this practice did not originate with Dr Simpson, but with the late Mr Kinder Wood, for whom, accordingly, Dr R. claims the merit of priority, and endeavours, by letters from several of his brethren, to show that his deceased friend had not only recommended this plan, but had

himself adopted it in his practice. We have no wish to implicate ourselves in the difference which, on this subject, has arisen between Drs Simpson and Radford, nor even to insinuate any thing against the justness of the claims made by the latter gentleman in favour of his deceased friend, though it does strike us as remarkable, that Dr Radford, while on a visit in this city, something less than a year ago, did not, when this subject was the topic of conversation, make known his knowledge of Mr Kinder Wood's views. To the practice which has given rise to these latter observations, we are by no means reconciled; for the very satisfactory reason among others—that after having for nearly 29 years been extensively and incessantly occupied in this department of the profession, only one case, fatal to the parent, has occurred under our management, though we have not deviated from the principles which were wont to regulate our conduct. And, as with the originator of the section of the pubes, so also with those who at present are the promoters of the practice referred to in the placental presentation, we do not hesitate to state our belief that they will one day or other disapprove of it entirely. For except the fact, which we have no wish to deny, that some women recovered in whom the expulsion of the placenta preceded that of the foetus, we cannot upon any correct and substantial principle we are acquainted with, reconcile to ourselves the propriety of recommending to our brethren the adoption of this practice. Though some women have survived under the above circumstances, this merely affords an example of the extraordinary efforts which, under the most formidable conditions, nature makes for the preservation of the system; and not by any means a justification, in all cases, for imitating her steps.

In conclusion, although we have passed unnoticed several important subjects, yet some apology is due for the length of our observations on the works under review; but in reality it is so gratifying to be afforded occasional opportunities of turning our attention from such common-place productions, as Observations, Essays, Memoirs, &c., to notice systematic works from the pen of masters in the art, that we have been imperceptibly seduced from the plan which we ought to have observed consistently with the scope of this Journal. Of M. Chailly's work, we have to observe in parting, that no reflecting practitioner of this country is likely to be misled by those principles advocated therein, which, as conscientious reviewers, we have thought it our imperative duty to condemn; and we certainly consider it one of the most objectionable publications which can be put into the hands of the student, if it were for no other reason than the proneness of the author to use the knife, knowing how much the less experienced part of our brethren are taken with a bold practice. This objection has not escaped even the observation of the American editor, charmed as our transatlantic brethren generally are with

operations and every thing of French origin. Of Professor Moreau we desire to record our sentiments in terms of unfeigned respect. With the exception of his far too numerous subdivisions of the operative department of his subject, we have no serious objection to his publication, which, we repeat, displays industry, inculcates safe principles, and contains sound doctrine. The work of Dr Ramsbotham, as far as it goes, is deservedly so well and so highly appreciated, as to require no eulogium from us. All the other publications of this nature, of London origin, sink into the shade when compared to it. We do not prize it on account of its embellishments, which, as works of art are beautifully executed, but of which many are useless—we value it on account of the immense body of sound doctrine which it contains. We are not stating too much when we say, that it is what the work of the late amiable Dr Denman was considered in the zenith of its reputation—chaste in language, classical in composition, happy in point of arrangement, and abounding in numerous and most interesting illustrations on all subjects of importance.

The Structure of the Lungs, Anatomically and Physiologically considered, with a view to exemplify or set forth, by instance or example, the Wisdom, Power, and Goodness of God, as declared in Holy Writ. The Warneford Prize Essay for the Year 1844. By John Moore, Student of the Queen's College, and Resident Medical Officer of the Queen's Hospital, Birmingham. London, 1845.

There is a fashion in literature, as well as in most other things, and the tide has recently set in rather strongly in favour of the class of essays to which the work before us belongs.

The branch of natural theology which it illustrates has been especially indebted to British authors, for, with the exception of the laborious Dutch work of Dr Nieuwentyt, it is in the pages of Derham, Ray, Macculloch, or in the masterly production of Paley, that we are to look for our chief illustrations of it. It is singular, that since the time of the latter author, while the literature of the subject has multiplied to an extraordinary extent, it cannot number among its numerous contributions a single one which has been the *spontaneous* offspring of a mind earnest in the inculcation of important truth.

We know not whether our readers share in the dislike which we entertain for prize essays. It may be true that, after all, the motives which lead to their composition are not very different from those under which most of the works of the present day are undertaken, but at least it is more prominently and offensively put forward. It substitutes a false for the only true stimulus to

exertion, and tends to make the "love and wooing of truth," for its own sake, a rare and uncommon virtue.

Those who have early accustomed themselves to write under such ignoble inspiration, will seldom live beyond their own generation.

We make these remarks in no disparagement of the author of the able essay before us, and merely seize the opportunity of deprecating the fashion of prize essays at present so prevalent. The subject of the present performance, too, is unfortunate, as reminding us of the comparative failure of a similar attempt on a much larger scale, in the case of the Bridgewater Treatises.

The essay of Mr Moore is divided into two parts; the first giving a good summary of the anatomy and physiology of the breathing organs in the different classes of the animal kingdom; the second, applying these descriptions to the special subject of the essay, and illustrating from them the power, wisdom, and goodness of the Creator of the universe. This division we cannot help regarding as unfortunate, for the unnatural disjunction of the facts from the arguments founded upon them must lead either to much unnecessary repetition, or to frequent omissions. The latter seems to be the chief fault of our author.

Thus, for example, while in the first part of the essay we have the comparative anatomy of the respiratory organs ably discussed, we miss altogether in the second the arguments deducible from these.

If the prescribed subject limited the author to the consideration of the human lungs, then the description of the breath-apparatus in the lower animals, in the first part of the essay, is out of place.

If, on the other hand, this field was allowed him, we cannot help thinking, that while dwelling with a minuteness almost tedious on some *comparatively* unimportant details of his subject, he has missed altogether a class of arguments at once most important and most interesting.

Take, for example, the various changes in the respiratory organs of the Batrachian reptiles, coresponding to the changes in the element of which they are for the time inhabitants; what can more strikingly illustrate the adaptation and varying of means to suit a prescribed end, and therefore by plain inference, show more clearly the prospective wisdom and bounty of the Creator?

Or, taking those creatures which permanently inhabit either water or land; why should not the same apparatus have answered both? Or why, with striking similarity, instancing the unity of design, is there yet such a variety as is best suited to the element where the creature is found? Why is it, that while in most fishes the water swallowed by the mouth is forced by the action of the muscles of the throat through the gills, that in those fishes which employ their mouths as suckers, adhering firmly by them, the gills

are so constructed as to be independent of the mouth for their supply of fluid? Why is it, that in those fishes whose habits force them at times to remain long out of water, as the Anabas, the bones of the throat are so constructed as to act as reservoirs of the all-important fluid, from which the vital air is to be extracted? Why is it, that in birds the lungs are so constructed that the blood is twice exposed to the action of the air, so that the breathing organ is half the weight it would require to be if constructed on the same plan as that of quadrupeds?

Questions of this kind might be multiplied almost indefinitely, and we cannot help thinking that the solution of them would have increased the interest and strengthened the argument of the essay.

Within the limits which he has assigned to himself, Mr Moore has shewn much ingenuity in the selection of his proofs, although we think he is rather guilty of overstraining his quotations from Scripture. The following passage gives a favourable specimen of the book:—

"What can more strikingly demonstrate the far-forward sight and prospective wisdom of God than the gradual development of the lungs during foetal existence? They are evidently unrequired (for present use) since the modified respiration which then occurs, is effected in the placenta; an insuperable obstacle to their use is also present in the liquor amnii, which everywhere envelopes the embryo. The temporary respiratory process which is now carried on, must however necessarily cease with the cessation of intra-uterine existence, and therefore have God's omniscience, omnipotence and benevolence pre-ordained and provided lungs especially fitted to inhale, at birth, the breath of life. These foetal and puerperal wonders call forth renewed expressions of admiration; they most forcibly convince us of the superficial nature of man's profoundest philosophy, and with equal power compel us to acknowledge that 'the treasures of Almighty wisdom and knowledge lie deep,' (Col. ii. 3); they serve, moreover, to bind together the conclusions of natural theology with the declarations of Holy Writ, and establish the analogy which exists between what a religious reasoner may gather from the phenomena of conception, embryotic growth and parturition, and the positive declarations of Scripture on those subjects.

"The testimonies of nature and Scripture, of faith and reason, concur in their joint reference of these things to the great first cause, the Father Almighty, maker of heaven and earth, and of all things visible and invisible. Nature and reason declare that these things must have a cause, for (as Tully says), 'nihil turpius physico quam fieri sine causa quidquam dicere.'* But faith and Scripture do more—they proclaim that cause to be Jehovah, the eternal, immutable, self-existent 'I am that I am,' (Exod. iii. 14), the terrible God, that liveth for ever and ever: it is he who reminds us in his Holy Word, that 'we know not the way of the spirit, nor how the bones do grow in the womb of her that is with child,' (Eccles. xi. 5); it is he who has taught our lips to address him as the great author of our being; it is his revealed will that we should hymn the wonders of his watchfulness over us, when as yet we lay in ante-natal darkness, that we should say with David, 'thou hast covered me in my mother's womb! I will give thanks unto thee, for I am fearfully and wonderfully made: my bones are

* De finibus, Lib. i. § 6.

not hid from thee, though I may be made secretly and fashioned beneath the earth; thine eyes did see my substance, yet, being imperfect; and in thy book were all my members written, which day by day were fashioned, when as yet there was none of them,' (Psalm cxxxix. 12, 13, 14, 15."

We cannot conclude this notice without expressing a most decided opinion, that the lithographs at the end of the book are any thing but an improvement, and are not only discreditable as works of art, from the badness of their execution, but calculated to convey to uninformed readers, erroneous ideas of the structures which they represent.

Remarks on Clause Thirty-Eight of a Bill (as amended by the Committee), for regulating the Profession of Physic and Surgery, 12mo, pp. 15. London, 1845.

Under the above title, there is a reprint of a letter which appeared in the Medical Times three or four weeks ago. The name of the author has been communicated to us. He is an eminent English provincial surgeon, well known by his writings. He complains, in particular, of the clause in which it is set forth "that none but persons registered as Physicians shall use the title of Doctor." The subject is ably handled, and a good case made out against the clause. In a few respects we dissent from the author's sentiments.

His objections dont interfere with any of the leading principles of the bill, of which he thinks very favourably. The designations of the several grades of medical men to be fixed by the bill, are no doubt matters of detail and arrangement; yet we cannot help thinking the right or wrong choice of these by the legislature may more concern the future welfare of the profession at large, than the enactment of some of its leading principles. This is why we think it worth while, since, if the bill is to go on, it has come to the stage for the discussion of details, to take this opportunity to indulge in some reflections on the right choice of designations for the several members of the medical profession.

We will begin with a quotation from the letter before us—

"As the amended bill refers to the whole empire, it will be quite allowable to select examples from any part of it; and we find in some portions of the kingdom, that surgeons of the highest grade, being at the same time doctors of medicine, now take the doctorial title; and even respectable general practitioners, where similarly qualified, do the same; this makes none of them physicians; but if the title have been legally and properly obtained by graduation, they have a claim to it, and cannot be deprived of it, neither does the amended bill contemplate depriving them of it, but will leave them in the same privileges they now respectively enjoy. Under the contemplated regulations for obtaining the title of doctor of medicine in future, there can be no proper motive for preventing those

who attain the title from using it; but, on the contrary, students should rather be induced and encouraged to take the high course of education henceforth to be required, without reference to the grade in which they may subsequently register their names for practice. There ought to be no *Act of Parliament pressure* to make the well-educated register in the higher, in preference to the lower grade, as the former will invariably be selected by individuals having the option, if the public want and desire them, and will remunerate them accordingly. We do not find hungry, half-starved physicians to be very valuable members of society, or of the profession; indeed they are even at present often below, far below, the respectable surgeon-apothecary. It is incontrovertible, that the better the lower grade of the medical profession is educated, the fewer are required in the higher; this is as certain as that the effect follows its cause, and has been proved practically of late years in England, and it is a fact which supplies the powerful reason why the higher grades should not have the sole regulation of the education of the lower, whom it is their interest to depress for their own elevation."—p. 8, 9.

Our author here consents to a limitation of the word "Physician," at the same time that he so manfully vindicates the right of the general practitioner who has a degree to the title of Doctor. We do not feel satisfied that it is for the advantage either of the public, or of the profession at large, that the name of physician should be so limited.

It is strange there should be any war of opinion as to the definition of a physician. There are not many people of common education, who, if asked, would make any difficulty about saying what a physician is. Nay, take any illiterate person at random from the streets, and he or she would pronounce on a *physicianer* as readily as on a cod-fish or mackerel. Nor will the description in either case be far from the genuine and universal sense of the word. But once step within the medical circle, and it is odds if you meet with any two to agree in describing him by the same characters. One will hold by the comfortable definition of guinea fees as the minimum for every visit; another thinks M.D. a synonyme; a third makes the Fellowship of a College a "sine qua non;" a fourth will have none of these marks, if he has ever opened a vein or carried a lancet about his person.

Let us hear our author on this subject.

"My idea of a Physician is old-fashioned, being derived from observation and experience during thirty or forty years, and were I to describe a real Physician, I should say, 'he is a Graduate, or Doctor of Medicine, of an University—practises in medical cases, rejecting operative surgery—prescribes for his patient, but supplies no medicines—takes no smaller fee than can be paid in golden coin of the realm, as the prompt reward for his time and professional talent.' It is farcical to consider a man a Physician, because he is a Doctor of Medicine, upon the authority of even a proper diploma, and takes the title or prefix of Doctor; yet this is the assumption carried through every part of the New Bill, and every speech made in the House of Commons, referring to the subject, supports the erroneous idea."—p. 4.

In the above account of a physician, there is much that is merely local, the mere result of the circumstances of this country in past times. At periods when there is but a small number of fully edu-

cated medical men in a country, their services are very much confined to the wealthy, and their remuneration is proportionately liberal, while inferior grades of practitioners arise to supply the wants of the public at large. Some ages back, the "barbæ tonsores," the lowest grade of medical practitioners, flourished in all the countries of Europe. In most countries, an order of surgeons, content with lower fees than the physicians, succeeded the "barbæ tonsores." In England, the apothecaries, whose office should have been confined to pharmacy, stept in and possessed themselves of no small share of the public patronage. The existence of apothecaries, as an order of practitioners, is a purely local anomaly, and one certainly which should not be suffered to continue though but in name. As the education of the practitioners who succeeded the old "barbæ tonsores" improved, the field for the physician was gradually narrowed, and, out of the metropolis and the largest towns, the physician could no longer maintain his ground, except as a consulting physician—that is, not treating cases himself, but giving his advice to the actual practitioner when called on. And hence has originated the confusion of ideas by which the consulting physician is regarded as entitled to monopolize the name of physician. The amount of his fee, the mode of receiving it, even the degree of a university, or the fellowship of a corporation, are not, in the universal sense, essentials to the character of a physician. Tried by those tests, Hippocrates, the prince of physicians, would be expunged from the roll of physicians; he could not have registered as a physician. He held no degree, was a fellow of no college. In the universal sense, then, it is obvious, that a physician, *ἰατρος*, medicus, is one whose medical education is complete, who is competent to treat all internal diseases, in as far as the actual state of the science permits; who declines no duties in the relief of the sick, except those of the surgeon. For some ages past, the received sense of the word physician within the limits of Christendom has been an educated medical man, who has obtained the degree of doctor from a university. The degree of doctor does not indeed constitute him a physician in the rigid sense of the word—it is merely the attestation of the university that he has had the opportunities of becoming a physician.

It is manifest, then, that the name physician has no such special signification, as should forbid its application to any person who is proved to be competent to treat internal diseases according to the best lights afforded by the science of medicine. In short, it will be no solecism in medicine for the legislature to judge, on pure grounds of expediency, whether or not it shall confer the title of physician on all fully educated medical men who do not confine themselves to the manual operations of surgery.

It is not strictly correct to say, that the general practitioner practises medicine, surgery, and midwifery. The country surgeon, no

doubt, does so almost invariably. But in the towns, and it is to be remembered there are many other towns in the empire besides the metropolis, there is a considerable division of labour even among general practitioners. A great number do not practise midwifery at all. Many do not practise surgery beyond the slight operations required in the treatment of internal diseases, such as venesection and the like. Others, again, having been educated as surgeons in the fullest manner, and being competent to all the operations of surgery, would confine themselves to pure surgical practice, but that the place they live in does not afford enough of occupation of that sort, so that they engage in the treatment of internal diseases. Others practise midwifery almost exclusively. There is indeed one mark by which, over England, the ordinary practitioner, however perfectly educated, and how much so ever he may abstain from surgical practice, is distinguished from the physician, namely, in practising pharmacy and supplying his patients with medicines. This practice is perhaps incompatible with the name of a physician. In the towns, it will probably soon disappear, as is already the case in Edinburgh. In the country, it must continue—but the crying part of the evil would be at end, if the remuneration for attendance were made in another shape than by the charge for the medicines supplied.

Except the supplying of medicines, there is no objection to all, who having a degree practise chiefly in internal diseases, being called physicians. And we certainly doubt the practicability of preventing, by any enactment, those who have a university-degree, from taking the title of Doctor, whatever be their line of practice. And we should like very ill to see those who have a diploma in surgery deprived of the name of surgeon, for any untried new name, such as licentiate. We believe there is no intention of preventing those who are already graduates in medicine, or who hold the diploma of surgeon, from registering as physicians and surgeons, and yet acting as general practitioners.

The way to improve the profession is by all possible means to keep up the respectability of those who supply the medical wants of the public at large. Those whom the rich and noble employ may be safely left to shift for themselves. But nothing but evil can result from any measure which is not careful to preserve the bulk of practitioners from any name which indicates inferiority of qualification.

Some forty or fifty years ago, the French were ill advised enough to institute an inferior grade of medical practitioners under the appellation of "Officiers de Santé." But for a long time past, the general wish in France has been that this "Plebs Medicorum" should be allowed to die out, and that the "ancien regime" in this, as in some other things, should be brought back. The French, in a word, have experienced this inferior grade for the wants of the great public to be the reverse of an improvement.

And the Apothecaries' Company of London, with all their praise-worthy exertions to extend the education of their licentiates, have not succeeded in enhancing the estimation in which the license is held, either with the public or with the profession. While it seems to us more than doubtful, if any name different from the universally recognised names of physician and surgeon, will fare any better hereafter than apothecary and "officier de santé" in past times.

We are friendly to all the essential parts of the proposed measure. We are willing to take it with many defects; yet, while it is still time, we must counsel a tender dealing with the ancient names of the profession. We are sure that the names which such a new measure is to put into current use, cannot fail to exert a paramount influence over its ultimate failure or success.

There cannot be any real objection to general practitioners being called physicians and surgeons, and to those of them who have degrees being called doctors. Every such objection must be too flimsy to bear examination. If the general practitioner be made to pass through a professional education, as complete as that of the highest grades of the profession in former times, it is injustice to deny him one of the designations which time has consecrated. If there must be new designations, let these be applied to those who wish to confine themselves to consultations and operations. They will be sufficiently distinguished from the crowd if they be called consulting physicians, and consulting and operating surgeons. There could be no difficulty in registering the general practitioners already in practice, 1*st*, as Physicians and Licentiates in Surgery and Midwifery; and, 2*dly*, as Surgeons and Licentiates in Physic and Midwifery.

One chief intention of the proposed measure is to elevate all grades of the profession above their present level. But all experience forbids us to expect the general practitioners to make any effort to elevate themselves, if the name imposed on them be of less dignity than that of which they are deprived. At this moment, the general practitioners of England and Wales, who are surgeons, are obliged also to be apothecaries; but though the prescribed education of an apothecary be at present even superior to that of a surgeon, all who can produce the diploma of the College of Surgeons, and very many who cannot, with one consent sink the apothecary, conceal the qualification on which they might found a good pretension to cope with physicians, and call themselves surgeons. Does any doubt this? Look to the directories of the large towns; turn up Pigot's directory, under Manchester, Liverpool, Birmingham, where are the apothecaries? There is not one in the list of medical practitioners—all are surgeons. And why? Surely because the name of surgeon carries with it a proper degree of respect, founded on the usage of ages.

We do not say that the name licentiate, if the bill pass with its present nomenclature, will be as obnoxious as "apothecary" in past times. Still it is a new and untried name; nor can it claim any superiority over "officier de santé," the unsuccessful invention of our French neighbours. No extension of education, nor even the restriction of the apprenticeship to two or three years, which the Company would have done long since, had they been wise enough in their generation to forsee the growing storm, can remove the objections to the name apothecary, now that the public attention has been awakened. It has in its origin no reference to medicine. It signifies a storekeeper, a grocer. The ridiculed Iatralipts of ancient times arose more naturally to the rank of practitioners in medicine than the apothecaries. "Primo enim Iatraliptæ," says Pliny, "medicorum servi fuere, postea in medicorum classem transierunt." But the Iatralipts never gained any footing of credit—their name was a jest. "Tres interim Iatraliptæ," says the Satirist, "in conspectu ejus Falernum potabant." And so in English literature, "apothecary" is unfortunately associated too frequently with ludicrous ideas, ever to become a fit name for a medical practitioner. Apothecaries are now educated like physicians—Why, then, should the legislature permit a name so unsuitable to remain?

Away, then, with names that mark inferiority. Let measures be taken, if not for the immediate, at least for the ultimate application of the good old names of physician and surgeon to the bulk of the profession, and let other names be invented for those who are to confine themselves to consulting practice. Let us hear no more of its being essential to a physician to have the power of exacting guinea fees, paid at the time, for every visit. Surely if the legislature deem it expedient to countenance this idea of a physician, it must be Mercury, not Apollo, who is to be invoked as patron of such an order of things.

The Retrospect of Practical Medicine and Surgery, being a Half-Yearly Journal, containing a Retrospective View of every Discovery and Practical Improvement in the Medical Sciences. Edited by W. Braithwaite, of the Leeds School of Medicine, &c. &c. Vol. XI. January—June, 1845.

We have just received the 11th volume of Braithwaite's Retrospective—the volume for the first half of the present year. It is like its predecessors in bulk and character. For Mr Braithwaite, as the inventor of a new description of medical literature in this country, we entertain a proper regard, though, as editors of a medical periodical, we have just reason, in common with our brethren of the periodical medical press, to nourish a grudge against him.

No sooner is our half-yearly volume completed, than out comes Mr B.'s volume, showing thirteen of its much prized articles made captive, and still bleeding, the effect of the Procrustian process to which they have been subjected. But, though we owe Mr B. a grudge for such treatment of our own articles, we must confess we sometimes profit by the similar mode in which he deals with the articles of our contemporaries. In short, resting as we do our own claims to attention on the utility of the most unrestricted diffusion of medical knowledge, we must not find fault with the plan adopted by Mr Braithwaite, though it does tend to interfere with the circulation of the journals on which he draws. Mr B.'s plan sprung out of the multiplication of medical journals. The multiplication of medical periodicals is assumed by many to be an evil, and Mr B.'s work is represented as a corrective to that evil.

We deny that the multiplication of medical journals is an evil; unless it be proved that periodical medical literature is altogether an evil. It is quite as easy to multiply arguments in the latter case as in the former. Nay, we have heard it gravely maintained, long before the number of medical periodicals, either on the Continent of Europe, in America, or in this country, attained its present height, that periodical medical literature has a mischievous effect on the opinions and practice of the medical profession. The learned owls, who are wont to give utterance to such sentiments, sitting in solemn darkness, impose on themselves, and would put the same deception on the rest of the world. We frankly admit that periodical medical literature tends to the more rapid propagation of error. But if a medical man, hugging himself for a supposed discovery, commits an error of fact, of opinion, or of practice, without being aware of his offence against the rectitude of science, the sooner he publishes himself to the world the better. Error loses half its mischief as soon as it is committed to print. Let it be spread wide enough, and it will be sure to meet with a contradiction. Compare the short career of such a published error with the course of one monopolized by its author for the improvement of his own particular circle. He imparts it to his pupils, and to such of his medical friends as most respect his authority, withholding it most probably from all whose nature it is to put novelties through the rough ordeal of a debate, and a searching cross-examination. From such small beginnings serious heresies arise, which never become known till they have gathered strength enough to defy the received canons of medicine. Let it not be said, then, that periodical medical literature nourishes error: it lets in the light of truth upon error, which at last burns it up like chaff.

Just take thought for a moment of the long files of day dreams which take possession of the recluse student's mind, and which are nourished by his solitude into realities. Here we dont speak

of any particular pursuit; it matters not what is the subject of his studies. Apart from sufficient intercourse with their fellows, the best of men studying the least imaginative of subjects, are liable to such follies. Medicine, then, cannot escape. And how many medical men of active, and well stored minds, are condemned to a life of comparative solitude, as respects their intercourse with their fellow practitioners! Where is there such intercourse except in considerable towns, and not in all of these. We see here how much room medicine obtains for fanciful error. But the multiplication of periodical medical literature not only serves to shorten the span of such errors, by bringing them into the light of day, but also to check them in their birth; for what better substitute can there be in the absence of personal intercourse with one's fellow practitioners, than the pages in which the occurrences of their practice, and their passing comments on these, are recorded?

Is it said that one or two good periodicals should be all that is wanted: that the multiplication of them destroys the excellence which a few would possess. This argument signifies, that were there but a few, the profits being greater, would command more talented support. It is plausible, and in some measure true. Yet competition appears to afford a more sure and more constant foundation of excellence; while the being diffused everywhere, and being open to all, or at least to many under little restriction, is a condition necessary for the most desirable uses of medical journalism.

But we had almost forgotten Mr Braithwaite. Some of our seniors, still rankling a little with the "esprit de corps," probably prize his attentions to their articles less than we do. We beg, however, to offer him our thanks for the number of articles which he has introduced into his two last volumes, from the Northern Journal. To introduce even the most meagre epitome of all the original articles from the British and Irish journals into his work, on its present plan, we know would be impossible. And this points to the failure of this plan to fulfil the great proposed object of correcting the evils of the over-multiplication of periodical medical literature. Mr B. must make a selection. He must even, for abridgement, choose some articles, and reject others. In short, he is forced to erect himself into an "arbiter" of what parts of the periodical medical literature of the day shall supply the wants of his readers—to assume a dictatorship, in a word, over the periodical supplies of the republic of medicine. In this dictatorship Mr B. is already threatened with a rivalry; and we fear, that what betwixt such rivalry and the jealousy of the subject members of the republic, his final success may not answer to the superabundance of the first fruits.

The rivalry we were sorry to see threatened. We have not yet learned on what higher pretensions the new Braithwaite rests its

claims to superiority over the old. Surely the ipsissimus Braithwaite vindicated to himself all the literary glory of the undertaking, by the mere devisal of the plan, and the steady execution of it. It is not a case for rivalry. The only ground of opposition that could be taken with fair warrant, would be the avoiding that necessity for selection, for the omission of some articles and the preference of others—a kind of usurpation over the critical pretensions of all the journals in a lump, which we warn both parties will not long go on quietly and without some breaking out of offended bile. This is what the "Encyclographie des Sciences Medicales" undertook, and has very nearly accomplished. But it is not to be spoken of as a subject of imitation, since it is like too many other works that issue from the Brussels press, however convenient, nothing better than robbery or pocket-picking. Moreover, it is only in such a language as the French, understood over Europe, that such a work could maintain itself. The idea of republishing, in one periodical work, all the papers that had before appeared in the continental periodical medical literature without abridgement, is one which could have owed its birth to no age but our own—far less could it have been realized to any extent in any age but one which sweeps along by steam over land and sea.

There is, however, one suggestion which we would make to Mr Braithwaite, which, if practicable, would render his work almost as useful as an "Encyclographie." For instance, if he were to combine with his present plan of abridged articles, an index of the whole contents of the several British and Irish medical periodicals, for each half-yearly period, we should then have a means of access to the whole of our national periodical literature, which could not but be in the highest degree satisfactory in every respect both to the readers and proprietors of these works. Such a half-yearly index would probably occupy no more than such a space as he devotes at present to the Retrospect, as it is "par excellence" termed, namely, a sort of connected view of the progress of certain parts of medical science, founded on some of the memoirs abridged in the previous part of the book. If it would occupy much less space, nothing could be more useful than an addition to it by an index of the principal Parisian Medical Journals. To make such an index in the fullest degree useful, it should be re-cast at intervals, of five or ten years, into one index, comprehending the whole contents of our periodical literature, for either of these periods, as may be found most practicable. We have the model of such an index in that published, now more than twenty years ago, to the first twenty volumes of the Edinburgh Medical and Surgical Journal, including also the matter of all the Edinburgh Medical periodicals back to their rise, about the middle of the last century.

Mr Braithwaite must not for a moment believe that we are

putting upon him a servile office, when we recommend such an index to his attention. He has possession of this field of medical literature, and he is entitled to keep possession of it. Unless done by a man of tried capability for the task, such an index would not obtain or deserve the confidence of the profession. Mr B. has justly earned that confidence by the eleven volumes of his Retrospect which he has laid before them. In this department of medical literature men of the highest name have tried their strength. The name of Ploucquet of Tubingen is universally known on other grounds, than for the labour he has bestowed on his stupendous work, the "Literatura Medica Digesta." Dr Watt is also favourably known for his contributions to Medicine, altogether independently of the toil employed on his "Bibliotheca Britannica," the medical part of which is however almost overlaid by the mass of references in general knowledge which it contains. But need we add, that the only index to purely English medical literature that our language posseses, namely, "Young's Medical Literature," is the work of a man who passed through life, known to the profession as physician for a time to a London Hospital, a laborious cultivator of certain parts of medical science, and truantly addicted to the study of physical science, but who has since unexpectedly turned out one of the greatest original geniuses of his age—one whom the Biots, Brewsters, Aragos, claim for their brother, or rather for their master and instructor.

We proposed, however, to cite some passages from the Retrospect, that is, from the "Vidimus," which Mr B. gives, at the end, of the progress of some parts of medicine. Our opinion of this part of the work is, that the space allotted to it is much too narrow to permit any justice to be done to so important an object.

On Bilateral Lithotomy.

"Dr Warren, of Boston, in the United States, has twice practised the bilateral operation of lithotomy, and strongly recommends it, saying that he would be disposed to employ it in most cases where lithotomy is required, in preference to the lateral operation. In his opinion, its simplicity, the comparatively small pain from the incisions, the facility of seizing and removing the stone, the very slight loss of blood, and the absence of any severe consecutive symptoms, all concur in producing a favourable impression with regard to this mode of operating.

"The chief objection to this mode, arising from the great danger of wounding the rectum, he fully acknowledges, but thinks it will be found even less than in the lateral operation, if the staff, with the urethra and prostate gland be drawn towards the symphysis pubis, at the same time drawing out the rectum in the direction of the sacrum, with the left hand."

On Compression in Aneurism.

"The opinion as to the feasibility of treating aneurism by compression of the artery above the diseased spot, is gradually gaining ground with the profession. Other cases, in which it has been successfully adopted, have been published in the journals of the

last half year, the cure in all of which has been up to the present time permanent. The principal novelty which has been introduced in this treatment consists in the mode of applying pressure, which, instead of being by one instrument, screwed down with such force as to stop pulsation in the artery, is now applied by two or three, one of which is kept tight, and as soon as the pain becomes intolerable, this is loosened, and another screwed up, and so on. By this means the principal obstacle in the way of the employment of pressure has been removed; the patient can apply it with comparatively little inconvenience to himself; no time is lost by pain or excoriation of the parts by the pressure of the pad, and as this pressure can be applied unremittingly, the duration of the treatment must be considerably abridged.

"Perhaps some of this success is to be attributed to the improved form of the instrument employed. That which is used by Dr Bellingham, (made by Millikin of Grafton Street,) consists of 'An arc of steel covered with leather, at one extremity of which is an oblong padded splint; the other extremity terminates in a nut, containing a quick screw, to which a pad similar to that of the tourniquet, is attached.' "

On Caries of Spine.

"It is of great importance in practice to distinguish between strumous caries of the spine, and the rheumatic caries described by Sir B. Brodie, as the two diseases are quite different in their origin, progress, and termination, and the treatment required is also different in each case. In the former, pain is frequently, though not invariably met with; in the latter, it is a constant symptom, whilst in paraplegia from disease of the chord alone, there is entire absence of pain. We may also be assisted in our diagnosis by the moral history of our patient, as well as by the presence of a strumous or rheumatic diathesis. But in females we meet with the most anomalous symptoms, which, if there be no rheumatic diathesis, no increase of pain on pressure, the pain shifting from one part of the spine to the other, may pretty safely be referred to hysteria.

"With respect to the pathology of the disease, Mr Solly believes that it is local; the mollities ossium *rubra et fragilis;* and renders this view probable by instancing the softening of the bones of the pelvis occasionally met with, which is an entirely local disease, and from which recovery not unfrequently takes place.

"A medical friend of Mr Solly's, who had suffered under this rheumatic caries, broaches the very pertinent idea that nervous exhaustion may be a cause of diminished supply of phosphatic salts to the bone, seeing that the phosphorous is an essential constituent of the brain; and therefore, that from the superior importance of the latter to the system, the principal portion secreted would be supplied to it in preference to the bones.

"On this supposition, Mr S. would give phosphoric acid freely, for he says that, even if it does not act specifically, it is a good tonic, often agreeing better than sulphuric acid with the system. The dose he would commence with is ten minims of the dilute acid.

"He mentions another important fact, which should be strongly impressed on the mind in the treatment of all spinal affections—namely, the necessity for absolute quiet of the mental system, on account of the close connection existent between the spinal chord and the brain."

Part IV.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

The Structure of the Human Placenta. By John Goodsir, Esq.

In our last number, we extracted from the excellent series of Anatomical and Pathological Observations recently published by the Messrs Goodsir, a portion of Mr John Goodsir's account of the Human Placenta. In this number, we present our readers with the remainder of his interesting description of that important organ.

(*Concluded from p.* 45.)

II.—OF THE VILLI OF THE CHORION.

"Without entering at present into the question as to the manner in which the villi of the chorion take their origin, I may state, that as soon as they are distinctly formed, they present a structure which has to a certain extent been represented and described by Raspail,* Seiler,† and others.

"The substance of the tufts consists of nucleated cells. These cells are of different sizes. The smaller are situated, some in the interior, others in the spaces between the latter. The cavities of the larger cells are full of a granular fluid. The surface of the tufts is bounded by a fine, but very distinct membrane, which, when minutely examined, is seen to consist of flattened cells united by their edges.

"The free extremity of each villus of the tuft is bulbous. The cells which constitute this swelling are arranged round a central spot. They are transparent and refractive, apparently from not containing the same granular matter as the cells of the rest of the villus and tuft. However short a villus may be, it invariably presents a bulbous extremity, with the peculiar cellular arrangement already described. Here and there, on the sides of the stems of the tufts, swellings of a similar structure may be seen. Each of these swellings is the commencement of a new villus or stem, which, as it elongates, carries forward on its extremity the swelling from which it arose.

"These groups of cells in the bulbous extremities of the villi of the chorion, and in the swellings on the sides of their stems, are the germinal spots of the villi. They are the active agents in the formation of these parts. The villus elongates by the addition of cells to its extremity, the cells passing off from the germinal spot, and the spot receding on the extremity of the villus, as the latter elongates by the additions which it receives from it.

"The bulbous extremities of the villi of the chorion, are not only the formative agents of these parts, but are also all along, but principally after the villi have become well developed, their functional agents also. They are to the ovum what the spongoles are to the plant—they supply it with nourishment from the soil in which it is planted.

"Up to a certain period of gestation, the chorion and its villi contain no blood-vessels. Blood-vessels first appear in these parts when the allantois reaches and applies itself to a certain portion of the internal surface of the chorion. The umbilical ves-

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* "Raspail. 'Chemie Organique.'"

† "Seiler. 'Gebärmutter und das Ei des Menschen in den ersten Schwangerschaftsmonaten.'"

sels then communicate with the substance of the villi, and become continuous with loops in their interior. Those villi in which the blood-vessels do not undergo any further development, as the ovum increases in size, become more widely separated, and lose their importance in the economy. The villi, again, in which vessels form, in connection with the umbilical vessels, increase in number, and undergo certain changes in the arrangement of their constituent elements, so as to become the internal structures of the tufts of the placenta, as described in the first part of this memoir. The villi of the chorion always retain their cellular structure. As the blood-vessels increase in size the cells diminish in number; but are always found surrounding the terminal loop of vessels in the situation of the germinal spot. The fine membrane, which was formerly described as bounding the villus of the chorion, always remains at the free extremities of the villi of the placenta; but on the stems and branches of the latter it coalesces with the contained cells.

"The conversion into fibrous texture of the membrane and cells of the stems and branches of the tuft of the chorion, forms the tough white fibrous trunk and branches of the tufts of the foetal portion of the placenta; in each of which runs a branch of the umbilical arteries and vein; and the fine membrane of the villi of the chorion, with its contained cells and terminal blood-loops, still persistent at the extremities of the villi, are the internal membrane, the internal cells, and the blood-loops described in the first part of this memoir."

III.—OF THE MATERNAL PORTION OF THE PLACENTA.

"The mucous membrane of the uterus presents on its free surface the orifices of numerous cylindrical follicles arranged parallel to one another, and at right angles to the surface. In the spaces between these follicles the blood-vessels form a dense capillary network.

"From the observations of Professors Weber and Sharpey,* it has now been ascertained, that when impregnation has taken place, the mucous membrane of the uterus swells, and becomes lax, that its follicles increase in size, and secrete a granular matter, and that the capillaries increase in a proportional degree. 'In a uterus,' says Dr Sharpey, 'supposed to have been recently impregnated, and in which the vessels had been minutely injected with vermilion, the lining membrane, or commencing decidua, appeared everywhere pervaded by a network of blood-vessels, in the midst of which the tubular glands were seen, their white epithelium strongly contrasting with the surrounding redness.' It must have been from a uterus in this condition that Baer took the sketch of the structure of the commencing decidua, which has been copied by Wagner in his *Icones Physiologicæ*. Baer and Wagner, however, have mistaken the enlarged follicles for papillæ, and have represented the capillary loops in a manner much too formal. I have examined a uterus which was in a state described by Dr Sharpey. There was a well formed corpus luteum in one of the ovaries; the decidua had appeared on its internal surface, and presented in the most distinct and beautiful manner the orifices of the follicles, and the vascularity of the inter-follicular spaces. The follicles, bounded by their germinal membrane, were turgid with their epithelial contents. The inter-follicular spaces in which the capillaries formed a network with polygonal or rounded meshes, was occupied by a texture which consisted entirely of nucleated particles. This is the tissue represented by Baer and Wagner, described by them as surrounding what they supposed to be uterine papillæ, and considered by them as decidua. The free surface of the uterine mucous membrane was covered by a membrane, which appeared to me to be continuous with the germinal membrane of the follicles.

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* "Müller's Physiology, page 1574."

" Dr Sharpey has not described this inter-follicular substance, as his attention appears to have been chiefly directed to the follicles. As, however, it is to this inter-follicular substance, as much as to the enlargement of the follicles themselves, that the mucous membrane owes its increased thickness, it appears to me worthy of being recorded.

" A uterus in the condition which has just been described, is said to be lined with the decidua, consisting, as has been stated, of an inter-follicular cellular substance, and of an extended network of capillary blood-vessels.

" About the time at which the ovum reaches the uterus, the developed mucous membrane or decidua begins to secrete, the os uteri becomes plugged up by this secretion, where it assumes the form of elongated epithelial cells; the cavity of the uterus becomes filled with a fluid secretion, the 'hydroperione,' of Breschet, and in the immediate neighbourhood of the ovum, the secretion consists of cells of a spherical form. The cells which are separated in the neighbourhood of the ovum I consider as a secretion of the third order. They have passed off from the uterine glands entire, and possess a power peculiar to the third order of secretions, the power of undergoing further development after being detached from the germinal spots or membrane of the secreting organ.

" From what has now been stated, it appears, that the decidua consists of two distinct elements: the mucous membrane of the uterus thickened by a peculiar development, and of a non-vascular cellular substance, the product of the uterine follicles. The former constitutes at a later period the greater part of the decidua vera, the latter, the decidua reflexa. This view of the constitution of the decidua, clears up the doubts which were entertained regarding the arrangement of these membranes at the os uteri and entrances of the fallopian tubes. It is evident that these orifices will be open or closed, just as the cellular secretion is more or less plentiful, or in a state of more or less vigorous development. It also removes the difficulty of explaining how the decidua covers the ovum, a difficulty which cannot be reconciled with the views of Dr Sharpey, who is obliged to suppose the deposition of lymph, which is only the old view of the constitution of the decidua.

" When the ovum enters the cavity of the uterus, the cellular decidua surrounds it, and becomes what has been named the decidua reflexa, by a continuation of the same action by which it had been increasing in quantity before the arrival of the ovum. The cellular decidua grows around the ovum by the formation of new cells, the product of those in whose vicinity the ovum happens to be situated.

" At this state of its growth, the ovum with its external membrane, the chorion, covered by tufts, the structure and functions of which, have been described in the second part of this memoir, is embedded in a substance which consists entirely of active nucleated cells. The absorbing cells of the tufts are constantly taking up either the matter resulting from the solution of the cells of the cellular decidua, or the fluid contained in these cells. The ovum is now deriving its nourishment, not from the supply which it took along with it when it left the ovary, but from a matter supplied by the uterus. I am, therefore, inclined to look upon the cellular decidua, as representing in the gestation of the mammal the albumen of the egg of the oviparous animal. They are both supplied by a certain portion of the oviduct, and they are both brought into play after the nourishment supplied by the ovary is exhausted, or in the course of being exhausted. The difference between them consists in this, that in the mammal the albumen is applied to use as quickly as it is absorbed; whereas, in the oviparous animal, after being absorbed, it is kept in reserve within the chorion till required. I have also been in the habit of considering the uterine cotyledons of the ruminant and other mam-

malia as a permanent decidua vera, and the milky secretion interposed between them and the foetal cotyledons as decidua reflexa in its primitive and simplest form.

"I have been thus particular in the explanation of what I believe to be the nutritive function performed respectively by the chorion and decidua, as upon it I shall have to found my views regarding the actions of nutrition in the fully developed placenta.

"When the ovum has arrived at a certain stage of its growth, the absorption and circulation of nutritive matter by the agency of cells alone is no longer sufficient. At this period, the ovum has approached the thickened mucous membrane, or that portion usually described as decidua serotina. About the same time, the allantois bearing the umbilical vessels applies itself to the internal surface of that portion of the chorion opposed to the decidua serotina, and the villi of that portion become vascular, as formerly described. The vessels of the decidua enlarge, and assume the appearance of sinuses encroaching on the space formerly occupied by the cellular decidua, in the midst of which the villi of the chorion are embedded. This increase in the calibre of the decidual capillaries, goes on to such an extent, that finally the villi are completely bound up or covered by the membrane which constitutes the walls of the vessels, this membrane following the contour of all the villi, and even passing to a certain extent over the branches and stems of the tufts. Between this membrane, or the wall of the enlarged decidual vessels, and the internal membrane of the villi, there still remains a layer of the cells of the decidua.

"From this period, up to the full time, all that portion of decidua in connection with the group of enlarged capillaries, and vascular tufts of the chorion, and which may now be called a placenta, is divided into two portions. The first portion of the decidua, in connection with the placenta, or forming a part of it, is situated between that organ and the wall of the uterus. This is the only portion of the placental decidua with which anatomists have been hitherto acquainted, and I shall name it the parietal portion. It has a gelatinous appearance, and consists of rounded or oval cells. Two sets of vessels pass into it from the uterus. The first set includes vessels of large size which pass through it for the purpose of supplying the placenta with maternal blood for the use of the foetus. These may be named the maternal functional vessels of the placenta. The second set are capillary vessels, and pass into this portion of the decidua for the purpose of nourishing it. These are the nutritive vessels of the placenta.

"The account given by Mr Hunter of the manner in which the functional vessels of the placenta pass through this portion of the placental decidua is still doubted by many, notwithstanding the more recent of Mr Owen's* dissections, and the observations of Dr Reid.† I have dissected the vessels of an unopened uterus at the full time in the manner adopted by Mr Owen, by opening one of the large veins over the spot to which the placenta was attached. Introducing a probe as a guide, I slit open the vein with a pair of scissors, and repeated the same process with the probe and scissors whenever a branch entered the vein already opened. In my progress, I occasionally found, that when the probe was pushed along an unopened vein, its point appeared at another opening; and as I approached the internal surface of the wall of the uterus, these anastomoses of the veins became more numerous, the spaces which they inclosed presenting the appearance of narrow flat bands. At last, in introducing the probe under the falciform edges of the veinous orifices, it was found to have arrived at the placental tufts, which could be seen by raising the edges of the falciform edges. Having passed

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* "Owen. Palmer's Edition of John Hunter's Works, vol. iv."

† "Reid. Edinburgh Medical and Surgical Journal, *loc. cit.*"

over the falciform edges, the veinous membrane suddenly passed to each side to line the great cavity of the placenta. The flat bands which I have just described as the spaces inclosed by anastomosing veinous sinuses, became smaller, and, on entering cavity itself, the bands were seen to have assumed the appearance of threads, which passed in great numbers from the vascular edges of the veinous openings, and from the walls of the cavity of the placenta on to the extremities and sides of the villi and tufts of the placenta. The whole mass of spongy substance, that is, the whole mass of tufts, were in this manner perceived to be attached by innumerable threads of veinous membrane to that surface of the parietal decidua of the placenta which was covered by the veinous membrane. On proceeding deeper into the substance of the placenta, I perceived that, throughout its whole extent, villus was connected to villus, and tuft to tuft, by similar threads of veinous membrane. Sometimes the apex of one villus was connected to the apex of another. In other instances the threads connected the sides of the villi. On minute examination these threads were found to be tubular, and the membrane of which they were formed was seen to be continuous in one direction with the lining membrane of the vascular system of the mother, and in the other with the external membrane of the tufts of the placenta, and passing from one tuft, or set of tufts, on to another, so as to form the central containing membrane of the bag of the placenta. These threads, as well as their cavities, are somewhat funnel-shaped at each extremity. The funnel-shaped portions of the cavities of threads, and, in some instances, the whole length of the tube, were found to be full of cells, which were continuous in the one direction with the parietal decidua of the placenta, and in the other with the external cells of the placental villi.*

" This observation led me at once to perceive the real signification of the external cells of the placental tufts. I saw that this great system of cells was a portion of the decidua, all but cut off from the principal mass by the enormous development of the decidual vascular network, but still connected with it by the minute files of cells, which fill the cavities of the placental threads.

" This system of cells, the external cells of the villus, with the external membrane, are portions of the decidua, and, unlike the other elements of the placental tufts, belong to the organism of the mother. These cells, with their membrane, I name the central division of the placental decidua, to distinguish it from the other portion formerly described, and which I have already called the parietal division of the placental decidua.

" 1. My observations have confirmed the statements of Professors Weber and Sharpey as to the mode of formation of the decidua vera; but have led me to attach more importance to the inter-follicular substance, and to the secreted or non-vascular portion of the decidua.

" 2. The placenta, as has long been admitted, consists of a foetal and of a maternal portion intermixed. But the maternal portion, instead of consisting of a part of the vascular system of the mother only, includes the whole of the external cells of the villi.

" 3. The external membrane of the placental villi is a portion of the wall of the vascular system of the mother, continuous with the rest of that wall, through the medium of the placental threads and lining membrane of the placental cavity.

" 4. The system of the external cells of the placental villi belongs to the decidua, and is continuous with the parietal division through the medium of the cavities of the

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* " These are the reflections of the veinous membrane of the mother, described by Dr Reid."

placental threads. This portion of the decidua has been named the central division of the placental decidua, and the threads decidual bars.

" 5. The functions of the external cells of the placental villi is to separate from the blood of the mother the matter destined for the blood of the foetus. They are, therefore, secreting cells, and are the remains of the secreting mucous membrane of the uterus.

" 6. Immediately within the external cells of the placental villi there is a membrane which I have named the internal membrane of the villi. This membrane belongs to the system of the foetus, and is the external or bounding membrane of the villi of the chorion.

" 7. Inclosed within the internal membrane of the placental villi is a system of cells, which belong to the system of the foetus, and are the cells of the villi of the chorion. These are the internal cells of the placental villus.

" 8. The function of the internal cells of the placental villi is to absorb through the internal membrane the matter secreted by the agency of the external cells of the villi.

" 9. The external cells of the placental villi perform, during intra-uterine existence, a function for which is substituted in extra-uterine life the digestive action of the gastro-intestinal mucous membrane.

" 10. The internal cells of the placental villi perform during intra-uterine existence a function, for which is substituted in extra-uterine life the action of the absorbing chyle cells of the intestinal villi.

" 11. The placenta, therefore, not only performs, as has been always admitted, the function of a lung, but also the function of an intestinal tube.

" J. G."

SURGERY.

Proposal to make an Artificial opening into the Stomach in some cases of Obstructed Deglutition. By J. Watson, M.D., Surgeon to the New York Hospital.

In the January number of the American Journal of Medical Science, Dr Watson, in a paper on Organic Obstructions of the Œsophagus, has collected a number of interesting cases bearing on the question, whether it be warrantable to make an artificial opening into the stomach in any case of obstructed deglutition. These cases we leave to the judgment of our readers without comment.

" Having now spoken of œsophagotomy as a mode of relieving such strictures as are within the reach of an incision on the side of the neck, another question naturally arises :—what measures should be adopted for the relief of strictures of the œsophagus so situated as to be inaccessible in this way?

" This question, of course, applies to only such organic obstructions of this organ as are irremediable by bougies and other means of mechanical dilatation, and so severe as to threaten total and immediate obliteration of the passage. Time may be gained and the patient's life prolonged for weeks, in such cases, by the use of nutritive injections. But the most that can be expected from these, where any hope remains of preserving the patient's life, is a temporary respite from more efficient measures.

" Organic strictures may occur at any point in the course of the œsophagus ; but the most frequent seat of deep strictures is at its transit through the diaphragm, or just above its termination. I had occasion, about three years since, to prescribe for a gentleman from New Jersey with a stricture thus situated. For some months he subsisted wholly on fluids ; and these he swallowed with the utmost difficulty. He finally died

of inanition. The disease, in this case, was probably scirrhus. But disorders of a different character, leading to the same result, may attack this part; as in the case of a lady with a tubercular affection, to which I have already alluded; in cases resulting from chemical or mechanical injuries, and in certain malformations of the œsophagus interfering with deglutition, and yet possibly not beyond the reach of art. An instance of the latter sort was reported by M. Martin, of Aubagne, to the Medical Society of Marseilles: The infant refused all nourishment, or this, when forced down, was immediately rejected. The child lived only thirty-six hours. The œsophagus terminated in a cul-de sac, just below the pharynx, and the stomach communicated by a canal, of the calibre of a small quill, with the trachea near its bifurcation. *

"Incised and even gun-shot wounds have often penetrated the stomach without resulting fatally. Injuries of this sort are, unquestionably, amongst the severest and most alarming; but the proportion of deaths to recoveries is perhaps fully estimated by Percy, who calculates that out of twenty cases only four recover. Ettmuller† and Hevin have recorded cases, and furnished us with numerous references to recoveries after such injuries, recorded among the writings of the older authors since the days of Galen. But Plouquet, according to Hennen, has exceeded all others in the vast number of cases he has amassed. Hennen himself,‡ refers to two successful cases in the practice of Dr Thompson, after the battle of Waterloo, to another in the Philosophical Transactions, and to others in the writings of Kluyskens, Schlichting and Percy; and Permannus is said to have often stitched the stomach in his practice with the army. The following instance I have condensed from the original report of it, in the New York Medical Repository, vol. xv. p. 215:

"In the month of June, 1784, three men undertook to secure a runaway negro, who was armed with a large knife. The negro, in defending himself, gave one of them a back stroke with the instrument, which entered near the cartilages of the false ribs on the right side, penetrated into the stomach and passed nearly transversely the cartilages on the other side. The wound was about two inches below the ensiform cartilage and nearly three inches long externally. The stomach was opened by a wound of more than two inches long. The dinner, which the man had taken just before the accident, consisting of bacon, cabbage and cider, was partially discharged through the cut, and part of it escaped into the peritoneal cavity. The wound was sewn up by an old soldier with an awl, needle, and thread. The patient was seen, for the first time, by Dr Archer, of Maryland, (who has recorded the case,) some forty-eight hours after the accident. The stitches being only through the skin, were then removed. The patient was kept on his back, and nourished with strained soups; the wound was kept clean, and dressed twice a day. At the doctor's second visit, on the ninth day, it looked well, and the patient was free from fever. He complained of soreness at the

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* "New York Medical Repository, vol. xxii. p. 244."

† "Acta Physico-Medica. Obs. LII. vol. iii., p. 168. In this paper Ettmuller refers to the following authors as furnishing confirmation of the curability of the wounds of the stomach, viz:

"Galen, Albucasis, Julius Alexandrinus, Fallopius, Job. Matthæus, Jo. Schenck, Dan. Becker, Diemerbroek, Menzel, Blegny, Wolff and Cowper. To this list, Hevin adds three cases on his own authority from the records of the academy, and further references to others in the writings of Christoph. a Vega, Matth. Carnax, Bern. Suevus, Sennertus, Bohnius, Jacob Octhus, J. F. Hildesius, Selveltetus, Wolsius, Felix Platerus, Le Dran, and to others in the Ephemerides, Dec. 2, Ann. 1; and Dec. 1, Ann. 10, &c."

‡ "Principles of Military Surgery, Philadelph. 1830, p. 346."

right groin, which was swollen, hard and inflamed. A poultice was applied and continued until suppuration occurred. The swelling at the groin was then opened, and a large quantity of pus, mixed with pieces of cabbage, was evacuated. The patient suffered more from this abscess than from the wound in the stomach. After the matter was discharged both wounds healed up. Dr Archer often saw the man after his recovery. The only permanent inconvenience resulting from the accident was a hernial protrusion of the stomach, about the size of a goose egg, which would appear after eating or drinking, and recede when the stomach was empty.

"Having now shown that wounds of the stomach are far from being necessarily fatal, we may next proceed to show that openings, whether the result of injury or occurring spontaneously, may give rise to permanent fistulous communications between the stomach and external surface of the abdomen, and that such fistulæ may exist for years without interfering with digestion or impairing the general health. A most remarkable example of this sort was published in 1803, by Dr Jacob Helm of Vienna, an abstract of which may be found in the 12th vol. of the N. Y. Med. Repository.' The following is the case still more abbreviated :—

"Theresa Petz of Breitenwaida, a village seven miles from Vienna, the wife of a blacksmith and mother of seven children, had, for many years, suffered from an obscure and painful affection of her stomach. A tumour, not larger than a hazelnut, appeared in 1790, over the region of the stomach and slowly increased until 1796, when it extended to the navel. In April 1797, it suppurated, broke, and gave issue to a pint of thin, yellowish matter. The dropsical swellings and occasionally agonizing pains, which she had long endured, entirely disappeared within a fortnight afterwards; and for many years subsequently she continued in good health. The opening into the stomach was at first small, but readily gave issue to particles of food. In the July following its first occurrence, it was large enough to admit the finger; it afterwards acquired an extent of two inches in diameter. A catheter was often introduced into the upper and lower orifices of the stomach without exciting pain, vomiting, or any other unpleasant symptom. She sometimes washed out the stomach with milk and water, and occasionally she relieved herself of an over-amount of food by removing it from the stomach through the opening. After the washing with milk and water, she was usually obliged to take food for relieving a sense of distress and uneasiness. When she was riding in a waggon, or subjected to any considerable motion, the bile would rise into her stomach and issue through the opening. She attended to all her domestic affairs, and was usually in good spirits. In 1800 she was able to attend to field-labour, and to walk to Vienna to show herself to physicians and other curious persons.

"Ettmuller, in the Acta Physico-Medica Academiæ Cæsarea Naturæ Curiosorum, (vol. iii. p. 170,) published at Nuremberg, for the year 1733, gives an instance somewhat similar: A single woman, aged thirty, the housekeeper of a very celebrated man, consulted me last year, says he, in reference to a hole about the size of a large pea in her left hypochondriac region, surrounded by inflamed and indurated integument, and giving issue to portions of her food and drink. She referred this indirectly to a fall against the top of a post, which happened to her when she was only ten years old. After the injury, an indolent swelling appeared over the stomach, which eventuated in the fistulous opening. Her exercise and active habits appeared to prevent this from closing. On changing her mode of life and confining herself for a few weeks to bed, the fistula contracted, and she is now, says the report, getting on prosperously.

"Mr Richerand gives another case. This patient was also a female, aged forty-seven. The opening, as in the foregoing instance, had resulted from an indolent swelling, caused by a local injury many years before its breaking. The fistula was seated at the upper and left portion of the epigastrium. It was of an oval form, eighteen lines long by ra-

ther more than an inch wide, allowing the inner surface of the stomach to be seen through it. She became a patient at La Charité, under the care of M. Corvisart. At this period her appetite was equal to that of three ordinary women of her age. The fistula had existed about nine years. Three or four hours after eating she was usually obliged, from a sense of uneasiness, to remove the compresses with which she covered the fistula, to give issue to the contents of the stomach. After this escape of food, which was discharged with a considerable quantity of gas, she was accustomed to wash out the stomach with an infusion of chamomile. This quicted her, and enabled her to sleep. Her bowels were habitually constipated; her urine was small in quantity; her pulse was weak and rarely over forty-six beats in a minute: she was feeble and emaciated, probably from want of nourishment; only a small portion of the food which she took passed beyond the pylorus. She died of a colliquative diarrhœa six months after her admission into the hospital. The stomach was found intimately united to the abdominal parietes. The opening into it was at the union of the two left thirds with the right third; or about eight fingers' breadth from its great extremity, involving only the pyloric portion. No other organic lesion was discovered. *

"A case more remarkable than either of the foregoing is the well-known instance of the Canadian, Alexis H. Martin, recorded by Dr Beaumont, of the United States Army. The fistula in this case resulted from a gunshot wound. He lived for many years after its occurence in the employ of Dr B., who was in the habit of frequently inspecting the stomach, and making all sorts of experiments upon its inner surface through this opening, preparatory to the publication of his work on digestion. †

"Mr Hennen refers to a case of Ettmuller's in the fifth volume of Haller's 'Dissertationes Chirurgicæ,' probably the same which I have quoted above, in which the fistula remained open ten years; and Wenker, in the same volume, says he, relates another in which a wound of the stomach continued open for twenty-seven years.

"But the remarkable cases to which we have just referred, much as they might warrant the propriety of establishing an artificial opening into the stomach, as a last resort in some severe cases of strictured œsophagus, are, after all, not so much in point as others that yet remain to be noticed. For if the early records of surgery are worthy of confidence, this formidable operation has actually been performed, on three several occasions, for the removal of sharp instruments from the stomach. These cases are related in the German Ephemerides, and quoted by M. Hevin in his essay above referred to, from which I have made the following abstract.

"A young Prussian peasant, feeling some uneasiness in the stomach, attempted to excite vomiting by introducing a knife with the shaft downward into his throat. The instrument slipped from his fingers and fell into the œsophagus. He attempted to dislodge it by placing himself head-downwards, but failing in this, he finally washed the instrument into his stomach with a draught of beer. The surgeons of Kœnigsberg, whom he consulted, advised him, in view of the dangers to which he was now exposed, to have the knife removed by an incision; and Daniel Schwaben, a lithotomist, was selected as the operator. About a month and a half after the accident, having already been prepared for the operation by a gentle purge, and by oleaginous and balsamic medicines, the patient was tied to a plank, and the course of the proposed incision was marked with pen and ink over the left hypochondrium. The external incision was made longitudinally, to the extent of two inches. The stomach being empty at the time, did not present at the wound, and the surgeon was obliged to seize and draw it outward by

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* Physiologie. Paris, 1833. Tom. i. p. 282.

† Experiments and Observations on the Gastric Juice and the Physiology of Digestion. By Wm. Beaumont, M.D., Plattsburgh, 1833.

means of a curved needle. The projecting point of the knife was easily recognised through the coats of the stomach. An incision was made into the organ immediately over the instrument, through which it was promptly extracted, and found to be about ten inches long. The edges of the wound in the stomach required no sutures. The incision of the integuments was drawn together by five peg sutures (*chevilles ou agrafes*). No serious symptoms ensued, and the patient soon got well. The knife and a portrait of the young peasant himself, says the report, are both preserved in the electoral library of Kœnigsberg.

"The German jugglers of former days must have had strong stomachs, and been more matter-of-fact sort of people than some of their sublimated descendants. Infinitesimal potions of silex and mieroscopic globules of sulphur they would have scorned, at the sight of a tasty jack-knife. A young fellow of Sprague, out of mere sport, says Crollius, swallowed a knife nine inches long, the point of which presented a little above the fundus of the stomach, towards its left side; and the handle, towards the spine. Two months afterwards, it was successfully extracted from the stomach by Florian Mathis, first surgeon to the emperor."

"Again, a Prussian woman had the misfortune to swallow a knife seven inches long, which she had introduced into her throat to excite vomiting. At first it stuck in the œsophagus, but afterwards gradually descended into the stomach, where it remained three days without causing any pain. She afterwards felt pricking sensations, and very soon the point of the knife could be felt in the left side. The pains increasing forced her to seek advice. Dr Hubner, of Rastembourg, to whom she applied, made an incision over the point of the knife in the left hypochondrium, on the eleventh day of the accident. He found that the blade had already pierced through the stomach, and had excited slight suppuration around it. The knife was withdrawn with a pair of forceps. Her cure was afterwards very prompt.

"It would take us too far out of our way to refer to instances of foreign bodies successfully removed from other portions of the alimentary canal.* Enough, I presume, has been advanced to show that, under pressing circumstances, and as an extreme measure, the operation of opening into the stomach, for the purpose of supplying it with food, is sufficiently warrantable, and that, under some circumstances, it may be the means of preserving or prolonging life.

"The anatomical or surgical knowledge requisite for performing it with safety, so far as the process itself is concerned, is immeasurably less than is called for in numerous comparatively trifling operations. Its immediate danger is from hemorrhage; its more remote, from peritonitis; and its ultimate, from impaired action of the stomach. The loss of blood is not likely to be severe, except from penetrating into the stomach near its upper or lower curvature in the situation of its greater blood-vessels. Peritonitis may possibly be avoided by preventing the escape of blood, or of any of the contents of the stomach into the peritoneal cavity, as well during as after the operation; by avoiding any injury to the omentum, and all undue manipulation with the serous surfaces; or it may be controlled by depletion, anodynes and other measures employed for the treatment of ordinary peritoneal inflammation. The stomach being necessarily empty under the circumstances calling for the measure in question, the lower edge of the liver, or the colon distended with gas, might interfere with our attempt to bring it into

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* "Some of these are referred to by Mr Hevin. But perhaps the most interesting fact of the sort on record is given by Dr White, senior, of Hudson, N. Y. Dr W., August 7th, 1806, removed, by incision, and with complete success, a silver teaspoon from the small intestine of a person who had swallowed it, in a fit of delirium, about a month previous.—For a full report of the case, see N. Y. Med. Repos., vol. x. p. 367."

view. But these organs can be readily avoided, or pushed aside. The case quoted from M. Richerand would seem to show, that the functions of the stomach would be most impaired where the opening had been made into its pyloric portion. Other cases would lead us to infer that serious nervous symptoms, at the time of the wound, would be most frequent when the opening was effected near the cardiac orifice. The place of election, then, for opening the stomach, would be at equi-distance from its two extremities, and midway between its two curvatures, at its anterior prominence."—American Journal of Med. Science, October 1844.

New York, *July* 1844.

On the use of Oil of Turpentine in Iritis. By Dr GRAVES of Dublin.

We have much pleasure in being able to confirm the observations of Dr Graves on the use of turpentine after mercury in iritis. During the last four years, we have been in the practice of giving it in almost every case that has come under our notice, whether mercury had been given previously or not. In many cases, especially when the disease was *chronic*, turpentine alone seemed to have the power of checking it; but when the disease was *acute*, we have generally found it necessary to give a small quantity of mercury before having recourse to the turpentine. It is not necessary, however, in all cases, that the mouth should be affected by the mercury. Our mode of administering the turpentine is similar to that recommended by Dr Graves, viz. thirty or forty drops three times a-day in some mild fluid. Sometimes it even requires to be carried to the extent of affecting the urinary organs before its effects become manifest.

"Before I conclude, allow me, gentlemen, to make a few observations on the treatment of iritis. You are all aware, from what you have seen of my practice, that it consists in the antiphlogistic treatment, general and local, combined with a prompt exhibition of mercury, the use of belladonna ointment, &c. Now there is one point of practice, not laid down in books, but which is very important, I mean the exhibition of spirit of turpentine internally. This remedy was first recommended in iritis, as is well known, by Mr Carmichael, junior, of this city. Since the date of his last publication on this subject, I have had opportunities of observing its effects, and I have arrived at some conclusions on the subject, by no means uninteresting, for they tend to establish that spirit of turpentine is an excellent adjuvant to mercury in the cure of iritis. Who has not remarked the curious fact, that when iritis is yielding rapidly to mercury at the time salivation comes on, the improvement in the eye may cease after a few days in some cases, although the mouth is still sore? The practitioner is then embarrassed, and hesitates to decide whether he shall resume the exhibition of mercury; as he has no other resource, he does so, and again gives calomel freely, and again the eye improves. In a few days the mercury is again laid aside, either because the patient is suffering much from its effects, or because the physician thinks the inflammation is quite subdued; how much is he mortified, then, to find that in the course of a few days, and without any apparent cause, the eye is threatened with a relapse. The sight again becomes dim and clouded, the zone round the cornea becomes again red, and pain is again complained of. What is now to be done? Is there no other resource but mercury? Yes, gentlemen, I have much pleasure in being able to assert with confidence, that spirit of turpentine is a most valuable remedy under these circumstances; no one, indeed, can justly estimate its value, who has not been placed in the embarrassing situation above described. I first tried it in a case that I attended along with Mr Carmichael, senior, and Mr Colles. A gentleman of robust frame, aged twenty-two, had contracted chancres. He remained in the country for several weeks, and then

came to town for advice, and placed himself under my care. I directed rest, cooling aperients, and cleanliness for a few days, in order that I might have time to form an opinion as to the necessity of giving mercury. In the meantime, he felt himself not quite well, and one of his eyes became red and watery; I at once feared syphilitic ophthalmia. This new affection resisted the ordinary antiphlogistic means, and in a short time its nature was evident. I had now the benefit of Mr Carmichael and of Mr Colles' advice, and mercury was boldly given. In a very short time the mouth was touched, and the iritis checked in its progress.

"As our patient had more than once been attacked with a spitting of blood since puberty, we were anxious to cure his iritis with as little mercury as possible, and we, therefore, desisted from its use, as soon as an evident improvement had taken place in the eye. In a few days, however, we were again forced to resume it in larger and repeated doses, for the redness of the eye, the pain in the eyebrow, and the dimness of sight had suddenly come back. This time we persevered in the use of mercury much longer, until, in fact, all danger of a relapse seemed over, so much so, that both Mr Carmichael and Mr Colles took their leave, a step in the propriety of which I fully concurred. Judge, then, gentlemen, how much I was mortified at observing another relapse of the iritis in the course of a few days, and that while the mouth was still sore, very sore, from the mercury previously given. I was much embarrassed as to the mode of practice I should adopt, and felt very unwilling to begin with mercury a third time, fearing that a scrofulous diathesis might be thus acted on unfavourably, and spitting of blood excited at no distant period. At length turpentine suggested itself to my mind; I remembered what Mr Carmichael, jun., had written on its exhibition in certain forms of iritis; and it struck me forcibly that I was justified by analogy in expecting advantage from its employment. I accordingly gave my patient thirty minims of spirit of turpentine well diluted with barley water three times a-day; the effect was most satisfactory; the very next day the eye was evidently better, and it improved steadily afterwards, until it became perfectly healthy. We continued the use of the turpentine about a fortnight. Since the occurrence of this case I have met with several others, one of which was under the observation of my class at the Meath Hospital."—Med. Times, May 31, 1845.

MATERIA MEDICA, DIETETICS, &c.

Unusual Remedies in continued Fever at Stockholm—Hydrochloric Acid, Phosphoric Acid, Valerian, Extract of Belladonna, Infusion of Arnica Montana, Acorus Calamus, Oil of Turpentine, &c. &c.

In the Gazette Medicale de Paris (No. 15, 12 Avril 1845), is given a portion of some observations on a typhoid fever, which prevailed in the months of December 1841, and January 1842, in the barracks of the Gens d'Armes of Stockholm, by Magnus Huss, Professor of Clinical Medicine in the Stockholm school. At present we propose to extract merely some of the prescriptions, leaving it to be determined whether we shall translate the whole, till the paper be finished.

In the first case, after blood letting and cupping in the nape of the neck, and ice to the head, dilute hydrochloric acid was prescribed in a decoction of marsh mallow. Afterwards a solution of phosphoric acid in a decoction of marsh mallow was ordered. This case did not recover. In the second case, hydrochloric acid was prescribed, and phosphoric acid also, and camphor was afterwards directed. In the convalescence of this case was prescribed an infusion of Arnica Montana, and Acorus Calamus, two drams of the former and one of the latter, in eight ounces of boiling water, infusion for an

hour, and a table spoonful every two hours. In the third case, after bleeding from the arm, cupping, ice on the head, and sulphate of soda, hydrochloric acid was prescribed. After a second cupping, solution of phosphoric acid was ordered. On delirium and contraction of the pupils coming on, Extract of Belladonna was directed to the extent of one grain, and the same to be repeated in two hours. Afterwards camphor was joined to the belladonna and phosphoric acid. After 70 hours of almost continuous sleep, subsequent to the discontinuance of the belladonna, the patient awoke, feeling well, and the convalescence went on favourably, supported by the use of arnica and valerian.

In the fourth case, before admission to the hospital, the patient had been vomited, and purged by enema—there was then blood-letting and cupping, and immediately subsequent to this treatment was the use of the hydrochloric acid. Some days after, castor oil followed by phosphoric acid. At a later period camphor was combined with the phosphoric acid. On the thirteenth day of the disease, there was a long sleep, during which a critical sweat commenced. In the convalescence the arnica was used.

In a fifth case, after venesection, cupping, ice to the head, and evacuation of the bowels, by sulphate of soda, the hydrochloric acid was resorted to on the 5th or 6th day of the disease. Cupping was again practised the following day, and sinapisms applied to the thighs and calfs of the legs. In a day or two the phosphoric acid was prescribed, and subsequently camphor was alternated with that acid. The case had now reached the 8th or 9th day, and put on a very threatening appearance, the delirium became muttering, the pupils were contracted to the size of a pin head, there were subsultus tendinum preventing the pulse from being counted; the first sound of the heart was no longer perceptible, the second alone being distinct; the lips, teeth, and tongue were covered with dark brown sordes, the respirations 48 in a minute, the skin of a blue tinge, the extremities cold, the urine retained. Dilute sulphuric acid was added to his drink, and a powder, containing three grains of powdered musk, and one grain of camphor, with 12 grains of white sugar, was ordered to be taken every two hours. In the evening extract of belladonna and camphor, to the extent of one grain of each, one half at once. The next day repetition of the belladonna; continuation of the musk; signs of improvement; the belladonna left off; the musk reduced in quantity. Before the following day tranquil sleep; now the infusion of arnica. Distinct convalescence now begins; the camphor is left off, the arnica continued, the musk appears to have been already left off. A few days after a relapse, when the arnica was omitted, and oil of turpentine prescribed to be taken, to the extent of half an ounce, in divided doses; opium at night. The same quantity of turpentine was continued for several days; the decoction of senega was used; and, lastly, the decoction of bark. This recovery was much retarded by the formation of several abscesses, so that he did not leave the hospital sooner than the end of four months from the first attack.

The above few notices point to some parts in the treatment of fever, so different from that adopted in this country, as to be of considerable interest.

PATHOLOGY AND PRACTICE OF PHYSIC.

Dr Corrigan's Lectures—Variola, Modified Small-Pox, Prevention of Pitting.

In our last number we made some extracts from Dr Corrigan's lectures on skin diseases on the subject of scarlatina,—in this number we present some of his observations on small-pox. Our first extract relates to modified small-pox:—

"*Varicella.*—Swine-pox, chicken-pox, modified small-pox, by which ever of these

you chose to call it, comes next. All these varieties of pock, in my opinion, should not be separated, but should form one class. I think that much unnecessary sub-division has been made among them by systematic writers, who seem to forget that they are all modifications of the same disease, small-pox presenting the same characters, and calling for the same treatment. Some years ago, when small-pox prevailed to a much greater extent than at present, cases of this disease were very rife; but, latterly, owing to the great progress of vaccination, neither it nor small-pox are so much to be met with. Authors writing on small-pox, and its modified variety, have been at pains to lay down characteristics, which would enable us to distinguish between them. For this purpose, some have spoken of the premonitory fever, as furnishing a distinctive mark. Others have spoken of the crystalline or pearly appearance of the vesicles, (this has been termed bird-pox); but I think none of these furnish us with a satisfactory test between them. The fever in varicella is just as severe as in variola; the pains in the back, and vomiting, are just as urgent; and as for the crystalline appearance of the vesicle, that I look upon only as an *incident*, not an *essential* of the disease. It is attaching importance greater than it merits, to every trifling deviation from what is supposed to be the regular phase of this disease, that has led to the formation of so many unnecessary varieties. The only criterion which can be depended upon, as furnishing us with a means of judging between them, is the irregularity of the eruption in varicella. In this drawing (sending it round), made from a patient under our care at the Whitworth Hospital, you have an opportunity of seeing this irregularity of appearance. In one part, you will see the vesicles dry, and scabbed over; while in another quarter, they are but appearing; and here and there, through the whole, you perceive scattered, these crystalline vesicles, termed bird-pox. A circumstance occurred some years ago in Edinburgh, which, in my mind, places the identity of small-pock and chicken-pock beyond all doubt. It is detailed in the Edinburgh Medical and Surgical Journal,—the exact year when it appeared I do not remember; it may be perhaps three or four years since; at any rate, a reference to the series for a few years back will enable you to discover it. At the time I speak of, modified small-pox made its appearance at Heriot's Hospital, in Edinburgh. A very interesting account of it was drawn up by the surgeon of the Institution, which was published, as already remarked, in the Medical and Surgical Journal. This Heriot's Hospital is a charitable institution, somewhat like our own Blue-Coat Hospital, and contained at that time about ninety or one hundred boys; of these, all had been previously vaccinated, yet among all, with the exception of some three or four, did the disease run. None of these boys fell victims to it; the only person who was carried off was one of the masters, and he had been previously vaccinated. Of the fact of the disease having been modified small-pox, I think there can be no doubt, as the infection spread among them from the porter's son, who had died of confluent small-pox. Here we find vaccination not acting as a preventative of small-pox; but we find it creating a power almost equal, and next to that of a preventative; we find it exciting such a controlling power over the disease, as to reduce the mortality to one per cent, when previously to its introduction, it had averaged from nine to ten per cent. In this drawing, which I have already exhibited to you, we have modified small-pox appearing, though the arm presents the regular vaccine cicatrix. From the fact which I have mentioned, of the appearance of modified small-pox at Heriot's Hospital, I think that there cannot be a shadow of doubt cast upon the identity of small-pox and varicella."

The account to which Dr Corrigan refers, drawn up by Mr Benjamin J. Bell, of the occurrence of a varioloid epidemic, not in Heriot's Hospital, but in George Watson's Hospital (a similar institution) is of great interest, and bears very closely on the controversy as to the identity of variola and varicella; yet we cannot admit that this account

is of itself sufficient to close the question. Mr Bell's account unequivocally demonstrates the power of vaccination to modify small-pox, but it adds nothing material to the evidence of the identity of chicken-pox and modified small-pox. Dr C. plainly begs the question. He assumes, without any proof, that the milder cases of the varioloid epidemic in George Watson's Hospital were chicken-pox, or the same as chicken-pox. Perhaps many of our readers will think the importance of the question too small to make it worth while to examine, if the steps by which Dr C. comes to his conclusion be logical or not. We do not regard the question as one to justify any great warmth of argument; but it is not surely too much to ask that a question like this should at least be understood. The point in dispute then is not, as Dr C. would represent, whether the variolous contagion may not produce at one time a confluent small-pox, and at another time a febrile eruption, on a level with what is popularly termed chicken-pox, in the mildness of its character; but whether there be a vesicular eruption resembling the very mildest forms of small-pox, which, nevertheless, may prevail epidemically without in any instance rising into the unequivocal forms of variola, such as its confluent, its discrete, or adherent varieties. Hear Cazenave and Schedel on varicella; we quote from the translation by Burgess:—"Formerly varicella was considered to be merely a variety of small-pox; but Heberden proved it to be a distinct affection, differing from variola in its cause, symptoms, and duration. With the introduction of vaccination new difficulties arose, from the appearance of a new species of varioloid disease, bearing a close resemblance to varicella. The disputes respecting the nature of varicella continue to the present day, but it still appears to us right to retain it among the vesicular affections." *

We confess we are still partial to the opinion that there is a varicella distinct from modified small-pox, though we are compelled to admit that modified small-pox imitates many, if not all the varieties of this varicella. Still it cannot be affirmed, we think, that the most frequent form of unequivocal modified small-pox is that which resembles the varicella described as well known before the introduction of vaccination. The purely vesicular nature of the disease, and the appearance of the vesicles in different stages of progress on the same part of the body at the same time, are, we should say, the rule in true varicella, the exception in unequivocal modified small-pox. And there are two very marked forms of unequivocal small-pox which bear no resemblance to the descriptions of the old varicella, that, namely, in which the eruption is firm, having a a hard base from an early stage, depressed at the apex, and suppurating there only, and that in which the constitutional symptoms and the progress of the eruption during the first days, in all respects are the same, as in a case of natural small-pox, but in which the eruption, instead of continuing its onward progress, suddenly blightens, passing into brown films, as if brought up by the force of the previous vaccination.

To the first of these two forms, Cazenave and Schedel refer in their diagnosis between modified small-pox and varicella. "In variola the precursory symptoms are very severe, amongst which pain in the loins is especially remarkable, which never occurs in varicella. In modified variola the pustules are small, circular, and generally depressed in the centre. Frequently after the desiccation of the scaly crusts, small tubercles appear, which subside very slowly. In varicella, the vesicles are at first transparent, but subsequently contain a sero-purulent fluid. They are never succeeded by small tubercles, as in modified small-pox." †

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* Manual of Diseases of the Skin from the French of Cazenave and Schedel. By T. H. Burgess, M.D., p. 63.

† Ibid., p. 65.

The difficulties in this question then, are, as we think, greater than Dr Corrigan is disposed to rate them. The resemblance between modified small-pox and varicella first drew attention in Edinburgh. Twenty-five years ago, the interest of this subject in the profession here was at its height; at a considerably more recent period, a similar interest appears to have been excited in London, and perhaps the circumstances of the two diseases which created that interest, first in Edinburgh, and then in London, may have still to take place in Dublin. We believe that the veteran pathologist, Dr John Thomson, who was the first to teach the identity of varicella and modified small-pox, was led in the outset to take up the idea, that what is now termed modified small-pox is a form of varicella: which opinion is but in appearance the opposite of that which he afterwards published; for in this view the identity of the two diseases is recognised, what is not acknowledged being the origin of the eruption from a variolous contagion. We observe that Cazenave and Schedel deny that varicella is contagious, in which respect they affirm it differs from variola. Its epidemic character, however, is indisputable.

We have been led insensibly to say more than we designed on this extract from Dr Corrigan's lecture. We will only add that there are some points deserving the attention of those medical practitioners who meet with good opportunities for the observation of eruptions of this kind, to ascertain how far it is true that the disease described before the introduction of vaccination as varicella, attacks numbers of children who have no protection, that is, who have had neither natural small-pox, inoculated small-pox, nor vaccinia, and that the children so affected are as liable as any others to inoculated small-pox, vaccinia, and natural small-pox, under the conditions on which each respectively arises. If varicella give no protection whatever against variola, then it can hardly be a varioloid disease. If small-pox protect against vaccinia and varicella do not, then the probability is that varicella differs essentially from variola. Our second extract from Dr Corrigan's lecture on small-pox relates to the means of preventing the subsequent pitting of the face:—

"I had almost forgotten to speak of a subject closely connected indeed with the treatment of small-pox, and its modified variety; namely, the pits which are left after the disease. For many years past, in the extensive experience of small-pox which the Whitworth Hospital has afforded me, I can confidently affirm, that a single badly marked case has not left it. When I speak of the experience afforded me by the Whitworth Hospital, I do so from a feeling of consciousness that no other medical man in the city or in Ireland, with the exception of my colleagues at that institution, can have had or have had such opportunity as I had of studying this disease. The fact of more cases of small-pox having been admitted there than in all the other hospitals in Ireland collectively, will bear me out in my assertion. Some years ago when small-pox prevailed here as an epidemic (and let me tell you that when it does appear, it is an epidemic,) I was struck by the remarkable fact, that on no other parts of the body save the face and hands, were pockpits discernible upon the convalescence of the patients; struck with this fact, and remarking that the axilla and groins in particular shared in this immunity, I began to reflect upon its cause. It could not be that these latter parts possessed any peculiarity of texture, which rendered them as tissues different from the face and hands, nor could the looseness of cellular tissue in the groin or axilla be the cause of this exemption from marks, as we find these marks in abundance about the eyelids, which are possessed of as lax a cellular tissue as either the axilla or groin. Conceiving this immunity to depend, not upon any structural difference existing between these parts of the body which were free from marks, and others which were deeply seamed, I considered it to be due to the natural moisture of these parts keeping the pustules soft, and preventing them from falling off prematurely, before a

new skin was formed underneath. Acting on this idea, I determined to apply something over the entire face, which should completely protect the pustules, and prevent their exposure to irritation of any sort, until they were detached by the formation of new skin underneath. For this purpose the application which suggested itself to me as likely to answer best, was lead plaster, melted with as much almond oil, as would allow the compound when moderately heated, to be spread over the face with a camel-hair pencil, and when dry to form a perfect mask of consistent firmness. This application can only act beneficially on the principle of oiled silk dressing, namely, preventing perspiration from the pustules, and preserving them free from irritation, until they become detached by the natural process of the formation of new skin underneath.

"This mask is to be allowed to remain on, until the detachment of the scabs by the new skin brings it away with them. It looks to be sure very hideous for a few days, but I think that exemption from permanent personal deformity is cheaply purchased at the price of an ugly face for some short space of time. The following case will, I think, illustrate both the utility of the application, and the correctness of the idea, from which its employment originated. I had been attending a young lady ill of small-pox. Her face had been coated over with this application, from the time the pustules were fully formed. The greatest part of these pustules had been detached from the face without the slightest deformity having been produced. None of the mask remained, save a small portion covering part of the nose. This I cautioned her against interfering with, advising her to allow it to be detached naturally. She became impatient, disregarded my injunctions, picked at it until she removed it, but ulceration of the part set in, accompanied with inflammation of the surrounding skin, so violent as scarcely to be controlled, before ulceration had extended to a much greater distance, than the part first attacked. In consequence of her own folly, this part was very deeply marked, while the remainder of the face preserved its usual smoothness.

"It has been recommended to destroy the pustules, when they first appear, by cauterisation with nitrate of silver, and this method it is said prevents all deformity. This I have never tried. Perhaps it is the great and uniform success, which has invariably attended the adoption of the preventive means which I have just detailed, that has made me unwilling to change it for another and more doubtful means. This is the remedy, which, from extensive personal experience of its efficacy, I would be inclined to recommend to you for adoption in your future professional career. From the time the small-pox pustules are fully formed, coat them over with this application, and allow it to remain undisturbed, until the formation of new skin underneath disturbs it. By adopting it, I can confidently promise you the gratification of sparing your patients the grievous amount of deformity, which the numerous cicatrices of small-pox must otherwise inevitably produce. Were I inclined, I could enter at much greater length into the nature of the different varieties of small-pox and its modifications, but this I think would be but an unnecessary wasting of your time. I shall therefore dismiss these subjects, contenting myself with having called your attention to those points connected with each disease on which, as I conceive, I have given you some knowledge, which you would not find detailed in works on these subjects."—Med. Times, May 31, 1845.

Here we have Dr Corrigan's testimony to his experience of the good effects of a kind of treatment, the principle of which, though too often neglected, and even condemned, has been known for many years. Thus, to go no farther back than to a work better known to the seniors among our readers than to the juniors, we mean "Thomas's Practice of Physic," we find it recommended with the object of preventing the face from being marked, "to bathe it three or four times a-day with warm milk and water, and on the seventh or eighth day to apply over its whole sur-

face a mask made of fine cambric, thinly spread with a soft liniment, composed of olive oil, white wax, and prepared lard; or with the unguentum cetaceum so as to exclude the external air." The renewal of this mask, twice or thrice a-day, as Thomas recommends, seems to be unnecessary. The Doctors Campbell, in their "Introduction to the Study and Practice of Midwifery," recommend a somewhat different plan. "To prevent pitting, whenever itching commences, the contents of the pustules should have exit, the face covered with a pledget of simple ointment, with apertures corresponding with the eyes, nose, and mouth; and if the patient be young, the hands should be secured to obviate scratching." * Following nearly the same plan, Cazenave and Schedel say, "The best means of preventing cicatrices from forming on the face, consists in opening carefully each pustule, pressing the matter gently out, and preventing the scabs from remaining long, by the application of emollient fomentations."

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Rupture of the Uterus, followed by Utero-intestinal Fistula.

A coloured woman was seized with severe labour pains, and the membranes were early ruptured; she remained in this situation for about 26 hours, with excruciating pain, attended by a midwife. A physician was called in, who found a shoulder presentation, the arm having descended, and the child low in the pelvis, firmly grasped by the uterus, and the pains still very severe. He bled her freely, gave her an anodyne, and delivered by turning with much difficulty. Thirty-six hours after delivery, Dr Morgan was called to see her; he found her labouring under obstinate constipation, with great soreness and much distension of the abdomen; he ordered a blister to be applied to the abdomen, and by persevering in the use of strong cathartics, aided by enemas, the bowels were opened after the lapse of four days, they having remained inactive for the ten or twelve days previous. From this period an evident improvement took place; the uterus, however, remained higher than usual, much harder, rather enlarged, and extremely painful on pressure. She continued to improve for ten days, when she was suddenly attacked with violent uterine hemorrhage, attended with great relaxation of the womb, and prostration of the vital energies. The flooding yielded to proper treatment. About eighteen days after her confinement, Dr M. learned that she was passing fæces per vaginam, and none by the natural passage. He immediately proceeded to an examination, expecting to find a communication between the rectum and the vagina; but finding no rupture there, pushed his examination further. About the left fundus of the uterus, the patient had complained of much soreness, and on pushing the fingers into that region, a large collection of fœcal matter was discovered. A syringe being introduced, several ounces of fluid fæces were removed. She continued to void her fæces involuntarily by the vagina thirty days, during which time she experienced rapid emaciation. A favourable change, however, shortly took place, and the evacuation of fæces through the uterus ceased. It is three years since the case occurred, and she has had no more children since, although "she enjoys connection as before, and bred rapidly previous to the accident."—American Jour. of Med. Science, April 1845, p. 522.

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* 2nd Edition, page 721.

Arrested Foetal Development. By Dr Griscom.

"A lady became pregnant eight months ago. She received information of the sudden death of a friend, which caused her great grief. This induced severe pain in the uterine region, at first intermittent. The uterine tumour seemed about the size of a fist. In a few hours the pain became uninterrupted and excessive, and after a time an ovum was expelled, rather larger than a goose egg. It was found to contain a well formed foetus of the size of three or four months. On examining it, the cord was observed to be wound around the leg nearly a dozen times, as closely as a thread upon a spool. I required considerable force to unwind it." Dr G. conceives the death of the foetus to have been produced by compression of the cord. "As the limb grew, the cord became compressed, and eventually the circulation through it was suspended."—American Jour. of Med. Science, April 1845, p. 524.

FORENSIC MEDICINE AND MEDICAL POLICE.

Poisoning with Prussic Acid. By Mr Taylor.

Mr Taylor has favoured the profession with another of his admirable papers on medico-legal cases. A gentleman was found dead in his bed at an inn; poisoning being suspected, an examination of the body was ordered. The body was first seen by Mr Creed, about ten or eleven hours after death. Mr C. found the deceased lying in the recumbent position, inclined to the left side. The arms were bent across the chest, and were very rigid; but the hands were not clenched, nor was there any appearance indicative of convulsions before death, the body lying in the natural position of rest. One leg was slightly bent, the lower extremities and abdomen were warm, the countenance natural but very pale, the eyes open and particularly bright, the lips purple and retracted, and a decided odour of prussic acid about the mouth. The bed-clothes were smoothly drawn up to the shoulders, and there was no appearance whatever of disorder about them. There had evidently been no struggling before death. On a chair at the back of the bed, but close to it, was found a phial *with the cork in it.* This phial, in the opinion of Mr C. had contained prussic acid, mixed with some essential oil, probably oil of lemons. On post-mortem examination of the body the serous fluid in the ventricles of the brain, the blood in the heart, and the contents of the stomach, were each strongly impregnated with the odour of prussic acid. Evidence was adduced to show that no one could have been accessory to the death of the deceased; that he had been for some time low-spirited, and that he was in embarrassed circumstances. One of the witnesses had seen the phial near the bed in the possession of the deceased two days before, and that it was then half full of some liquid. The deceased stated that it was medicine which he had bought to make him sleep. The contents of the stomach, which were acid, were not analysed till twelve days after death—they were totally destitute of the odour of prussic acid. Four ounces of clear watery fluid were distilled from them, which had not the slightest odour of prussic acid, but smelt closely resembling a mixture of the oils of caraway and lemon. On the addition of nitrate of silver to this clear fluid, a faint milkiness was produced, which did not disappear on adding nitric acid. No precipitate could be obtained; the milkiness was probably owing to the presence of a little muriatic acid. A solution of the green sulphate of iron with caustic potash was then added to another portion of the liquid, and after some agitation a small quantity of diluted sulphuric acid, but not the slightest appearance of Prussian blue

could be produced. The phial was of the capacity of about six fluid drachms; it contained no liquid, had no odour of prussic acid, but smelt faintly of oil of lemons; it was washed out with alcohol, which was tested, but no indication of prussic acid was obtained. It has been supposed that prussic acid can only be detected in an organic liquid where the odour is perceptible; this is generally the case; but it is an undoubted fact that the odour of the poison may be concealed by other odours. Mr Taylor has known it to be present in water and in porter, so that it was readily volatilized, and produced cyanide of silver, with a few drops of the solution of the nitrate placed upon a glass above it, and yet in neither of the fluids could the least odour of the poison be perceived. In a case quoted by Professor Christison from Chevallier the odour of the acid became evident on the distillation of the organic liquid. Prussic acid has been detected in the stomach seven days after death, but not later; in the present case twelve days had elapsed. It was first remarked by Orfila, and has since been confirmed by others, that though a strong odour of prussic acid may exist, none can be detected. Mr Taylor considers that there is no evidence in favour of the validity of the objection, that prussic acid may be spontaneously generated by a re-action in the elements of animal matter aided by heat. Cyanogen is, under certain circumstances, a product of the decomposition of animal matter by heat, but the temperature at which distillation takes place is too low for its production.

Acts of Volition and Consciousness after large Doses of Prussic Acid.—One of the most important medico-legal questions connected with poisoning by prussic acid is, that which refers to the period after swallowing the fatal dose, at which the individual becomes insensible, and loses all power of performing the most simple acts of volition and locomotion. The facts detailed in the case reported, show that the dose taken by the deceased was probably large; that he was not rendered immediately insensible by the dose, but that after taking it from the phial, for no other vessel was found near, he had had time to cork the bottle and place it on a chair at the back of the bed, and had then drawn the bed-clothes smoothly up to his shoulders. This condition of things clearly indicating a sequence of voluntary acts immediately preceding the moment of dissolution. It became a question, could all these events occur between the taking into the stomach so large a quantity of prussic acid as to cause death without the intervention of convulsions. The appearance of the body when discovered indicated nothing that could possibly justify the opinion that such had occurred. Acts like those performed by the deceased have been supposed to indicate that the poison must have been slow in its operation. It has been rather hastily inferred, from some experiments on animals, that the larger the dose the more speedy is the appearance of the symptoms, and the less probable, therefore, that an individual after taking a large dose, should have the power to perform a single act indicative of volition or deliberation. Other experiments have shown that this inference is fallacious; that doses differing materially in quantity may begin to operate and prove fatal within the same period of time, and that very large doses are sometimes slow in producing their effects on animals. We are therefore not justified in inferring, from comparative experiments of this kind, that a dose of prussic acid is necessarily rapid in its action in proportion as it is large. There is great variety in the effects produced by other poisons on the human body where opportunity for observation occurs, both as to the nature of the symptoms and the time at which they commence. This is seen in the case of opium, and why may not the same irregularities occur with prussic acid? In a period of twenty seconds all the acts observed in this case, and similar acts which have formed matter of dispute in other cases, may undoubtedly be performed. It has been considered that the discovery of the body in a convulsed attitude, or the bed-clothes in a disordered state, from the convulsive motions of the limbs, might indicate whether

the poison had operated slowly or rapidly. If the body were found, as in the case of the deceased, in a calm attitude of rest, and the clothes undisturbed, it would be inferred by those who adopted this criterion, that death must have been extremely rapid, therefore, there would be no time for the performance of any act of volition. This case furnishes an answer to such an opinion. We learn, moreover, from this case, that in the human subject, convulsions do not necessarily accompany poisoning by prussic acid, where its operation is so slow as to allow of the individual corking a bottle, and drawing up the bed-clothes, after having taken it. Or, what is practically the same result, the convulsions are so slight as to leave no trace of their past existence. From the evidence adduced in many cases, we are warranted in concluding, 1*st*, That in poisoning by prussic acid, even in large doses, insensibility does not supervene immediately; but that the individual may retain sufficient consciousness to dispose of the vessel out of which he has taken it. 2*dly*, That convulsions are not a necessary accompaniment of this form of poisoning, even where the acts show that there has been a limited degree of survivorship.—Guy's Hospital Reports, April 1845.

[We shall return to the consideration of the second part of this admirable paper in our next number.]

Part V.—MEDICAL MEMORANDA.

NEW APPLICATION OF ELECTRICITY TO SURGERY.

A novel application of electricity has been described by Mr Smee, Lecturer on Surgery at the Aldersgate Street School of Medicine, in order to detect needles or other steel instruments impacted in the human body. The following extracts, from the Philosophical Magazine, explain the *modus operandi*:—

"You are all acquainted with the curious condition which steel assumes under certain circumstances, whereby it evinces properties which are called magnetic; you know, moreover, that like magnetic poles repel, and opposite attract each other. You have, therefore, but to render a piece of inclosed steel a magnet, and you will be able not only to ascertain its presence, but to determine by its polarity its general direction; and by the amount of magnetism it evinces, you may even infer its probable bulk.

"When you suspect the presence of a piece of needle, or other steel instrument, you must subject the suspected part to a treatment calculated to render the needle magnetic; and there are two principal methods by which this object may be effected:—the first, by transmitting a galvanic current, at right angles, to the suspected part; the second, by placing a large magnet near the part affected, so that the object may be magnetized by induction. You may accomplish the first end, by taking a copper wire, covered with cotton, or still better with silk (in fact, you may employ the covered wire as generally used for the formation of electro-magnets), and wind it round the parts suspected to contain steel, several times, so that the same current may act at right angles, many times, upon the piece of steel; you may then take a galvanic battery (one of my little tumbler batteries will amply suffice), and connect one end of the wire to the zinc, the other to the platinized silver. The current might be continued for half an hour, or more, when the steel would become magnetized, and thereby give strong indications of its presence.

" For my own part, I should use the second plan, or the plan of magnetizing by inducting, to render the needle magnetic. For this purpose I have employed a temporary electro-magnet, which I magnetized by the voltaic battery, and you will find, that by keeping the part affected as close as possible to the instrument for about half an hour, you will sufficiently obtain the desired object.

" The electro-magnet might be made of the horse-shoe form, if we knew the direction of the object; but in that case we should not require its use at all, as the proof of the existence of the needle is our only aim. I have used the horse-shoe magnet, but should prefer, in most cases, an electro-magnet like this, made for me by Messrs Horne of Newgate Street, which is made of a simple straight bar of soft iron, wound round with wire. Your chemical lecturer has, doubtlessly, made you aware that the magnetic effect is proportionate to the power of the battery, so that if you are desirous of producing but slight effect, you would employ this tumbler battery; but if you required the action to be manifested at a greater distance, you would use a compound battery, such as this trough battery upon the table. The compound battery will magnetize a needle, in conjunction with the electro-magnet, in the space of two or three minutes. A powerful permanent magnet would answer as well as the temporary magnet; but it would be very expensive, and not so constantly at hand. When soft iron is impacted in any part of the body, we do not require either the electro or permanent magnet, for on this substance we are unable to confer magnetic properties.

" To test the existence of a magnet within the body, we may take a magnetized sewing needle, and suspend it by a piece of silkworm's silk, when it will exhibit certain phenomena upon the approach of the suspected part, provided it contain a piece of magnetized steel. Although this simple contrivance will amply suffice, I myself possess a needle which was made for me by Messrs Willats of Cheapside, and which is well adapted for the purpose.

" It consists, as you perceive, of a delicate needle, about six inches long, centred upon a small agate cup resting upon a steel point; so that the smallest possible amount of resistance is offered to its free play.

" When a part containing magnetic steel is brought near the needle, it may be either attracted or repelled, it may move upwards or downwards, or it may exhibit disquietude according to the position in which the new magnet is held. We may detect the position of the foreign body, when it is of any size, by ascertaining where its north and south poles lie, and these are determined by their repelling and attracting the opposite poles of the magnetic needle. The disquietude, or motion upwards and downwards, merely indicates magnetism, but not the direction of the magnet.

" You will, doubtless, be surprised when I tell you, that in this manner I have detected a piece of needle impacted in the finger of a young woman, although it weighed but the seventh of a grain. This gave such marked indications, that I found out tolerably well the position of its north and south poles, though I could not ascertain the presence of a foreign body in any other way. I tried experiments on smaller pieces, at short distances, such as half an inch to an inch, and I found that a piece of needle, weighing 1-60th of a grain, gave decided indications after having been magnetized, and perhaps even a still smaller amount of steel might in some cases be detected.

" I have now satisfactorily demonstrated to you, that magnetism may be used for the detection of steel particles impacted within the body with absolute success; and though but a very trifling application of natural philosophy to the practice of surgery, I have no doubt that, had it been adopted before, many joints would have been saved; and I confidently anticipate that it will be the means, in future, of frequently saving these parts from destruction."—Quoted by the Dublin Medical Press, June 1845.

PROCEEDINGS OF MEDICO-CHIRURGICAL SOCIETY.

Wednesday, March 5, 1845.—Dr GAIRDNER in the Chair.

On the Employment of Oxygen as a means of Resuscitation in Asphyxia, and otherwise as a Remedial Agent. By Dr G. WILSON.

This communication was given at length in No. 11 of the Northern Journal of Medicine.

"*Dodson's Patent Unfermented Bread.*—The President called the attention of members to some samples of patent bread transmitted to the Society for their inspection, by the patentee, Mr Dodson of London. This bread is 'raised,' and made perfectly spongy, though prepared without fermentation, by having muriatic acid and bicarbonate of soda mixed in the dough during kneading; the carbonic acid thus given off serving in the place of that evolved by the fermentation in the ordinary process, and enough of common salt being at the same time formed to give sapidity to the bread. This bread, thus prepared without fermentation, has been found to agree better than ordinary bread with patients liable to acidity of stomach. The President called attention to testimonials given to the patentee by practitioners in London, and solicited from the members a trial of the new bread in dyspeptic cases. Dodson's bread is now manufactured by Mr Tod, Princes Street, Edinburgh."

"*Sulphate of Bebeerine.*—Dr Douglas Maclagan stated, that sulphate of bebeerine, which he formerly brought under the notice of the Society as an anti-periodic and tonic, had been prepared to a considerable amount, and of fine quality, by Mr J. F. Macfarlane of Edinburgh, and could now be had in sufficient quantity to enable practitioners to give it a fair trial as a remedial agent.

"Dr M. stated that he had collected a considerable number of cases treated by it, which would appear in the April number of the Edinburgh Medical and Surgical Journal."

[We have given an abstract of this paper in a late number.]

Wednesday, 7th May 1845.—Dr GAIRDNER, President, in the Chair.

"*Case of Poisoning with Hemlock.* By J. HUGHES BENNETT, M.D.—On Monday, April 21st, a man named William Gow, was brought into the Infirmary by two policemen, and was found to be dead. On examination, the following appearances were observed:—

"Great fluidity of the blood throughout the system. In the cavities of the heart only a few small grumous clots existed. The veins on the surface of the brain were much congested. The lungs, liver, kidneys, and almost every organ were also much congested. The stomach was found to be distended with a pultaceous mass, which consisted of the fragments of green leaves and stalks. The mucous membrane of the stomach was congested, with slight extravasation of blood below the epithelium at its cardiac extremity. Intestines healthy. The body was muscular, and without external marks of violence.

"On examining the contents of the stomach attentively, it was ascertained from some fragments of the stalks and leaves which had escaped the action of the teeth, that they were portions of Conium Maculatum. On bruising them with a solution of potash, the mousy odour of conia was strongly evolved.

"On Monday, two of Gow's children gathered what they took to be parsley, and brought a quantity of it home with them. Their father ate it greedily with a piece of bread. Dr Bennett related minutely all that occurred to the individual from the time he took the poison, till he was brought into the Infirmary. He was seen and spoken with by many individuals, and their combined accounts were on the whole consistent, and render the case tolerably perfect.

"Shortly after eating the hemlock, want of power was experienced in the lower extremity—he faltered in his joints. After a time he was observed to stagger, as a man intoxicated—he fell on his knees—and perfect paralysis of the inferior extremities was manifested. At this time his intelligence remained perfect, he spoke readily and sensibly to those about him. He complained of having lost his sight. The paralysis gradually crept upwards. There were ineffectual efforts to vomit—he could not swallow—slight movements of the left leg. These symptoms were present two hours after taking the poison, but his intelligence was still perfect. Asphyxia now gradually came on, and he died three hours and a quarter after eating the hemlock. These symptoms fully confirmed the description given by Dr Christison, of the effects of hemlock and its alkaloid conia as observed by him in the lower animals. Some cases had been related, in which delirium was said to have been present; and others, where death was occasioned, were marked by stupor and coma, as when opium has been taken. Nothing of this kind was observed in Gow; but, on the contrary, gradual paralysis creeping from below upwards, referable to some change produced on the spinal cord, of a nature exactly opposite to that produced by strychnia. Dr Bennett pointed out how these facts perfectly agreed with the account of Plato and Nicander, of the effects produced by the Κωνειον, or state poison of the Athenians. A difference of opinion existed among botanists, as to whether the modern Conium Maculatum was the Κωνειον of the Athenians. From the effects produced in the case described, he was disposed to believe in their identity.

"Dr Christison observed, that he was inclined to adopt this conclusion of Dr Bennett; and he felt the more pleasure in stating this, because he had formerly expressed a different opinion. The only positive characters of the Athenian state poison, as given by Dioscorides, were a 'hollow root, and not deep.' Now the root of our hemlock is not hollow, and it is very deep. In all the recorded cases of poisoning by this substance in modern times, the symptoms observed in man were very different from those described by the ancients, and were opposed to the effects he had himself witnessed in animals. A well observed case of poisoning by hemlock, therefore, was a great desideratum. This had been furnished by Dr Bennett, and tended to clear up the difficulties hitherto connected with the subject."—From the Minutes of the Society.

The remaining proceedings at this meeting in our next.

*** We have the satisfaction of announcing to our Readers, a Paper for our next Number, by Professor Simpson, accompanied with a Lithographic Illustration.

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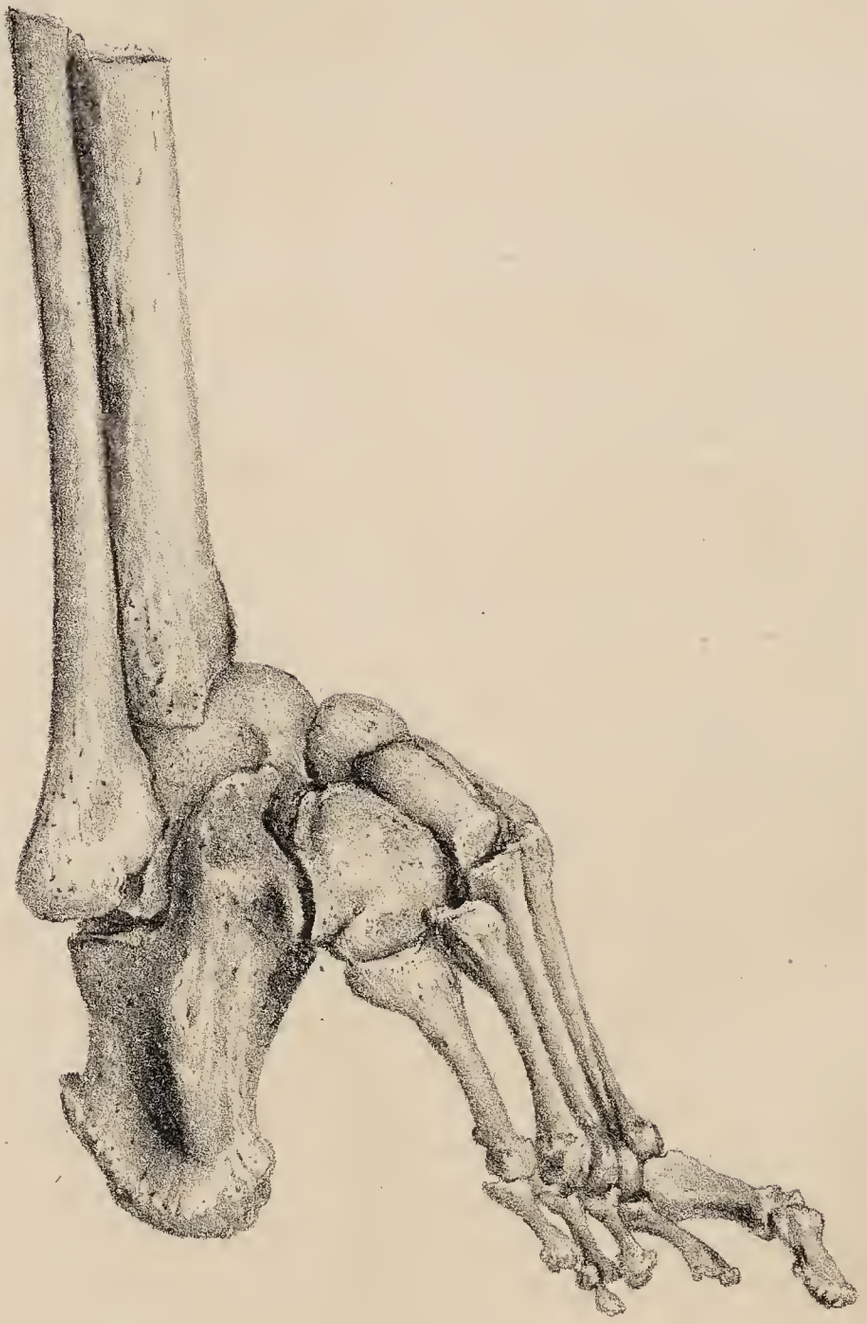

Drawn on stone by D.r Skae. *F. Schenck. Lith.r Edin.r*

SKELETON OF A CHINESE LADY'S FOOT.

(half size.)

THE

NORTHERN JOURNAL OF MEDICINE.

No. XVI.—AUGUST 1845.

Part I.—ORIGINAL ARTICLES.

Description of the Bones of the Distorted Foot of a Chinese Woman. By J. Y. Simpson, M.D., Professor of Midwifery in the University of Edinburgh.

It is well known that it has been long a practice in China to compress and deform, during infancy, the feet of females of the higher ranks. The accompanying lithographic sketch (see plate) represents an example of the deformity produced in the bones of the foot by this practice.

The specimen from which the sketch is taken was brought to this country by Captain Maitland, an officer who distinguished himself in the late Chinese expedition. It was obtained from the grave of a Chinese lady, that was laid open while digging some fortifications on the Joss House Hill of Chusan.

I am induced to figure and describe the foot, not on account of the interest which we may be inclined to attach to this artificial distortion as a mere matter of curiosity, but rather for the purpose of showing to how great a degree art is capable of altering the form of even the osseous parts of our frame. And seeing it can effect so much in changing completely a normal into a deformed foot, it will afford us a stronger and greater hope that, by analogous and properly directed measures, we may, in other instances, be able to change a deformed member into a normal one, as in the cure of the different varieties of club-foot.

The changes in the Chinese female foot, produced by the compression to which it is subjected, appear to be more marked in the conditions and relations of some of the pedal bones than of others. I shall describe the principal alterations as seen in the different bones of the individual specimen before me.*

* That the specimen in question affords an accurate representation of the usual kind of deformity seen in the feet of Chinese females seems to me to be strongly demon-

Tibia and Fibula.—These bones seem normally shaped, but they are considerably less in size, and more slender than natural. This remark, in regard to the degree of diminished development or size, applies also to all the bones of the foot. They are all smaller in their absolute dimensions than we find the corresponding bones in the foot of the European female.

Os Calcis.—The position of this bone is altered in a remarkable manner. Its long axis, instead of being almost horizontal—when the sole of the foot rests on the ground—is, in the deformed Chinese foot, quite vertical. The posterior part or tuberosity, which naturally looks backwards, is brought downwards and forwards; and the point normally serving for the insertion of the tendo Achillis, is thus made to impinge on the ground, and serve as the principal point of support behind. In consequence of the vertical position of the os calcis, the prominence of the heel backwards is altogether obliterated, and its usual amount of projection is subtracted from the entire length of the foot. The most posterior part of the calcis is, in its changed relation, on a plane parallel with, or indeed anterior to, the posterior surfaces of the tibia and fibula. This arrangement must materially have modified the movements of the ankle-joint during progression, as it allows of and favours a sinking downwards and backwards of the tibia and fibula over the calcis. The cuboidal articulating facet of this bone, or great process of the os calcis (as it is sometimes termed) is directed directly upwards, instead of obliquely forwards, and has become firmly and anormally wedged in between the astragalus and cuboid. The cuboid has in consequence contracted a new articulation with what should form a part of the inferior (but is now the anterior) surface of the calcis. This new articulation appears to have assumed all the characters of a normal joint, the adjacent surfaces of the bones being quite smooth and well adjusted, whilst the old displaced facet has lost in a great measure its natural appearance.

Astragalus.—The astragalus is much flattened in its vertical direction, and is rotated considerably on its axis, so that its inferior surface is directed much more forwards than is observed in the well-formed foot. This is evidently the effect of that sinking backwards of the ankle-joint in progression, that we have just alluded to. There is a new articulating facet formed on this bone at the point at which it joins the posterior aspect of that wedge-shaped projection of the calcis, which is forced up between the cuboid and the bone we are now describing.

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strated by one fact. After obtaining the present foot for description and representation, I accidentally met with one already figured by Mr Bransby Cooper, in the Philosophical Transactions for 1829. The one represented by Mr Cooper is a right foot—that which forms the subject of my observations is a left. They resemble each other, however, in all points so precisely and accurately, that they might truly be considered as the right and left foot of the same individual.

Scaphoid, Cuboid, and Cuneiform Bones.—The bodies of the scaphoid, three cuneiform, and cuboid bones are closely compressed, their superior surfaces are more convex and slightly smaller than usual, but the interstices between them greater; inferiorly they are very tightly wedged in against each other. This is particularly remarkable in regard to the middle and external cuneiform bones which have their under surfaces reduced to a thin edge.

Metatarsal Bones.—The metatarsal bones are not much diminished in actual length, but in consequence of the arch of the foot being greatly raised, they have assumed a more vertical position than they naturally possess, and the whole length of the foot is greatly lessened. They are weak and slender, and are closely in apposition with each other, particularly the three central ones.

Toes.—The phalanges of the toes are shorter than natural and unusually small. They are peculiarly arranged. The great toe is forced upwards and laterally towards the others, which it must have overlapped, as it lies on a higher plane than the rest. The three central toes are normally directed, except the distal phalanx of the third, which is turned directly downwards. They are very closely impacted together.

The little toe turns towards the others, and is completely curled under the fourth; its point exactly reaches the distal articulation of the middle toe.

The pisiform bones are normally developed, but small. None of the joints are anchylosed.

In consequence of the individual changes above enumerated, the general contour of the foot is remarkably modified. In particular, the natural arches of the foot are greatly altered. The principal bases of support of the antero-posterior arch (the ball of the great toe and the posterior extremity of the os calcis) have been forced into much nearer apposition than they naturally are, and chiefly by the forcing forwards of the tuberosity of the os calcis. Thus the sides and top of the arch have become also in a corresponding degree raised, and a remarkable increase has been produced in the curvature of the whole arch. The transverse arch of the foot, having been subjected to a similar lateral compressing force, is altered in the same manner, though in a minor degree.

To show the effects of these various changes, I shall append, in a tabular form, the measurements of several corresponding parts in the skeleton of a normally developed adult female foot, selected from the museum of this University, and in that of the Chinese foot just described.

Different Measurements of the Foot in the	Chinese.	European.	Difference
Total length of foot	5 in.	$8\frac{1}{8}$ in.	$2\frac{7}{8}$ in.
Breadth of foot at metatarso-phalangeal articulation	$1\frac{5}{8}$	$2\frac{5}{8}$	1
Breadth of instep	$1\frac{6}{8}$	$2\frac{3}{8}$	$1\frac{3}{8}$
Height of instep—that is, from the ground to a level with the superior aspect of scaphoid bone	$3\frac{3}{8}$	$2\frac{1}{8}$	$1\frac{1}{8}$
Height of antero-posterior arch of foot—that is, from the ground to the inferior surfaces of the scaphoid, cuboid, and cuneiform bones	$2\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{1}{8}$
Length between the two principal points of support—that is, from the tuberosity of the calcaneum to the ball of the the great toe	$2\frac{2}{8}$	$5\frac{2}{8}$	3

According to the preceding brief notice, the following points constitute the principal peculiarities which are observable in the osseous configuration of the Chinese female foot. 1*st*, The bones are altogether smaller and less developed than in the normal foot. 2*d*, The foot is absolutely shorter, and particularly from the tuberosity of the os calcis to the metatarsal articulations. 3*d*, It is diminished in breadth. 4*th*, The arch of the sole is increased. 5*th*, The instep projects much higher than natural. 6*th*, The os calcis is vertical in its position ; and, consequently, 8*th*, The projection of the heel is wanting. 9*th*, The great toe is displaced upwards and laterally. 10*th*, The small toe is curved greatly downwards and inwards towards the sole of the foot. 11*th*, The intervening toes have a similar but slighter curvature.

It may not be uninteresting to add, that slighter but still well-marked deformities of the feet seem to be produced among ourselves, by the slighter degree of compression to which they are subjected by the particular conformation and frequent tightness of the shoes that are used in most parts of Europe. To the action of this cause, Camper traces the common shortness of the second toe, and the occasional partial luxation of some of the tarsal bones. Cruveilhier ascribes to the operation of the same means, the frequent luxation outwards of the first phalanx of the great toe ; and the luxation inwards of the first phalanx of the second, and sometimes of the third toe.

Case of Placenta Prævia, treated successfully by Extraction of the Placenta before the Child. By John Maclean, M.D., Edin.

Mrs Nixon, æt. 37, mother of seven children, was, on Wednesday the 18th June, taken in labour about four o'clock, P.M. Having been generally lingering in her labours, with the pains trifling,

and at long intervals, she did not at this time send for any early assistance. But, whilst in bed, about three o'clock in the morning of Thursday, she became alarmed at the discharge of blood which accompanied the pains, and these having gradually become more frequent and severe, I was sent for. Being engaged at the time, Mr Woodhead kindly attended for me. The following symptoms presented themselves to his notice:—The labour pains came on at intervals of twenty minutes, but lasted a very short time only. The os uteri was dilated to the extent of a shilling, but rigid and undilatable, with a soft substance presenting in it, and a constant oozing of blood, which at each pain became much increased.

In these circumstances, Mr Woodhead very properly considering that, until the labour was a little farther advanced, little could be done to assist her, administered a slight opiate, and employed the usual means to check the hemorrhage.

In a short time, finding the pains and discharge of blood nearly to have ceased, he left her, giving directions that I should be sent for as soon as the pains came on again. I was accordingly informed about eleven o'clock in the forenoon that they had commenced, but not being aware of the nature of the case, and having a few calls to make, I did not see her until about half-past twelve o'clock. At this time, on examination, I found the os uteri dilated to the extent of a half crown, the placenta presenting and protruding through it about one and a half inches. The hemorrhage which had recurred with the pains, had caused such a degree of faintness and collapse, that the fatal termination of the case appeared inevitable; and the pains, which now came on frequently from the great weakness of the patient, had but little effect in dilating the os uteri and advancing the labour.

Having ascertained by the stethoscope that the child was dead, and Mr Woodhead being again in attendance with me, it was at once agreed upon in consultation, (the mother alone requiring our immediate attention, and the state of collapse to which she was reduced rendering the forced delivery by turning exceedingly dangerous, whilst the evacuation of the liquor amnii had entirely failed even to moderate the hemorrhage), that I should immediately endeavour to suppress the discharge by separating the whole body of the placenta from the uterine parietes, when the patient might be allowed to rally a little before removing the child, supposing the views of Dr Simpson to be correct. Accordingly, having administered a small quantity of spirits with a few drops of laudanum to the patient, I immediately introduced my hand into the womb so as to remove the placenta. This I was easily enabled to do, after dilating the os uteri, by pressing down the placenta, with the fingers introduced behind it into the palm of the hand. A few minutes were sufficient to effect this; and I was much gratified to find all hemorrhage cease, as soon as the whole

placental mass was detached. The placenta being carried down into the vagina, a dose of ergot was administered, and in about a quarter of an hour the natural pains expelled the child. There was no after hemorrhage, and only slight lochial discharge.

The mother recovered without the slightest drawback, and was out of bed in a few days.

The above case, from the alarming symptoms attending it, and the certain fatality which must have ensued, had the flooding continued for a short time longer, with the immediate suppression of all hemorrhage on the placenta being completely detached, thus allowing time for the patient to rally, would seem to prove the operation of turning in these cases to be almost needless; at the same time, that it affords another instance of the accuracy of the conclusions published by Professor Simpson in the London and Edinburgh Journal for March last, where he proposes, in such cases, to remove artificially the placenta and not the child.

14th July 1845.

Surgical Cases. By James Duncan, M.D., Fellow of the Royal College of Surgeons of England and Edinburgh, one of the Surgeons to the Royal Infirmary, Edinburgh.

Case of Foreign Body in the Air-Passages expelled spontaneously after the lapse of Four Years—Recovery.

The notes of the following case were sent me by my friend, Dr Spence of Lerwick, and as it is a remarkable one in several respects, it appears to me worthy of being put on record.

Mr R. R. æt. 42. Early in February 1841, while Mr R. was at dinner, a piece of bone accidently passed into the trachea. The accident, as is usual in such cases, was followed by a violent paroxysm of coughing and difficult breathing. A sharp pain was likewise felt, referred to a point about three inches below the clavicle and to the left side, and a small quantity of bloody mucus was expectorated.

The violence of the paroxysm subsided, and the accident was forgotten, but a somewhat troublesome cough continued. This increased, and was not mitigated by any of the means employed. The patient could not rest on the left side, and considerable quantities of mucus, streaked with blood, were expectorated, more particularly after exposure.

These symptons continued, varying in intensity, until the spring of 1844, when for a time they were exceedingly troublesome, but were alleviated by the use of tonics.

During the winter months of 1845, they again became much aggravated, the patient was harassed by violent spasmodic cough,

and was unable to rest in any posture. He now came to Edinburgh for consultation, and the affection was treated as a bronchitic one, but without relief.

On the 2d of March 1845, he was seized with a violent fit of coughing, and a small piece of bone was discharged. The paroxysm still continued, and in about half an hour a still larger piece was ejected. The larger piece was of a very perfect rhomboidal figure, the diagonal between the two very acute angles measuring one inch, that between the obtuse angles three quarters of an inch. The smaller piece was three quarters of an inch in length, and three lines in breadth, and somewhat curved. From this time the symptoms improved; he began to rest well at night, and could sleep on either side with ease, but the cough still continued for some time troublesome during the day, and considerable quantities of muco-puriform fluid were expectorated. He still for a time felt the pain on the left side, but his strength and the general state of his health continued to improve. He is now, June 1845, perfectly recovered.

This case is remarkable from the length of time which the foreign body remained impacted in the air-passages, without producing fatal consequences, and for the complete recovery which followed its ejection. In the majority of the recorded cases of this description, in which the accident did not prove fatal, by inducing immediate suffocation, it has done so when not removed by surgical interference, either by exciting extensive bronchitis or pneumonia, under which the patient sank rapidly, or these have passed into a chronic state, and the patient has perished at a later period. Cases, however, are not awanting in which, as in the present instance, the foreign body has been expelled by the efforts of nature, and the patient has recovered; but I am not aware of any in which this fortunate result has followed at such a distant period from the date of the accident.

A case of spontaneous expulsion and subsequent recovery is given by Mr Plant, in the Dublin Hospital Reports.

A piece of wood had passed into the trachea, and at first had lodged in the right bronchus. At the end of four weeks, during which time the boy had suffered much from troublesome cough, it was thrown up from the bronchus into the trachea, where it could be detected moving up and down. As there appeared to be no particular danger, Mr Plant, trusting that, as it had been thrown up from its first situation, it might also be ejected from the trachea, deferred operating. At the end of the fifth week it was so, and the boy recovered.

Another case of this nature is given by Stalpart Vander Wiel. A small piece of bone passed into the trachea of a girl while she was engaged in supping bouillon. The symptoms were constant cough, fever, and ultimately hæmoptysis, with purulent expecto-

ration. At the end of four months the bone was coughed up, and the girl recovered.

Mr Howship relates a case in which a nail passed into the trachea of a man aged sixty-five. The accident occurred on the 15th of August, severe pulmonary symptoms followed, and the man was given up by the Faculty, but the nail was discharged on the 12th November, and the patient recovered, and was alive twelve years afterwards, though subject to frequent pulmonary affections.

In a case given by Dr Lettsom, the covering of a button remained in the air-passages for eight months, when it was coughed up, and the pulmonary symptoms subsided.

The admission of an ear of grass into the air-passages appears not to be a very uncommon accident, and almost invariably gives rise to very distressing symptoms.

Dr Donaldson of Ayr relates one of this description, in which the grass remained in the right bronchus for seven weeks, giving rise to intense bronchitis; it was then expectorated, and the patient recovered. The references to several of the above cases and some others, are given in a paper in Dr Craigie's Journal, published some twelve years back.

The following case bears a striking resemblance to that related by Dr Donaldson, but it is still more remarkable from the length of time which the ear of grass remained in the air-passages. The patient was under the care of my friend, Dr Pitcairn, for whom I repeatedly saw him while supposed to be labouring under intense and general bronchitis, and he has kindly furnished me with the notes.

W. W. æt. $5\frac{1}{2}$, on recovering from a severe attack of pertussis in 1840, was sent to the country for a change of air. During the month of July, while in the fields, he had been chewing a head of grass. At the time, he was seized with a fit of coughing, and during the hoop, the grass was carried into the trachea. The child did not tell the servant who was with him what had happened. Shortly after this occurred, he had an acute attack of bronchitis, for which he was very actively treated. He never thoroughly recovered this attack, but after the acute symptoms were subdued, was constantly affected with rapidity of breathing, harassing cough, and purulent expectoration, with occasional streaks of blood. Emaciation succeeded, and hectic symptoms were supervening, when one evening, in the beginning of May 1842, 22 months after the accident, during a very violent fit of coughing, the ear of grass was expectorated, enveloped in a mass of thick and fetid pus, with some blood. After it was washed, and discovered to be a piece of grass, the boy then told how it had got there. From that time, all the urgent symptoms diminished in severity, and by degrees he perfectly recovered.

On examination, the piece of grass rejected turns out to be an

entire ear of the crested-dogs'-tail grass (cynosurus cristatus), of an ordinary size, or about an inch in length.

In neither of these cases, I believe, could any indication as to the presence of the foreign body have been derived from auscultation at the period after the accident, at which they came under medical treatment, as in both bronchitis had supervened, and even had the nature of the accident been known at first, I doubt much if any would have been afforded.

In the first, however, I believe the history of the accident alone, had it been known, would have been sufficient to warrant an operation, although, in all probability, it would have proved ineffectual, from the fact that two fragments had gained admission at the same time; however, it is very possible that the second fragment might have escaped by the opening at an after period, as has occurred in several instances in which the operation has been performed, and in which its removal at the time had been found impracticable.

Remarks on Effusion of Blood within the Eyeball.

By C. Lockhart Robertson, M.D.

When effusion of blood into the eye is the *result of injury*, it generally takes place into the aqueous humour. The iris and ciliary processes being the only textures in this part supplied with vessels conveying red blood, the effusion must evidently arise from one or other of these. When present in the anterior chamber only, it must proceed from the vessels on the anterior surface of the iris, and the effused blood may be equally diffused through the aqueous humour, tinging the whole of a deep red hue, or lie unmixed at the junction of the iris with the cornea.

On the other hand, when blood is effused from the ciliary processes or posterior surface of the iris, and presents itself in the anterior chamber also, it must have escaped in quantity sufficient to have enabled it to pass through the pupil, and, in such instances, the whole of the aqueous humour will be found uniformly tinged with the colouring matter of the blood. Such cases are of very rare occurrence, probably owing to the distention of the eyeball, caused by the effused blood acting mechanically as a means of compressing the blood-vessels, and arresting their discharge before such a result could take place.

When the effusion of blood into the posterior chamber is in smaller quantity, and does not reach the pupillary margin, it will of course escape observation.

The effusions of blood into the aqueous humour are usually absorbed in the course of three or four days, provided no inflammation supervene.

Although effusion of blood, *the result of injury*, generally takes place into the aqueous humour, it occasionally occurs into the cells of the vitreous humour. "I have met with cases," says Mr Travers,* "in which hemorrhage into the vitreous cells occurred in consequence of a blow. Inflammation and swelling of the globe ensued, and the cornea, yielding to the pressure, sloughed, when the humour protruded gradually in the form of a large spongy mass, loaded with coagula of blood, so as forcibly to separate and distend the lids, and occupy the entire circle of the orbit. In these cases a severe pain is felt in the head and temple. The occasional hemorrhage is profuse. The pain is relieved by opiates, and the eyeball ultimately sinks with a total loss of figure. I have reason to believe that this disease, which at one period assumes much of the aspect and character of a fungus *(in its third stage)*, has sometimes been mistaken for one of a malignant character." "I have also known," says the same author,† "blood effused into the cells of the vitreous humour within twelve hours after the operation of extraction, in consequence of straining upon the night-chair, which was instantly followed by severe pain darting towards the occiput." In this instance, the effusion was more likely to occur in consequence of the vessels being deprived of their natural support, the cornea having been laid open, and a part of the usual contents of the eyeball evacuated.

Laceration or wounds of the iris, in extracting a cataract, or forming an artificial pupil, and penetrating wounds of the globe, are often followed by extravasation of blood into the anterior chamber, and acute inflammation is sometimes attended by a similar effusion.

Effusion of blood into the eye not unfrequently occurs *spontaneously*, and, in such instances, it generally takes place into the aqueous humour.

Such spontaneous effusion of blood into the anterior chamber may be the result of any over-exertion either of the body‡ or of the eye,§ or it may occur in weak subjects during the progress of scrofulous ophthalmia.‖ Again, these spontaneous extravasations may be vicarious with the menstrual discharge,¶ recurring at monthly intervals, and disappearing on the establishment of the catamenia,** or they may occur in consequence of the cessation of

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* A Synopsis of the Diseases of the Eye, p. 201.

† Op. cit., p. 200.

‡ Bell's Surgery, vol. iii., p. 350.

§ M'Kenzie. Practical Treatise, &c. 3d edit., p. 597.

‖ Zeitschrift für die Ophthal. Erster Heft, art. viii. Démours Traité, &c., tom. ii., p. 249.

¶ Walther. Merkwürdige Heilung eines Eiterauges. Zwieter Auflage, s. 395. Landshut, 1819.

** Tyrrell. Practical Work, &c., vol. ii., p. 40.

this function.* A hemorrhagic diathesis may cause a similar result.†

In such cases there is generally, after any excitement, bodily or mental, a return of the effusion.‡ Walther, § in connection with this subject, relates a curious case, in which the patient could, at will, cause the effusion to occur, which, although occupying half of the anterior chamber, was each time re-absorbed in the wonderfully short period of from eight to ten minutes.

In all the cases of *spontaneous* effusion which have been hitherto recorded, the extravasation took place into the anterior chamber, and the only notice I have met with in surgical works, of blood being *spontaneously* effused in the chamber of the *vitreous* humour, is in a paper by Dr Robertson, in the second volume of this journal; and it is there noticed in connection with the diagnosis of incipient medullary carcinoma, which it very nearly resembles.

The following is a well marked case of such effusion of blood into the chamber of the vitreous humour, occurring without direct injury, and probably dependent on a diseased state of the vessels of the part. The appearances presented in the eye so exactly resembled those of medullary carcinoma, that the true nature of the disease could only be determined by the history of the case.

Spontaneous Effusion of Blood into the Cells of the Vitreous Humour recurring at intervals.

Miss —, æt. 29, suffered when fifteen years of age from red spots appearing before the right eye, which in about a week yielded to the use of laxatives. When twenty years of age, she remarked that the left eye retained the image presented to it for some seconds after the object had been removed, and vision gradually became more and more impaired in that eye, till August 1839, at which time she could not distinguish light from darkness. Under the use of leeches and blisters, and of mercury, given so as to affect the system, the sight in December began to improve.

In June 1840, she had an attack of blindness in both eyes, accompanied by severe pain in the eyes and forehead, which yielded to leeches, blisters, and mercurials.

In January 1842, she had another attack in both eyes, of a slighter character. In December of the same year, the disease suddenly recurred in both eyes, and again yielded to the use of leeches and mercurials. While still under treatment, she had in January 1843, a sixth attack in both eyes. The same remedies

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* La Lancette, copied in Med. Gazette, Oct. 1829.

† Dublin Journal, vol. xi., p. 395.

‡ Bell, loc. cit., &c. &c.

§ Op. cit., p. 61.

were continued. Subsequently electro-magnetism was tried, with temporary improvement of vision.

In August 1843, the disease suddenly recurred, for the seventh time, in the right eye (owing, it was supposed, to a sudden fright), and again yielded to leeches and mercury.

Sight continued improving until May 1845, when she had another slight attack in the same eye. Under the employment of leeches and mercury, vision is being again restored.

The right eye, after each attack, presented the following characters:—

The conjunctiva and selerotic were healthy, the pupil dilated, but perfectly regular, the colour and texture of the iris natural. On a minute examination of the posterior chamber,* it was observed that an effusion of blood had taken place into the vitreous humour at the nasal side, and about halfway between the iris and optic nerve. The red colour gradually disappeared, leaving a mass of a brownish yellow colour, and of semi-metallic lustre. Under the action of mercurials, the bulk of this deposit was lessened, and vision improved. At present it is about the size of a hazel nut.

No effusion can be traced in the left eye.

The pale coloured mass in the right eye, presented appearances nearly resembling those observed in the *first stage* of medullary carcinoma, from which it was distinguished,—

Firstly, By the red colour presented by the tumour, after each effusion, which contrasted with the unvarying dark amber or greenish hue† of the incipient medullary carcinoma; while the single red vessels,‡ which, in the latter, may be traced over the tumour, were not present.

Secondly, The pupil, instead of being, as it is in medullary carcinoma, irregular, and having the transverse diameter the larger, was equally and regularly dilated; while the colour and texture of the iris remained unaltered, instead of being reduced in thickness,§ or presenting the injected‖ or reddish-yellow hue,¶ which it does in incipient medullary carcinoma.

Thirdly, The tumour decreased in size, and sight was gradually restored under the employment of mercurials; while in the malignant affection, the size of the tumour never decreases, and vision becomes more and more impaired, in spite of all remedial means.

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* By the application of belladonna, and by allowing the focus of a double convex lens to fall on the eye, we are enabled more readily to appreciate any alteration in its deeper seated textures.

† Wardrop on Fungus Hæmatodes, pp. 10 and 41.

‡ Dr Robertson, Northern Journal, vol. ii., p. 66.

§ Dr Robertson, loc. cit.

‖ Wardrop, op. cit., p. 47.

¶ Dr Robertson, loc. cit.

Similar appearances, requiring most minute attention in the diagnosis, are likewise presented after deep-seated inflammation of the globe, terminating in the deposition of a clot of lymph,* or proceeding to the effusion of pus into the cells of the hyaloid membrane.†

Our *prognosis* in *spontaneous* effusion of blood, be it into the anterior chamber or into that of the vitreous humour, must be very doubtful, the primary cause, in most cases, being a diseased state of the vessels, which are liable again to give way on the application of any exciting cause.

In spontaneous effusion of blood into the vitreous humour, we have further to fear that this constantly recurring extravasation, and the presence of the organized lymph resulting, may, by compression of the retina, cause at last permanent insensibility to the stimulus of light.

The *treatment* most to be relied on, on the occurrence of any such sanguineous effusion, is general or local depletion according to the circumstances of the case, accompanied by cold applications and quiet both of mind and body; while, farther to promote absorption of the effused mass, mercurials must be employed so as to affect the system.

The recurrence of the extravasation must be guarded against by attention to the general health, due regulation of diet, moderate and regular exercise, avoiding all stooping or over-exertion, more particularly of the eye, keeping the feet warm and the head cool, and sleeping with the head more than usually raised.

58 Queen Street, July 1845.

Part II.

SURVEY OF THE RECENT LITERATURE OF THE HISTORY AND TREATMENT OF DISEASES.

No. I.—*Bright's Disease of the Kidney.* By Alexander Wood, M.D., F.R.C.P., Lecturer on the Practice of Medicine.

(*Continued from page* 79.)

PART II.—PATHOLOGY OF THE DISEASE.

In a great majority of those cases in which anasarca is found to exist along with albuminous impregnation of the urine, some structural lesion of the kidneys may be safely predicated, more espe-

* Lawrence, Practical Treatise, &c., 2d edit. p. 697.

† M'Kenzie, op. cit. p. 607.

cially if the disease has existed for a considerable time. By some this is deemed sufficient evidence of a necessary connection between the symptoms and the organic alteration, and they are thus regarded as standing to each other in the relation of cause and effect. But it requires no great acquaintance with pathology to learn that such methods of reasoning are in that science seldom admissible; and that even where certain symptoms are constantly found associated with certain morbid alterations, we are not always justified in inferring that the former are caused by the latter. Besides, in the disease under consideration, the morbid appearances are by no means uniform. An individual previously of robust health, after being over-heated, is exposed to the combined operation of cold and damp,—his eyelids and extremities become puffy and swollen,—his breathing, it may be, embarrassed,—the secretion of urine increased, perhaps tinged with blood, but at all events decidedly albuminous. These symptoms increase, and the patient dies. Post-mortem examination may in such a case reveal merely the existence of a certain amount of vascular enlargement of one or both kidneys. Or, again, a patient under similar circumstances may appear to be relieved by the treatment which is adopted. Still there is an evident decline of the health,—langour, lassitude, incapacity for business, constantly annoy the patient, who is, besides, subject to recurrences of the dropsical effusion, and peculiarly susceptible of attacks of inflammatory disease. The symptoms increase,—he is attacked with some serous inflammation, which perhaps proves fatal, or his sight and hearing are affected, or he is seized with convulsions, or struck down with apoplexy, or dies comatose. In all these supposed cases, the urine was albuminous, either at intervals or throughout the entire progress of the disease, and it was easy to predict that after death some morbid alteration would be found in the renal glands. But what is the nature and character of that alteration? Here the physician can only conjecture. He may find the vascular engorgement to which we have already alluded, or the substance of the kidney may be mottled from a mixture of hyperæmia and anæmia, or the cortical part may be converted into a granular texture, or the organ may be found rough and scabrous, and exceedingly diminished in size. Are these various morbid appearances but so many stages of one and the same disease? or are they various diseases of the kidney, of all of which albuminous urine and dropsy are the chief symptoms? or are the diseased state of the kidney, the albuminious urine and the dropsy, alike co-existent symptoms of some general disease?

Before answering these questions, it is right that we should distinctly understand what those morbid states of the system are, which are most usually met with in connection with anasarca and albuminous urine. These we shall consider separately, under four distinct heads—1*st*, Morbid appearances found in the kid-

neys; 2*d*, Morbid appearances found in other organs; 3*d*, Morbid changes in the fluids; 4*th*, Inferences as to the pathology of the disease deducible from the facts ascertained.

I.—MORBID APPEARANCES FOUND IN THE KIDNEYS.

In his first notice of the disease, Dr Bright described three distinct forms, which he had found the kidneys present. Rayer, who first noticed the acute variety of the disease, describes two forms of it, and four of the chronic. M. Martin-Solon gives five different forms; while Dr Christison, admitting the propriety of investigating the connection between all of these and albuminous urine, limits the actual morbid anatomy to those cases where an actual new deposit is found in the substance of the gland. The following are the forms classified and arranged by Rayer:—

1*st Form*, *acute*.—Volume of kidney increased to double or triple of the natural size; constantly firm, without hardness; it feels much as if it was distended by fluid injection. The surface is of a morbid red colour, more or less vivid, and studded with small deep red points. A section of it shews that the enlargement is seated in the cortical substance, which both internally and externally presents these red points, which appear to be the malphigian glands much distended with blood. Tubular portion compressed between the cortical appears of a duller red, and its striæ less distinct than natural. The mucous membrane of the pelvis and calices is marked with arborescent injection.

2*d Form*, *also acute*.—Persistence of the enlargement, with diminished consistence of the substance—a remarkable mixture of hyperæmia and anæmia giving a mottled appearance, composed of red spots on a yellow ground. This is confined to the cortical substance, which encroaches on the tubular—the latter presents a vivid brownish red colour.

3*d Form*, *usually chronic*, *rarely acute*.—Kidney increased both in size and weight as before; but the red patches and mottling have disappeared. The cortical substance, externally and internally, of an uniform yellowish pink hue, like the flesh of an eel. Some points of red injection, and sometimes large white granulations, resulting from old depositions of coagulable lymph.

There are also found indurations, depressions, and elevations.

This appears to be a mere modification of the succeeding variety, with which the descriptions of other authors more closely correspond.

4*th Form*, *sometimes found in acute*, *more commonly in chronic*.—This form is "the granulated texture" of Dr Bright. The size and weight of the kidneys is still increased externally, and they appear of a pale yellow colour, and dotted over, or, in some cases, covered with minute spots of a milky white hue, about the size of small pin's head. These are sometimes elongated, and seem as if the surface were irregularly spread with milk curd. In general, these granulations are more numerous and better defined at the two ends of the organ. They do not communicate any roughness to the surface of the organ, which remains perfectly smooth, of a milky white colour, and covered with an extremely delicate tissue, through which the granulations appear as if varnished over.

The granulations (internally?) appear as if embedded in the cortical substance; but instead of being isolated and spread at random, they assume a linear arrangement, and seem to be continuous with the striæ of the tubular cones. A remarkable contrast is manifest between the pale yellow colour of the cortical and the vivid red of the tubular portions.

Occasionally, although the granulations appear numerous externally, comparatively few appear when the kidneys are divided. In other cases, again, they are universally prevalent, and appear even in the small prolongations which penetrate into the bases of the tubular cones.

Maceration makes the white colour of the granulations become more apparent.

This most obviously corresponds with the second variety of Dr Bright, in which we are informed that "the whole cortical part is converted into a granulated texture, and there appears to be a copious morbid interstitial deposit of an opaque white substance." —P. 68.

It is unnecessary to add to these descriptions, that of M. Martin-Solon, which, as usual, closely follows that of Rayer. In addition, he states what is constantly verified by observation, that "the cortical substance appears to penetrate between the radii of the tubular; and these latter, in some measure disappear, or tend to become of a pallid colour."

The remaining forms of Rayer all invariably belong to the chronic variety.

5th Form.—The kidneys increased in volume present an appearance of which it is difficult to give a more precise idea, than by comparing their appearance to that which would be produced, by sprinkling their surface under the proper investing cellular membrane, with a number of the minute grains of vermicelli. These are equally distinct from the yellow particles sometimes observed in the cortical substance, and from the small granulations of plastic lymph, which are met with in this as well as in other forms of nephritis.

6th Form.—The kidneys sometimes larger, often smaller than in health, are hard, and present inequalities or mammillæ on the surface, and few or no milky spots (Bright's granulations), although some of these are occasionally met with in the interior of the cortical substance. They are discoloured generally or partially, and sometimes present so close a resemblance to kidneys that have been altered by chronic nephritis, that it would be impossible, by a mere cadaveric inspection, to tell of which disease the patient had died.—vol. ii., p. 163.

II.—MORBID APPEARANCES FOUND IN OTHER ORGANS.

In a farther communication on this disease, published by Dr Bright in the first volume of Guy's Hospital Reports, we are furnished with a tabular view of one hundred cases, exhibiting the morbid states of the organs found to be co-existent with Bright's disease, which may be considered as affording a fair average of the complications of any other equal number of cases of the same

disease. The following synopsis will give the reader an idea of the comparative frequency of each of the concomitant diseases—

1. Pleura	affected in 74	cases.
2. Lung	65	...
3. Pericardium	37	...
4. Heart	67	...
5. Cavity of Abdomen	37	...
6. Peritoneum	25	...
7. Liver	60	...
8. Intestines	19	...
9. Stomach	18	...
10. Spleen	12	...
11. Pancreas	4	...
12. Aorta	19	...
13. Brain	49	...
14. Uterus and Varies	6	...
15. Bile	14	...

Although the results of this table shew most distinctly the extent and frequency of the complications of this disease, yet we must not overlook the caution of Dr Bright, who very properly reminds us, that "we are not at liberty to assume that the disease of the kidney has been the primary cause on which the disease of the rest depended." A glance at the table shews that it is in the circulatory and respiratory systems, and in the serous membranes, that the principal concomitant lesions are displayed. So far most of the observers are agreed; but when we come to investigate the question more in detail, we find a remarkable disparity of opinion as to the relative frequency of many of these co-existent affections. Thus, to begin with the diseases of the serous membranes, we find in reference to them considerable difference of opinion.

A. *Affections of the Pleura.*—"Of all the membranes," says Dr Bright, "the pleura has decidedly been most often diseased;" and then, after shewing that in many cases the adhesions were of old standing, and therefore might merely prove the liability of the individual to be easily affected by changes of temperature, and also, that the absence of all affection in 26 cases, distinctly proves that pleuritis is no essential part of the disease, he continues, "that the pleura is however liable to inflammatory action in a large proportion of these cases, may be inferred from the 16 instances of recent inflammation."

The opinion of Dr Christison is somewhat different. "Pleurisy and peritonitis, which, according to the experience of Dr Bright, form a very prominent description of secondary disorders in London, are, in Edinburgh, comparatively less common. Still they are met with often enough to establish the necessity of keeping them always in view."—P. 90.

Totally opposed to this, is the opinion of Rayer: "If we exclude those cases in which pleuritis was evidently induced, either

by pneumonia or by tubercles, the occurrence of this complication is extremely rare in albuminous nephritis."—(Tom. ii. p. 308.) When we call to mind the frequency with which adhesions of the pleura are met with in post-mortem examinations of all persons beyond middle life, we do not find that, even according to the experience of Dr Bright, they occurred so very constantly in this disease as to warrant us in regarding them as of very frequent complication. In many of his cases the probability is, that the pleural was antecedent to the renal lesion, while in others there is no evidence of any necessary connection between them.

B. *Pericardium.*—Upon this subject there is more agreement. "The same tendency to disease," observes Dr Bright, "which is manifest in the pleura, shews itself, though in a less degree, in other serous membranes. In the pericardium, we have found six instances of old adhesion, eight of recent inflammation, and twenty-three of serous accumulation. We are not aware that Dr Christison has made any very distinct statement on this subject; but the experience of Bright is amply corroborated by that of Rayer, who, after noticing the existence of a considerable quantity of limpid serosity in the pericardium, as commonly found after death in Bright's disease, continues—"I have several times observed the complication of albuminous nephritis with pericarditis."—(Op. cit. p. 237.)

In estimating, however, the effect which Bright's disease may have in the production of pericarditis, numerous limitations are required. In the first place, the remarks previously made in reference to the co-existence of pleurisy, are also applicable to that of pericarditis. In the second place, the frequent occurrence of disease of the heart, along with Bright's disease, and the admitted connection between many affections of that organ, and those of its fibro-serous bag, would incline to the belief, that in those cases where the kidneys, the heart, and the pericardium were alike found affected, the disease of the last was to be regarded as dependent upon that of the heart, rather than that of the kidney. And, lastly, in some of the recorded cases, the existence of a cause, universally admitted to be exceedingly productive of pericardial disease, viz. acute rheumatism, is distinctly mentioned, which not only accounts for those cases of pericarditis, where it was found to pre-exist, but also suggests the probability of the occurrence of this and other diseases from causes peculiarly their own, during the existence of Bright's disease of the kidney, but at the same time altogether independently of that affection.

C. *Lung.*—Inflammations of the air-tubes of the lungs are extremely frequent in this disease. On this point, all the observers agree. It is comparatively rare, however, to meet with the acute variety of the disease. The affection usually assumes the chronic form, sometimes attended by so little dyspnœa, as to cause slight

annoyance to the patient; at other times this symptom is severe and distressing, and not unfrequently seems to be the immediate cause of the fatal result. Unlike idiopathic bronchitis, it appears in this disease without any assignable cause. It seems also to be little under the influence of those remedies which are most successful in the treatment of the idiopathic affection, and to be more successfully combated by pectoral and cough mixtures, than by the detraction of blood, emetics, or purgatives. It shews a remarkable tendency to pass into the state of bronchorrhœa, and is often associated with dilatation of the bronchi, emphysema, or oedema of the lungs; the last of which is, according to Dr Bright, "very commonly the immediate cause of dissolution, or of the increased distress, towards the approaching termination of the chronic form of the disease."

With regard to pneumonia, Dr Bright found recent or old traces of its existence in one-ninth of his fatal cases. Rayer speaks of it as a very frequent secondary affection, and not unusually the immediate cause of death in the disease. It seems often to assume the latent character, which may perhaps account for the statement of Dr Christison, so much at variance with that of Bright and Rayer, that "inflammation of the lungs has not occurred often as a secondary disease among the cases observed in this city."—(P. 98). Only four cases altogether were observed by Dr C., two of which presented characters of obstinacy and severity, while the other two were not detected during the life of the patient. But perhaps the most extraordinary difference of opinion exists in reference to the relation between Bright's disease and phthisis pulmonalis. Dr Bright's statement on this subject is very decided. "The instances in which phthisis, or any form of scrofulous or tuberculous disease has been connected with the renal affection, have been decidedly rare; so that, in only four cases, has recent phthisis developed itself; and what is somewhat remarkable, in more than double that number, the disease seems to have made a certain inroad upon the upper lobes of the lungs, and then to have sunk into a state of quiescence, or entirely subsided; from which we should perhaps be inclined to infer, that so far from these diseases being associated, the condition of the body in this form of renal disease is unfavourable to the existence of phthisis, or that it is certainly not peculiarly apt to occur in scrofulous constitutions." In the first paper of Dr Christison, (Edin. Med. Surg. Jour., vol. 32), no mention is made of this subject. In that of Dr Gregory, (ibid., vol. 36), it is alluded to as a frequent complication arising from the deterioration of the constitution, induced by the presence of Bright's disease. In the thesis of M. Tissot, (De l'Hydropisie Causée par l'affection granuleuse des reins. Paris, 1833), a pupil of M. Rayer, the subject first received the notice it deserved, and out of seventeen cases occurring in the practice of M. Rayer, and recorded by M.

Tissot, in seven pulmonary phthisis and Bright's disease were found to co-exist. Rayer is inclined to regard the tubercular disease as the cause rather than the consequence of the renal affection—an opinion concurred in by Professor Christison; while Martin-Solon, while he admits the frequency of their co-existence, seems to regard the complication as accidental.

This notice of the connection between phthisis and Bright's disease, is well illustrated by four cases which fell under my own observation, and which cannot fail to be regarded as exceedingly interesting from their exhibiting an hereditary tendency to both diseases in combination. My first patient in the family was the mother, who, after long suffering from severe cough, difficulty of breathing, and copious expectoration, was attacked with anasarca and hydrothorax. Her urine was coagulable by heat and nitric acid. She died with an aggravation of the catarrhal symptoms in February 1836. I had no opportunity of examining her body after death. About a year after, I first visited her daughter who was labouring under confirmed phthisis. Towards the close of the disease, her lower extremities and face became anasarcous, but I did not immediately examine the urine until my attention was drawn to it by the following circumstance:—An elder brother of this patient came from Hamilton to pay a last visit to his sister, whose death was then daily expected. He travelled on the outside of the coach in very cold weather, and during a heavy fall of rain. The day after his arrival, he had an attack of shivering, followed by smart fever, pain in the loins, and distinct hæmaturia. He never remembered to have suffered from this before. The symptoms were relieved by cupping the loins, warm-bathing, and tartar emetic internally; but the urine continued coagulable for ten or twelve days. I found also considerable dulness on percussion, with feebleness of the respiratory murmur at the upper part of the lungs. The state of his urine led me to examine that of his sister, which was found to be very coagulable, and continued so until her death, which took place a few days afterwards. An examination of the body showed the usual signs of phthisis, and the kidneys were distinctly granular. Sometime after, her brother fell a victim to phthisis, and he also became dropsical, and his urine coagulable before his death. Since then a younger brother, whom I never saw as a patient, has died. I have no authentic account of his case, but I was informed by a friend of the family, that although he also fell a victim to consumption, yet that he had been very much swollen, and incapable of following his usual employment for some time before the chest symptoms displayed themselves.

D. *The Heart.*—Of all the diseases with which Bright's disease is found associated, morbid states of the heart are decidedly the most common. The following is extracted from Dr Bright:—"The deviations of health in the heart are well worthy of ob-

servation. They have been so frequent as to shew a most important and intimate connection with the disease of which we are treating. The obvious structural changes in the heart have consisted chiefly of hypertrophy, with or without valvular disease; and what is most striking, out of 52 cases of hypertrophy, no valvular disease whatsoever could be detected in 34; but in 11 of these 34, more or less disease existed in the coats of the aorta; still, however, leaving 22 without any probable organic cause for the marked hypertrophy generally affecting the left ventricle."—(Op. cit. p. 396.)

Again, on the same subject, M. Martin-Solon writes as follows:—"Among the most important complications of this (Bright's) disease, we most especially direct attention to diseases of the heart. They are so often found associated, that many physicians have believed that the former is produced by the latter."—(Op. cit. p. 236.)

It is true, that this author, out of 28 patients, labouring under Bright's disease, whom he had himself an opportunity of examining, found only eight affected with heart disease, a proportion considerably less than that recorded by Bright. Still, it nearly corresponds to that of Rayer, who met with lesions of the heart and its appendages, in about one-fifth of his cases.—(Op. cit. p. 234.) The remarkable number of such cases observed by Dr Bright, has led that author to attempt to account for its production in a way not quite in accordance with sound induction, and very different from the ordinary character of his reasoning. He believes the heart disease to be produced by the alteration in the quality in the blood, arising from the renal disease, which "either affords irregular and unwonted stimulus to the organ immediately, or so affects the minute and capillary circulation as to render greater action necessary to force the blood through the distant subdivisions of the vascular system."—(Op. cit., p. 397.) With regard to this theory, it is evident, first, that even supposing the morbid state of the blood to exist previously to the affection of the heart, there is a want of all proof as to its power to cause the alleged effects. Second, That according to Dr Bright's own observations, in 22 out of 52 cases of diseased heart, the valves or coats of aorta were also affected; so that, even granting the power of changes in the quality of the blood to produce hypertrophy, we should still be at loss to explain the co-existence of the valvular or arterial affection. Third, and chiefly, the theory of Dr Bright renders it necessary that the kidney should precede the heart disease. Now, we have the testimony of Dr Christison, "that the respective state of advancement of disease in the two organs, equally with the history of the symptoms throughout their progress, indicates that of the heart to be often prior in its commencement."—(P. 100.) The same view is unequivocally advocated by Rayer, who has apparently paid considerable at-

tention to the subject. "Were I," he observes, "to form an opinion from my own observations, I would regard albuminous nephritis as more frequently a consequence than a cause of the cardiac affection. The pupils and physicians who have followed my visits at La Charité, know that I have, for a long time, remarked, that the presence of albumen in the urine in patients labouring under disease of the heart, or large vessels, (with or without dropsy), was by no means an absolute and pathognomic sign of albuminous nephritis, and that the urine of individuals labouring under heart disease might be more or less charged with albumen, while the kidneys were very differently affected. For example, in some cases, there may be a true complication with Bright's disease; in others, these organs may be simply hyperæmic; while, in a third class, they may present no appreciable lesion whatever." —(P. 236.)

We have dwelt at some length on this subject, because we believe it to be one of great pathological interest. If the observations of Rayer are correct, such cases will often cause perplexity in the diagnosis. In one which recently came under my notice, there were evident signs of hypertrophy of the heart. The impulse was increased and diffused; there was dulness on percussion, over a larger extent than natural; pulsation in the epigastric region; frequent attacks of dyspnoea; a firm and jerking pulse, and anasarca. The patient, however, distinctly traced the occurrence of the dropsy, and the aggravation of all the symptoms to exposure to cold, while over-heated by exertion, since which time she had had constant uneasiness in the lumbar region; but this latter symptom might be accounted for by irregularity of the menstruation and dys-menorrhœa under which she laboured. The urine was coagulable by heat, but I had no opportunity of ascertaining its specific gravity. In such a case as this, we might be very apt to assign an origin to the renal symptoms prior to that of the cardiac, because the latter, in many cases, progress insidiously, and often cause the patient little annoyance until the balance of the circulation is disturbed, and the secondary affections declare themselves. Even in this case, the patient was inclined to impute her illness entirely to the exposure to cold, which probably developed the renal affection; and it required minute inquiry to bring out the fact, that even previous to this there had been a manifest disturbance both of the respiratory and circulatory system. As the accumulated evidence on the subject renders it now impossible to doubt that albuminous urine may exist with heart disease, independent of any affection of the kidney, it were well did we possess some means of deciding as to the presence or absence of the latter. We shall, therefore, conclude this part of the subject with the following quotation from Dr Bright:—"The existence of albuminous nephritis is almost certain, when, in a case of heart disease, the urine is of a pale citron colour, strongly coagulable, and

of low specific gravity. I ought to add, that in this complication, as in simple cases, the proportion of albumen, though it may be at one time considerable, may frequently vary even in the same patient, and that I have seen it sometimes diminish remarkably towards the fatal termination of the disease."—(P. 236.)

The affections of the abdominal viscera, which occur as complications of albuminous nephritis, need not detain us long, as they are neither so frequent nor so important as those which we have been considering. Dr Bright remarks, that, compared with the heart and lungs, the liver and abdominal viscera generally enjoy a great immunity from structural disease. We shall glance at these affections in order.

E. *Peritoneum.*—In a hundred fatal cases, Dr Bright found in the peritoneum, 10 instances of old adhesions, 12 or 13 of well marked recent, and often of most acute inflammatory action; and 23 of the effusion of clear serum, in 3 of which a false membrane had been formed by chronic action. M. Rayer considers peritonitis as one of the most rare complications of this disease; and is of opinion, that when it does occur, it is generally at an advanced stage of the primary disease. Dr Christison is of opinion that it seldom arises, except in consequence of some decided exposure to unusual cold and wet. He regards it as more commonly occurring towards the commencement of the disease, and as usually presenting a very obstinate character.

F. *Liver.*—A remarkable discrepancy of opinion prevails in reference to the frequency with which the liver is affected. By Dr Bright it is noted as an important fact, that although renal disease is so often found in persons of intemperate habits, yet the liver is wonderfully free from structural lesion. M. Rayer found it to be more or less different from its normal state, in about one-third of his fatal cases; while Dr Christison regards it as a more frequent complication than that of disease of the heart, and is of opinion that the liver and kidney disease are alike to be referred to intemperance as their cause. After this very strong statement, it surprises us to find, that among his 31 illustrative cases, there are only 3 where the liver is recorded as diseased; and that of these 3, only one was of intemperate habits.

G. *Stomach and Intestines.*—Structural disease of the stomach and intestinal canal seem to be regarded by all observers as by no means frequent complications, though it is not unusual to meet with marks of irritation, probably caused by too free indulgence in stimulants. Ulcerations of the intestines are occasionally met with, more especially in those cases in which tubercles exist in the lungs.

Functional disorders of these viscera are, on the other hand, among the most common and most distressing effects of the presence of the kidney disease; more or less dyspepsia, is an almost invariable accompaniment, and occasionally the irritability of the

stomach is so great, that nothing can be retained in it. In a most interesting case recorded by Professor Christison, it assumed the most aggravated form of chronic vomiting, so that "for many weeks before death, nothing was retained in the stomach;—food, drink, and medicine were alike, and immediately discharged. Severe retching also frequently occurred, though the stomach was empty, and death seemed to arise from mere languor and inanition."—(P. 86.)

The only other organ, the diseases of which need engage our attention, is the brain. The abridged table of Dr Bright (*supra*, p. 145), shews the relative frequency with which diseases of the spleen, pancreas, aorta, and uterus are met with, and neither their frequency nor their importance render it necessary to consider them in detail.

H. *Brain.*—Every one who has had an opportunity of observing cases of Bright's disease, must have been struck with the frequent co-existence of head affection, more especially towards the fatal termination of the disease; but were we to infer from this the existence of correspondent lesion in the brain, we would very generally be disappointed. The truth is, that while symptomatic affections are common, structural lesions are rare. When they do occur, they present chiefly that appearance of unequal distribution of the blood, which produces a mottled appearance, when the brain is exposed in slices. Occasionally there is some subarachnoidean effusion, (Gazette Médicale, 1836, No. 29.) With regard to the occurrence of ramollissement, atheromatous degeneration of the arteries, and various tumours of the substance of the brain, which have been described by some authors as complications of Bright's disease, they were in all likelihood accidental, (see, for example, the interesting case of Irving, related by Dr Christison, p. 184.) That the coma, which, according to the admirable description of the same author, "usually makes its approaches gradually, first in the shape of unusual drowsiness and dimness of vision, then of constant torpidity, at length of stupor, which soon passes into complete and irrecoverable coma" (p. 93), should often be unattended with any commensurate morbid change within the cranium, will occasion no surprise to those who have paid attention to the pathology of cerebral disease, arising from suppression of urine. The fact was pointed out by Sir Henry Halford, in his communications to the College of Physicians on Ischuria Renalis. The subject has recently called forth a short memoir from Dr Addison, (Guy's Hospital Reports, vol. iv.) He regards, as the general character of cerebral affections connected with renal disease, "a pale face, a quiet pulse, a contracted or undilated and obedient pupil, and the absence of paralysis." This general character, however, is liable to be modified in individual cases. Dr A. further describes five forms of cerebral disorder connected with renal disease.

"1*st*, A more or less complete attack of *quiet stupor*, which may be temporary and repeated, or permanent, ending in death.

"2*d*, A sudden attack of a *peculiar modification of coma and stertor*, which may be temporary, or end in death.

"3*d*, A sudden attack of *convulsions*, which may be temporary, or terminate in death.

"4*th*, *A combination of the two latter*, consisting of a sudden attack of coma and stertor, accompanied by constant or intermitting convulsions.

"5*th*, A state of *dulness of intellect, sluggishness of manner, and drowsiness*, often preceded with giddiness, dimness of sight, and pain in the head, proceeding either to coma alone, or to coma accompanied by convulsions; the coma presenting the peculiar character already alluded to."—(Op. cit. p. 2.)

Dr Bright and Rayer both mention epilepsy as not an uncommon form for the cerebral disorder to assume. As it is generally supposed that these affections are directly attributable to *suppression* of urine, it is right to conclude this part of the subject with an interesting statement of Dr Christison's—"That on the one hand, extreme diminution of urine is not essential to the establishment of stupor and coma; and that, on the other hand, stupor and fatal coma are not essential consequences of an excessive diminution."—(P. 94.)

To be continued.

Part III.—REVIEWS.

1. *A Manual of Medical Jurisprudence.* By Alfred S. Taylor, Lecturer on Medical Jurisprudence and Chemistry in Guy's Hospital. London, 1844. Pp. 679.
2. *Principles of Forensic Medicine.* By Wm. A. Guy, M.B. Cantab., Professor of Forensic Medicine, King's College, London, &c. London, 1844. Pp. 568.
3. *A Treatise on Poisons.* By Robert Christison, M.D., Professor of Materia Medica in the University of Edinburgh. Fourth Edition. 1845. Pp. 986.

Of the three works, whose titles are placed at the head of this article, the first two embrace a much more extensive range of subjects than the third, but as they individually treat of one and the same branch of medical education, we have thought they might not inappropriately be grouped together. For a similar reason, although toxicology is the last department of medical jurispru-

dence treated of in the Principles of Dr Guy, we shall consider the respective merits of the works on this subject first, and afterwards return upon the other branches of medico-legal study, comprised in the books of our two first authors. We have always considered that a great deal too much of Mr Taylor's Manual has been devoted to toxicology—little short of one half of it being taken up with this subject; and that, too, more particularly with the chemistry of poisons, to the neglect of other matters of equal, if not greater, importance. Mr Taylor, in fact, appears to have fallen into the student's error, that toxicological chemistry and medical jurisprudence, are synonymous terms. As far as relates to the analysis of poisons, the work of Mr Taylor is not to be surpassed by any other in the English language; but in the medico-legal questions relating to poisoning generally, and to individual poisons, it cannot stand in comparison with the Treatise of Professor Christison; this however is to be expected,—the work of the latter author being devoted to poisons solely. Dr Guy's "Principles" are well adapted for a text-book, being clear, simple, short, though not deficient, and devoid of that prolixity, which must inevitably render Mr Taylor's Manual perplexing and tiresome to the student. The Treatise of Professor Christison is above praise; any thing emanating from his pen bears on its title-page a guarantee of its excellence; and the work at present under review has already been stamped as a standard work on the subject throughout Europe; though excellent, it is not perfect, and we shall suggest, for the next edition, one or two improvements, which Dr Christison's thorough knowledge of his subject, both literary and practical, will readily supply.

As an appropriate commencement to the subject of toxicology, Mr Taylor and Dr Guy engage with the question, "What is a poison?" It is generally defined as a substance, which, when administered internally in small doses, is capable of causing death. There are on record cases of death resulting from half a pound of table salt, and from two ounces of Epsom salts; we therefore think that a medical jurist could have no hesitation in asserting that these substances might be poisons, although no articles in common use are less noxious, or more beneficial in proper doses. There is in fact no essential difference between a pharmaceutic remedy and a poison. The objects with which substances are administered, the doses in which they are exhibited, and the conditions under which they are employed, are the only circumstances which can lead us to decide, whether the given substance should be regarded as a remedial agent or as a poison. In a medico-legal point of view, it is of no consequence whether a man dies from the effects of a drop of prussic acid or a pound of table salt—"each substance must be regarded as a poison, differing from the other only in its degree of activity. The result is the same; death is caused by the substance taken, and the quantity required

to kill, cannot therefore be made a ground for distinguishing a poisonous from a non-poisonous substance. In medical jurisprudence, therefore, we must look to the effects produced by particular substances on the system, and their adequacy to cause death under symptoms of poisoning, rather than to the mere quantities in which they may have been taken."—Taylor, pp. 1—3. A poison we should define as a substance, which, administered internally, or applied externally, is capable of injuring the health, or destroying the life of the human body, without acting mechanically. We consider this definition as being more comprehensive, and we flatter ourselves more correct than that either of Dr Guy or Mr Taylor. By the former, a poison is defined, "any substance, which when applied to the body externally, or in any way introduced into the system without acting mechanically, but by its own inherent qualities, is capable of destroying life." —Guy, p. 293. Here the possibility of certain substances producing dangerous symptoms without destroying the sufferer, is excluded from the definition. Mr Taylor defines a poison as "a substance, which, when taken internally, is capable of destroying life without acting mechanically on the system."—Taylor, p. 5. Under this definition, those poisons are not included which have caused death by being applied to the skin; * the external application of the substance, in short, is excluded from the definition.

Other difficulties are raised by our authors, as to the correct signification of the term, "destructive thing," as used in the legal enactment, with regard to poisoning; and the term, "deadly poison," used in indictments for the same offence. The space we have allotted ourselves for this review will not permit of our entering minutely into this discussion; but, for our own part, we should define "destructive thing," in reference to poisoning, exactly as we have defined the term "poison." And we should not hesitate to consider any poison a deadly poison, if there are any recorded instances of death having resulted from its administration or application. Dr Christison has not discussed these matters. We could wish that he had, for we have a high estimate of the soundness and precision of his judgment.

Our authors next enter on the consideration of the mode in which poisons act. On one point they are agreed, viz. that many poisons produce their remote action by being taken into the blood, and to this Dr Christison adds, that "through its means they impregnate the organs which are acted on at a distance." We know that arsenic, mercury, lead, copper, and a few other poisons, have been detected in certain organs and tissues of the body—that alcohol, and the odour of prussic acid, have been detected in the brain; but the instances which have been brought forward, where

* Christison on Poisons.

a poison has actually been proved, by chemical analysis, to exist in the organ on which it appears to exert a specific action, are too few to permit of our determining certainly the universality of the fact. That poisons produce their remote effects by an impression made on the sentient extremities of the nerves of the part to which they are applied, our authors are by no means agreed. Mr Taylor, admitting this mode of action, (sympathy we shall call it, for want of a better name,) Dr Christison considering that the doctrine is "insecurely founded," and Dr Guy rejecting the theory altogether, and pinning too much faith to the experiments of Mr Blake,* who would almost make us regard as fabulous the results of experiments recorded by Magendie, Dr Christison, and Sir B. Brodie, in which they observed instances of poisoning by prussic acid, and conia, where there was no appreciable interval between the administration of the poison and the symptoms of its action, or even the death of the animal, because, in his hands, strong hydrocyanic acid applied to the tongue of a dog did not act until eleven seconds. "Mr Blake," to quote from Professor Christison, "denies the accuracy of these observations, insisting, that in those he made himself, with the most potent poisons, he never failed to witness, before the poison began to act, an interval considerably longer than what had been observed by others, and longer than what he had found sufficient for the blood to complete the round of the circulation." This is a very summary way of getting rid of the stubbornness of positive facts.

"The balance of testimony is in favour of those experimenters, whose accuracy Mr Blake impugns. For, in the first place, they had not, like him, a theory to build up with their results, but were observing, most of them at least, the simple fact of the celerity of action. Then, their result is an affirmative or positive statement, and his merely a negative one. They may perfectly well have observed what he was not so fortunate as to witness. And, lastly, it is not unreasonable to claim for Sir B. Brodie, Dr Freer, Mr Macaulay, and Mr Taylor, all of them practitioners of experience, the faculty of noting time, as accurately as Mr Blake himself."—P. 10. Dr Christison, with the modesty characteristic of real talent, has omitted his own name, but we consider his experiment with the muriate of conia more satisfactory than any of the others. Dr Guy and Mr Blake consider, that where an animal is killed by prussic acid in a shorter space of time than eleven minutes, the poison acts not by sympathy, but from its vapour being inhaled, and thus introduced into the blood. In proof, Mr Blake shews, that when this was prevented, the animal was not attacked until sixteen seconds had elapsed. We have, in some experiments of our own, seen a cat attacked

* Edin. Med. and Surg. Journ., vols. 51—54 and 56.

in six seconds with the usual symptoms, from five grains of the extract of nux vomica inserted into a wound in the back in the lumbar region; and, in another instance, an animal (also a cat) was affected even more speedily with a drachm of strong hydrocyanic acid, poured into a wound in the same region. In the first experiment, the inhalation of the poison was impossible; in the second improbable.

The mode in which poisons act is fully and ably discussed by our different authors. It is only of importance to medical jurists, in so far as a knowledge of the circumstance that poisons are to be found in the blood, and that they are conveyed to different organs, has shown the toxicologist that he need not confine his analysis to the stomach and its contents alone, but that important evidence may also sometimes be derived from an examination of the solid viscera, the blood, and secretions of the body. The general evidence of poisoning is next brought under consideration; in this, without any disparagement to Dr Guy or Mr Taylor, we affirm that Dr Christison is much superior; this, indeed, we might naturally expect. Dr C.'s work being devoted to toxicology solely, theirs being given to a subject quite sufficient, even on a limited scale, to extend through half a dozen volumes as large as Professor Christison's. Space will not permit us to notice the chapters on the General Evidence of Poisoning, but we recommend to our readers, more especially the pages of Dr Christison.

Before proceeding to the consideration of individual poisons, Mr Taylor favours us with a very admirable summary of the rules which ought to guide our investigations in a case of poisoning. As these may be of use to many of our readers who may not have a work on the subject of legal medicine at hand, we shall extract them at length.

Symptoms.

"1. Note the time of their occurrence. Their nature.

"2. The exact period at which they were observed to take place—after a meal, or after food, or medicine, had been taken.

"3. The order of their occurrence.

"4. Whether there was any remission, or intermission, in their progress, or whether they continued becoming more and more aggravated until death.

"5. Whether the patient had laboured under any previous illness.

"6. Whether the symptoms were observed to recur more violently after a particular meal, or after taking any particular kind of food, or medicine.

"7. Whether the patient has vomited—the vomited matters, if any (especially those first ejected), to be procured, their colour noted, as well as their quantity.

"8. If none can be procurable, and vomiting have taken place on the dress, furniture, or floor of the room, then a portion of the clothing, sheet, or carpet may be cut out, and reserved for analysis. If the vomiting have occurred on a deal floor, a portion of the wood may be scraped or cut out; or if, on a stone floor, then a clean piece of rag or sponge, soaked in distilled water, may be used to remove any traces of the poison.

" 9. Endeavour to ascertain the probable nature of the food or medicine last taken.

" 10. Ascertain the nature of all the different articles of food used at a meal.

" 11. Any suspected articles of food, as well as vomited matters, to be sealed up in a proper vessel, and reserved for analysis.

" 12. Note down, in their own words, all explanations voluntarily made by parties present, who are supposed to be concerned in the suspected poisoning.

" 13. Whether more than one person partook of the food or medicine; if so, whether all these persons were affected, and how?

" 14. Whether the same kind of food or medicine had been taken before by the patient, or other person, without ill effects following? In the event of the death of the patient, it will be necessary for the practitioner to note down :—

" 15. The exact time of death, and thus determine how long a time the person has survived after having been first attacked with the symptoms.

" 16. Observe the attitude and position of the body.

" 17. Observe the state of dress.

" 18. Observe all surrounding objects. Any bottles, paper packets, weapons, or spilled liquids lying about, should be collected and preserved.

" 19. Collect any vomited matters near the deceased. Observe whether vomiting has taken place in the recumbent position or not. If the person have vomited in the erect or sitting posture, the front of the dress will commonly be found covered with the vomited matters. In the event of a post-mortem examination being ordered by a coroner—

" 20. Note the external appearances of the body, whether the surface be livid or pallid.

" 21. Note the state of the countenance.

" 22. Note all marks of violence on the person, or discomposure of the dress, marks of blood, &c.

" 23. Observe the presence or absence of warmth, or coldness, in the legs, arms, abdomen, mouth, or axilla.

" 24. The presence of rigidity or cadaverous spasms in the body. To give any value to the two last mentioned characters, it is necessary for the practitioner to observe the nature of the floor on which the body is lying, whether it be clothed or naked, young or old, fat or emaciated. All these conditions create a difference in respect to the cooling of the body, and the access of rigidity.

" 25. If found dead, when was the deceased last seen living, or known to have been alive?

" 26. Note all circumstances leading to a suspicion of suicide or murder. Inspection of the body.

" 27. Observe the state of the abdominal viscera.

" 28. If the stomach and intestines be found inflamed, the seat of inflammation should be exactly specified; also all marks of ulceration, effusion of blood, corrosion or perforation.

" 29. The contents of the stomach should be collected in a clean vessel,—their colour, odour, and nature specified.

" 30. The contents of the duodenum should be separately collected.

" 31. Observe the state of the large intestines, especially the rectum.

" 32. The state of the larynx, fauces, œsophagus, whether there be in these parts marks of inflammation or corrosion.

" 33. The state of the thoracic viscera,—all morbid changes noted.

" 34. The state of the brain."—pp. 25—28.

Mr Taylor also points out, by apposite illustrations, the imperative necessity of being able to prove, that the vessels into which the parts or fluids taken from the body are put, were perfectly clean, as well as the vessels in which the analytic experiments were performed; and also that the medical witness should be able (if the substances have been sent to him), to swear to the integrity of the seal, or other cover, or fastening, and that they have never been placed in such situations as to permit of their being tampered with by other parties. To those of our readers interested in such matters, we would strongly recommend the perusal of an article on the trial of Madame Laffarge, in a recent number of the Edinburgh Review.

The first class of poisons treated of by our authors are the mineral acids. On the symptoms and morbid appearance, &c., we prefer Dr Christison; but on the chemical analysis, we think that Mr Taylor is superior. Dr Guy is brief, but clear on each of these heads. One error in Professor Christison's work, and continued throughout, is the want of methodical arrangement. In many of the subjects, the quantitative analysis is not mentioned. It is true that it is easily calculated, *i. e.* by those who are well versed in chemistry; but what a deal of trouble would it not save the reader, if Dr Christison would only say of all substances as he has said of hydrochloric acid? Thus, 145 grains of chloride of silver equal to 100 grains of concentrated commercial acid; or 100 grains of sulphate of baryta equal to 41½ grains of common oil of vitriol. Again, Dr Christison's work contains an immense mass of cases and literary information; but what labour it is to wade through these, and pick out the smallest dose that has proved fatal—the time at which death has ensued—the largest dose that has been taken with impunity, &c. &c. In Mr Taylor's and Dr Guy's works, the student gets all this at one glance. In no subject so much as medical jurisprudence is a methodical arrangement necessary; for here the facts are many, and the sources of fallacy numerous, so that without a clear classification of the various questions, it is impossible to find any thing when it is wanted, or to apply it when it is found. Among the tests for sulphuric acid, Dr Christison does not mention the use of iodic acid and starch, a test applicable particularly to stains, though not very valuable—it is useful, and ought to have been mentioned in a work specially devoted to Toxicology. We do not like the vague way in which Dr Guy speaks of it. He says it "is a process not quite free from objection."—(p. 430.) He ought to have mentioned the objections. On the subject of poisoning with sulphuric acid, Dr Guy gives us some very interesting statistical accounts (p. 433), which well deserve perusal. In treating of analysis for nitric acid, our authors recommend to procure from the suspected liquid, nitrate of potass, to decompose the crystals with sulphuric acid, and drop on them a crystal of morphia, when if

they contain nitric acid, the morphia will acquire the characteristic orange tinge. Mr Taylor thinks that the coloration of the morphia, caused by the charring with sulphuric acid, might be mistaken for the coloration by the nitric acid. We cannot see how black is to be mistaken for yellow; but a very elegant mode of performing the experiment satisfactorily, without permitting the sulphuric acid to touch the morphia, and therefore devoid of Mr Taylor's objection, is as follows:—Place a grain or two of the suspected salt in a test-tube; add to them a few chips of copper, or a little tin-powder; drop on this mixture a small quantity of sulphuric acid; adapt to the mouth of the test-tube, by means of a cork, a bent tube containing the morphia, if the salt be nitrate of potass, when it is decomposed, the metal taking oxygen from the nitric acid, the nitrous acid fumes will rise, and the morphia acquire the due coloration. Dr Christison (after Orfila) has found a strong solution of tannin added in excess, to organic mixtures containing hydrochloric acid, highly useful in precipitating the organic matter, thus permitting of the muriatic acid being distilled over sufficiently pure to enable the re-agents to act upon it.

We regret that our limits compel us to refrain from making any observations on the chapters on hydrochloric, oxalic, and acetic acids, the alkalies, earths, and a few other substances, all of which our authors have treated in an able manner, and to some of which Dr Christison has added much new and important matter.

The next subject we turn to is that of poisoning with arsenic. Mr Taylor and Dr Guy still give us the processes of Orfila, and M. M. Danger and Flandin, and others; but these processes may now be considered merely as matter of history, and we believe no future writer on toxicology will ever again think of cramming his pages with this "*olus recoctum.*" The time, too, is gone by for a "*grand tableau toxicologique,*" such as was exhibited in connection with Madame Laffarge's trial, where Orfila and his *aides* might have been seen by the glare of their charcoal fire, like so many evil spirits engaged in infernal orgies, quartering, cutting up, and boiling in a huge iron-pot, an entire human body. As Dr Christison very properly observes, "a false importance has been attached to the enthusiastic analysis of the whole human carcase, with which some French chemists have been astounding the minds of the whole scientific world, as well as the vulgar, on the occasion of some late trials for poisoning. I confess I could not find fault with a jury who might decline to put faith in the evidence of poisoning with arsenic, when the analyst, after boiling an entire body, with many gallons of water, in a huge iron cauldron, making use of whole pounds of sulphuric acid, nitric acid, and nitre, and toiling for days and weeks at the process, could do no more than produce minute traces of arsenic."—P. 280. Our authors, of course, speak highly, and treat ably of Reinsch's process. This is a subject which has been lately so extensively canvassed

in almost every medical or philosophical journal, that we shall dismiss it without further notice, merely observing, that we believe its beauty, simplicity, and facility of application, together with the fact that no organic mixture, however obdurate, or impenetrable, appears able to withstand the insinuating influence of this galvanic process, in revealing the presence of its arsenic, will cause it to be decidedly preferred to all other methods in medico-legal investigations. To the process completed and verified by the oxidation of the metal, its solution, and the subsequent testing of this solution, no objection can be stated, excepting the impurity of the materials used, which, of course, may, and must be obviated by previous examination. Dr Christison's article on arsenic has only that objection to which we previously alluded. When we have read it over, we learn that it contains an immense mass of information, in short, all we would wish to know on the subject; but any individual point we cannot find without going over it all again. Dr Christison, in speaking of the treatment of poisoning with arsenic, resting on the experiments of Dr Douglas Maclagan, seems to consider (although it is true he speaks doubtfully of it,) the hydrated sesquioxide of iron as an antidote; but it appears to us that both Dr Maclagan and Dr Christison have forgotten, that, in nineteen cases out of twenty, arsenic is taken or administered as a solid, suspended in a fluid. Dr Maclagan's experiments appear to have had no reference to the oxide of arsenic as a solid, but merely in solution. Our own opinion is, that no well authenticated case of recovery from arsenical poison is on record, where the iron-antidote has been used, without copious vomiting being either naturally present, or artificially excited; and that it is to this that recovery is to be attributed and not to the use of the antidote, will be obvious from the experiments of Mr Taylor, from whom we quote:—

"Dr Maclagan, of Edinburgh, states, that it requires 12 parts of oxide to neutralize one of arsenic; therefore something more is necessary than the formation of an insoluble arsenite of iron, admitting that this compound is really produced. According to this view, if an ounce of arsenic has been swallowed, and none of the poison ejected, 12 ounces, at least, of the hydrated oxide should be given immediately, in order to produce any good effects; and this, on the assumption that the poison is in a state of perfect solution in water! But as arsenic is almost always taken in the form of powder, and is very little soluble in water, it appears to me that all experiments performed with the hydrated oxide of iron on a boiled and filtered solution of the poison, have not the least practical bearing on the question. In order to ascertain whether this substance could really be considered a chemical antidote, under the circumstances in which arsenic is generally taken, I mixed a quantity of the hydrated sesquioxide of iron,

obtained by precipitating with ammonia 6 ounces of a strongly saturated solution of the persulphate of iron, with 40 grains of finely powdered arsenious acid, adding about 2 ounces of a mixture of albumen and water, as a substitute for the mucus of the stomach, and making the whole quantity up to 16 ounces with distilled water. The mixture was well agitated, and kept at a temperature of about 75 deg. for a week, at the end of which period the greater part of the arsenic still remained undissolved at the bottom of the vessel. As this poison is frequently taken in coarse lumps, and almost always in very large quantities, it is not possible to conceive, under these circumstances, that the oxide of iron should have any chemical action upon it of an antidotal nature. If the poison were swallowed in the state of a filtered aqueous solution, the oxide of iron might combine with it, but then its antidotal effects are so imperfect, that, unless administered instantly in a very large proportion, it could be of no benefit; for it is obvious that, in such a state of solution, arsenic would act with very great rapidity. Numerous recoveries are said to have occurred under this alleged remedy, but, so far as I have been able to ascertain, in severe cases, emetics and the stomach-pump were also freely used; and in the lighter cases, recovery would probably have equally taken place without it."—P. 144. We entirely agree with the opinion expressed by Dr Guy, that, " when the arsenic has been swallowed in the solid form, the antidote has little or no effect, and may safely be pronounced to be much less useful than emetics and mucilaginous drinks."—P. 470. Dr Guy has furnished some highly interesting statistical information on the uniformity of the symptoms, as well as of the comparative mortality and rapidity of death, in cases of poisoning with arsenic. From this we learn, " that, of 92 cases, 48 were fatal, and 44 recovered. Of 46 cases, 21 were suicidal, 17 homicidal, and 8 accidental. The average duration of all the cases which terminated fatally in less than 24 hours, is somewhat less than 7 hours; the average of all the fatal cases is 20 hours. More than half the cases proved fatal within 6 hours, precisely two-thirds within 8 hours, and as many as 37 within 12 hours," note, p. 469. There is much other interesting statistical matter which our limits do not permit of our quoting. We are somewhat surprised that none of our authors, in describing the treatment in cases of poisoning by corrosive sublimate, has mentioned the announcement made by M. Devergie in his last edition, that the yolk of the egg is more efficacious than the white as an antidote. His experiments are detailed at full length in his second edition, tom. iii. p. 393. There is no necessity, therefore, in these cases, for the medical attendant to lose time in taking pains carefully to separate the white from the yolk, as we have known done. In treating of the detection of copper in organic mixtures, Mr Taylor mentions a very easy and expeditious mode of obtaining from

them the copper which they may happen to contain. A portion of the suspected fluid is to be placed in a platina crucible ; " a few drops of diluted sulphuric acid may be added ; and a slip of zinc foil introduced. Wherever the platina is touched by the zinc, metallic copper is deposited. After having in this way coated the platina capsule, the surplus liquid may be poured off and the capsule well washed out. A few drops of nitric acid, with a small quantity of water, may be used to dissolve out the metallic copper. In this way, a pure solution of nitrate of copper is obtained, giving the usual re-actions."—P. 201. To his list of poisons, Professor Christison has, in this edition, added one or two preparations of iron.

For the obtaining of metallic antimony in analysis for salts of that metal, we find Dr Guy and Professor Christison still prefer the method recommended by the late Dr Turner. We have found that method frequently fail, more especially in experimenting at lecture, where the time requisite to observe the minutiæ of the different processes cannot be bestowed. We are inclined to agree with Mr Taylor, who, in treating of this subject, says—" Dr Turner recommended that the precipitated sulphuret should be reduced by heating it in a current of hydrogen ; but there are some objections to this. Dr Turner himself found that organic matter became precipitated with the sulphuret, and interfered with the metallic appearance after its reduction, and even supposing the metal to be obtained, it will require to be identified by certain chemical processes. The production of the chloride from the sulphuret (by boiling it in muriatic acid), with its peculiar properties, is more expeditious, and quite as satisfactory."—P. 208.

Dr Christison has added some new observations to his article on poisoning with lead, but on none of the other metallic poisons do we observe any thing particularly worthy of remark.

Before entering on the consideration of the narcotic poisons individually, Dr Christison gives us some admirable chapters on the distinctions between cases of narcotic poisoning, and those of simple, serous, and sanguineous apoplexy, epilepsy, and other diseases of the brain and spinal chord, liable to be confounded with them. The best of these chapters are those on the subject of apoplexy. Cases of apoplexy have occurred at a much earlier age than those mentioned by our author. M. Billard records one in a child three days old; and another instance at eleven days after birth was described by Dr A. D. Campbell in a former number of our Journal.—Northern Journal of Medicine, vol. ii. p. 155.

As most of our readers know, the morbid appearances after death from the narcotic poisons are generally very indistinct, frequently totally absent—simple and congestive apoplexy, therefore, are very important diseases in a medico-legal point of view. The former, it is true, is exceedingly rare ; so rare in fact, that many authors

have altogether denied its existence. Rostan makes use of that very common, yet very absurd argument, that, because he has opened 4000 heads and never met with an instance, there is no such disease. Those who argue in this way always remind us of the Sultan, who

> " ——was certain that the earth was square,
> Because he had journeyed fifty miles, and found
> No sign that it was circular any where."

In treating of this subject, Dr Christison observes,—" The possibility of its (simple apoplexy) occurrence is, in fact, the chief obstacle which, in many cases involving the questions of poisoning with narcotics, prevents the physician from coming to a positive decision on a review merely of symptoms and appearances after death. Instances will occur where it is impossible to draw a diagnosis between the natural, and the violent form of death. And, indeed, it might even be a fair subject of inquiry, whether death from at least some narcotic poisons, such as opium, is any thing else than death from simple apoplexy."—P. 669. We can scarcely pardon Professor Christison for not mentioning the value of a microscopic examination in detecting certain morbid states of the substance of the brain, which, no one knows better, are occasionally invisible to the unassisted eye; indeed, he says,—" it is not always easy to detect, without minute attention, two disorders little known till in recent times, and sometimes closely allied in their symptoms to apoplexy—hypertrophy of the brain, and inflammation of its substance."—P. 668. Dr Christison concludes his observations on this subject by relating the very curious case of M. Pralet at Chambéry,*—in which one might almost imagine that the medical witnesses obstinately shut their eyes to the morbid appearances of apoplexy, from a pre-determination to find the accused guilty of poisoning. With regard to hypertrophy of the brain, Dr Christison considers it not impossible, that when physicians are better acquainted with it, and a greater number of cases have been collected, " it may be found to prove at times fatal, so rapidly as to admit of being confounded with narcotic poisoning. Two cases of this disease have come under our own notice; it is remarkable that both of the patients were painters—had suffered very severely from lead colic—and laboured under partial paralysis of the extremities. One only of the cases was under our care during life; the man was seized on the morning of his death with a violent convulsion, closely resembling an epileptic paroxysm; this lasted for about half an hour. He then fell into a state of coma from which he never rallied, and died in little less than eighteen hours. On examining the brain after death, it was observed that the *sulci*

* Annales d'Hygiene Publique. 1841. xxvi. 399.

between the flattened convolutions appeared as it were effaced until they were opened by separating the convolutions with the fingers, the brain was firmer, denser, whiter, and less moist than usual, and the ventricles contained scarcely any serum. In the second case, the post-mortem appearances were precisely similar, but not having seen the patient during life, we are unacquainted with the exact train of symptoms under which he laboured. Such a case as that above noticed might, taking the symptoms only into consideration, with a fair degree of probability, give rise to a suspicion of poisoning.

Poisoning with opium is well treated of by our different authors.

We shall now pass on to hydrocyanic acid, which, from recent trials, has become invested with much additional interest since Dr Christison's third edition was given to the public. We must say that, upon the whole, we are rather disappointed with the articles on prussic acid by our authors. The paper by Mr Taylor, in the last number of Guy's Hospital Reports, from which we have so largely quoted, both in our present and last periscope, is far superior to any of the articles now under consideration. Dr Christison's chapter on prussic acid appears to have undergone but little alteration since his last edition. He says scarcely any thing, for example, on the value of the odour as a test for the presence of the acid, and the other tests are given with a meagreness which certainly we did not expect from our favourite author. We have been much pleased with our trials of the mode recommended by Mr Taylor, of verifying the presence of cyanogen, when the quantity of the cyanide of silver is so small, that the attempt to prove its existence by burning it, would be useless. "When the quantity of cyanogen," he says, "is very small, I have not always attempted to burn it, but have sometimes adopted the plan of receiving the cyanogen from the heated cyanide on bibulous paper, impregnated with the mixed oxides of iron obtained by moistening the paper with potash, and then dipping it into a solution of the green sulphate of iron. On afterwards dipping the paper into diluted sulphuric acid, there has been a distinct stain of Prussian blue on the paper, clearly shewing that cyanogen was present. The tube in which the cyanide is heated, may be bent like a retort, and its point inserted in a few drops of water slightly alkaline, and holding the mixed oxides suspended. After the decomposition, the surplus oxide of iron may be removed by diluted sulphuric or muriatic acid, and Prussian blue will be left, at once announced by its colour. In this way the minutest traces of cyanogen may be detected."* We cannot too much recommend this admirable paper of Mr Taylor to the perusal of our readers.

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* Guy's Hospital Reports, April 1845, p. 68.

We shall here take leave of the toxicology. Each of our authors appears to have his forte in some one particular branch of the subject. The work of Dr Christison is unquestionably the best, and, as may be expected, the most complete of the three. No medical man's library can be complete without it. We far prefer it to the work of Orfila, or the copious sleep-inviting tomes of Wibmer; for in it we have not only a thorough practical knowledge of the subject, but we have the powerful light of a strong sound sense, and a clear unerring judgment, illuminating and clearing up all the doubtful and intricate points, leaving no matter in obscurity, and meeting with nothing so impenetrable, that it does not at once render pervious and transparent.

The next department of legal medicine on which we shall consider the merits of our two remaining authors, is on those questions connected with the function of generation. In this department Mr Taylor is extremely deficient, and in many points erroneous. In proof of our statement we must quote, it shall be one example only, viz. the twenty lines devoted to the signs of pregnancy; and that is *all*, positively all, that Mr Taylor gives to this important subject.

"*Pregnancy.*—The subject of pregnancy rarely demands the attention of a medical jurist. There are only two cases in the English law, in which pregnancy requires to be verified, and these so seldom present themselves, that the questions connected with the pregnant state rather belong to the science than the practice of medical jurisprudence. For a full account of the signs of pregnancy, with the circumstances which occasionally render them obscure, I must refer the reader to the well-known works on midwifery of Burns and Denman. These signs are commonly enumerated in the following order:—1. Suppression of the menses. With respect to this sign, it has been a question whether a woman who had never menstruated could conceive and bear a child. Although a rare circumstance, yet cases of this kind have occurred. One will be found reported, where a female, aged 25, became pregnant and bore a child, and menstruation was only regularly established afterwards. (See Lancet, Feb. 1842.) Some have contended that the menses are invariably suppressed in pregnancy, but it appears that a discharge, analogous to the menstrual, if not identical with it, occasionally manifests itself throughout the whole period of gestation. 2. Prominence of the abdomen. The fallacies attending this sign must be well known to the practitioner. 3. A change in the breasts, consisting of a fulness acquired by these organs, and a darkening and widening of the areolæ. 4. Quickening, which depends on the motions of the child, indicated by syncope, nausea, and other symptoms. This may occur from the 10th to the 25th week; but it most commonly happens between the 12th and 16th week of gestation. 5. Auscultation, whereby the sounds of the foetal heart may be heard and recognised. 6. There are also changes taking place in the cervix uteri, which serve to indicate the pregnant condition," p. 581.

Here we learn that pregnancy rarely demands the attention of a medical jurist, and that quickening depends on the motions of the child. The correctness of these statements we leave to the judgment of our readers, as Mr Taylor leaves to their fancy what areolæ may be, and what changes take place on the os and cervix

uteri. Not a word is said about *ballottement per vaginam*, one of the most valuable signs of pregnancy; neither are the appearances in the urine noticed. Dr Guy gives us an excellent article on the signs of pregancy, much too long for us to quote. Dr Guy's obstetrical reading extends to, the Campbells, and Ramsbotham, the most recent authors on the subject; whereas Mr Taylor has not yet got beyond Burns and Denman, to whom he refers his readers "for a full account of the signs of pregnancy." We cannot conceive how an author can permit himself to refer to others for a very important branch of his own subject. It looks very like an excuse for indolence or impotence, the more particularly so since in the works to which he refers his readers for "a full account," some of the signs of pregnancy are omitted without a single observation. From the chapters on poisoning already criticised, we can see that indolence is very far from being one of Mr Taylor's faults. The signs of recent delivery in the living are treated of by Mr Taylor in the space of sixteen lines! The same author's chapter on rape is equally unsatisfactory. Let us compare the remarks of our two authors on the spermatic stains.

"*Semen and Seminal Spots.*—When called upon to examine the person of a female soon after violence has been committed, semen may sometimes be discovered at the orifice of the vagina, or on the other parts of generation. In other instances, we may find seminal spots on the garments of the female. If a fluid is found having the general appearance of semen, its real character may be determined by examination under the microscope; and should it contain animalcules, there can be no doubt of its being semen. The animalcules were first described by Leeuwenhoek subsequently minutely examined by Spallanzani, and since proved to exist in the semen of all males which have reached the age of puberty. When examined by a powerful glass, they present the following appearances. Their figure, while in motion, is spherical, with filamentous tails; when at rest, or dead, the fluid about them being dried up, they appear somewhat oval, with a tapering tail. These animalcules, of which the scientific name is Cercaria Seminis, differ little in shape in men and in animals, and measure, according to Raspail, about 1-3000th of an inch, being about 1-30th of the size of the globules of the blood.

"In recent semen these animalcules may be identified both by their shape and motion, but as they retain their shape when dried, they may be discovered in semen which has become dry, provided it be carefully moistened. Orfila states that he discovered animalcules in semen which had been kept for 18 years on glass plates. The animalcules also resist putrefaction in a most remarkable degree, so that Dr John Davy observed them in putrid semen which had been kept for 10 weeks. They may also be detected in the liquid obtained by steeping seminal stains on linen in distilled water. Dr Davy obtained them in this way from a seminal stain which had been kept 18 days."—Guy's Principles, p. 60.

Now, let us turn to Mr Taylor:—"Some continental medical jurists have proposed to add to the medical evidence in rape, the examination of spots or stains on the linen of the prosecutrix and prisoner. Thus, it has been recommended to infuse these in water, and examine the liquid with a powerful microscope, in order to observe whether it contains or not the spermatozoa,

long slender eel-like animalcules which are known to exist in the healthy spermatic secretion."—P. 579. We shall not venture a comparison ourselves. Mr Taylor states, that "among the reports of many trials for rape, he never met with a single instance in which such evidence was required, or would have been of the least utility." We beg to refer him to the case of John Hamilton, tried here in 1843, where very important evidence of this nature was given by the Messrs Goodsir and Dr Simpson.

To compensate in some measure for impotency in these matters, Mr Taylor gives us some admirable articles on death from external violence, and infanticide. They are not, however, superior to those of Dr Guy on the same subject. On mental alienation, we give the preference to the latter writer. Dr Guy also gives us some excellent chapters on personal identity, age, sex, life-assurance and feigned diseases, not any one of which subjects is at all treated of by Mr Taylor. We regret that our limits will not permit of our entering at length into these articles. Both works are good; but as a text-book for students we infinitely prefer the principles of Dr Guy; they are full without being prolix, and brief, without being deficient; they are clear and simple, and so arranged that any point that is required can be at once found with facility.

As journalists, awake to the controversies of the day, we cannot but be aware that charges of piracy were brought against Dr Guy. We consider them unjust, and that he has certainly been unkindly dealt with. We might as well accuse Dr Christison of pirating from Orfila, and Mr Taylor from Dr Christison, as Dr Guy from Mr Taylor. If four different authors write upon the same subject, they must agree on many points, take the same views, and state the same facts, perhaps even in the same words; surely this is not piracy? And yet it seems to us that this is the whole of Dr Guy's offence. But Time, which effaces all things, has now effaced these angry disputes, and let us not again awake them.

*** Owing to the length to which the review on the above important works has extended, we much regret being obliged to defer the reviews already prepared on Dr Gregory's excellent Elements of Organic Chemistry, and Dr Fleming's very interesting Treatise on the Physiological and Medicinal Properties of the Aconitum Napellus.

PART IV.—PERISCOPE.

THE CHEMISTRY OF VEGETABLE AND ANIMAL PHYSIOLOGY.

Influence of Water in the Economy of Organized Nature.

"Pure water is scarcely ever to be found at the earth's surface. Generally, it holds some saline substances in solution. These are found abundantly in nature, especially in sea-water. Without these very saline substances, animals and plants could not exist. They are as indispensable to life as the four organic elements themselves. This connection is undoubtedly not an accidental, but a necessary one. It places living nature in a peculiar relation to the so-called dead nature. If we imagine the organic parts of the serum of the blood separated from it, then there remains a saline solution, which, in many respects, approaches in composition to common water. Such coincidences are by no means accidental, neither is the necessity of common salt for animal life, and its abundance in the earth, accidental. Besides, not only in the serum of the blood, and in common water, but also in the aqueous fluid which circulates through plants, are contained the chlorides of calcium and magnesium, the carbonates of soda, lime, and magnesia, and sulphate of soda, and in the serum of the blood, potash salts, and phosphates also. The greater part of these salts, essential to the constitution of the serum of the blood, are found in common water, and also in the saps of those plants which are destined for the nourishment of man and animals—an arrangement which establishes an intimate connection between the subdivisions of nature, which scientific writers commonly separate too much.

"By these salts, undoubtedly, an important part is played in the whole organic kingdom. It is known that the greater part of them retard chemical changes among the elements of organic bodies. By common salt, and many others of them, for example, meat is preserved from corruption. Thus, the first purpose for which salts exist in the organic kingdom, is undoubtedly to limit, in a greater or less degree, the change of materials, to modify it here and there—which change would undoubtedly proceed much too rapidly in the animal body, consisting of parts very susceptible of change—if these salts were wanting. Some of them, for instance the alkaline carbonates, serve to dissolve the compounds of protein; others, for instance the phosphates of lime, supply supports for the soft parts (in grasses this purpose is served by silica), and form chemical compounds with many organic substances; at the same time, from these and from the sulphates is derived the phosphorus and sulphur by which, in certain combinations, the organic substances are accompanied. Finally, the oxide of iron, present in the ash of plants, must be dissolved in water before it can be taken up by plants, which convey it to animals, solely in order that, through the influence of the same de-oxidizing circumstances in the organism of animals, it may enter as an organic element in the colouring matter of the blood, in the same way as phosphorus and sulphur do into many protein compounds.

"All the salts, soluble in water, which are not fixed in the animal body, or whose constituents are not combined there, are necessarily carried away in the urine. We cannot imagine any reason why they should be retained in the kidneys, since they occur dissolved in the serum, and are also soluble in urine, which is an aqueous liquid. These salts must, therefore, be continually, and to the same amount, supplied from

without. Except common salt, they are sufficiently abundant either in animal or vegetable food, or in common water, to restore what has been lost. Man requires common salt, in addition to these, and knows, even in the most uncivilized state, how to appropriate it, and so to satisfy this want of his body.

" The light in which water exhibits itself is peculiarly striking, when we consider that this fluid is the medium in which a countless multitude of plants and animals live, find food, die, and putrefy; and that the substances they leave behind serve for the production, growth, and sustenance of new organized beings, in the same manner as the atmospheric air and the soil together do, for plants and animals which are said to live in the air.

" More than two-thirds of the surface of our planet are covered with water. In that amazingly extended mass, multitudes of peculiar beings live. The solid part of the earth is besides intersected and diversified, in every direction, with rivers and other bodies of water, in each of which plants and animals live. Being concealed from the eye by the surface of the water, and less accessible than substances on the dry land, they are less captivating in appearance, and attract, in an inferior degree, the attention of the natural philosopher. This world, however, deserves to be accurately known. Who would venture to determine, whether the number of organized beings, living in the water, or in the atmosphere, is the greater?

" By the great mobility of organic substances dissolved in fluids, their displacement and their union are in the highest degree promoted. In infusions of vegetable and animal substances, small animalcules, which thence derive their generic name of *Infusoria*, are easily produced. Their existence, commonly, is of short duration, as they devour each other, and disappear, while their substance serves to produce new individuals and new forms, and is converted into infusorial plants, which, in their turn, disappear, and make room for others. In every kind of stagnant water, in marshes and ditches, wherever they are found on the earth's surface, similar metamorphoses of small organized beings occur. Their production is promoted by the stillness of the mass of water; hence they are not so frequently found either in rivers, or in more extended collections of water, or in inland seas. The innumerable multitudes of small organized beings in marshy waters, derive their birth and existence from organic substances present in those waters. The organized beings there produced vary with the nature of the water itself, the circumstances to which it is exposed, and the substances with which it is mixed. Previous to the existence of our present plants and animals, similar Infusoria existed in innumerable multitudes: perhaps they have contributed to condense the component parts of the former atmosphere.

" There subsists an intimate mutual connection between the atmosphere and a limited portion of water. Wherever and in whatever way a small quantity of water is prevented from escaping into the ground, if it be exposed to the atmosphere, such an accumulation of organic substances takes place, that the shallow body of water becomes at last wholly filled up. The distribution of seed causes plants to spring up within it, which—finding abundant food in the organic substances which have been produced from the constituents of the atmosphere, and deposited there, altered by infusorial animals and plants, putrefied, changed into humic acid, apocrenic acid, &c.—grow there luxuriantly, raise their leaves beyond the water, drink in carbonic acid from the atmosphere, retain the carbon, and restore the oxygen. Every shallow mass of water is thus gradually filled up with peaty soil. In ponds and ditches this happens every year, so that they require to be widened and deepened, otherwise they would soon disappear. (Wiegmann, Entstehung des Torfs.)

" We therefore observe an intimate relation between the atmosphere and the water. All the particles from the atmosphere which are washed down by the rains, are taken

up by the water into which the rains fall. The great variety of substances diffused through the atmosphere being mixed with the water, are gradually decomposed in it, and at last substances are produced similar to those which appear in the soil.

" Hence, in every confined mass of water the same substances are present as in the soil, and consequently, the plants living there are surrounded by a diluted solution of inorganic and organic salts, which are more or less the same with those of the soil. The water of ditches is coloured by apocrenates, and from these is derived an abundant supply of organic food, to be taken up by the roots of plants, which in great numbers are floating in the water.

" In the great ocean an immense number of plants grow. Besides the sea-weeds and other water-plants with which the shores are covered, the vast quantities of the Sargassum Columbi, which float on the sea like the weeds on the surface of our ditches, are for this reason remarkable. This plant feeds on the organic substances of the sea-water, of which substances the water contains so great a quantity, that it has always a yellowish colour, and leaves behind a coloured mass of salt after evaporation. In those large masses of water where gigantic animals live, where their excrements are diffused, and their dead bodies putrefy, an amazing quantity of organic substances is accumulated, and for the greater part dissolved, or diffused in a state of minute division.

" It is certain, also, that by these water-plants, a relation between the water and the atmosphere is established. When growing, all the green plants give off oxygen, which is diffused through the water, and, by its intervention, partly through the atmosphere.

" By the continual evaporation of almost pure water from the ocean, by the anti-putrescent power of the salts in sea-water, and by the continual supply of organic substances, carried by the rivers into the ocean—the quantity of organic substances in the soil must necessarily be diminished, and consequently the quantity of food for the organized beings in the ocean, and at the same time their very number must be increased. Thus we observe a tendency to enlarge that multitude of living beings in the ocean.

" We have seen, that oxygen is given off by plants in stagnant waters, as far as they possess green parts. From this fact, and from the property which the water possesses, of absorbing oxygen more easily than nitrogen, we are forced to conclude, that the proportion of oxygen in the air which is dissolved in water, is greater than in that of the atmosphere. This was first observed in the water of the Seine, by Von Humboldt and Gay Lussac, and it has been ascertained by others, in reference to every kind of water, not containing an abundance of organic putrefying substances. Instead of 21 per cent., we find 28 to 32 per cent. of oxygen in this air, dissolved by water. Hence the fishes are supplied more readily with oxygen—the water thus impregnated flowing along the ramifications of the blood-vessels in the gills, and the carbonic acid, which at the same is given off, being dissolved by the water. This carbonic acid is a food for plants; and thus in the waters almost the same succession of changes takes place as in the atmosphere, namely, that oxygen is supplied to animals by plants, and carbonic acid to plants by animals.

" It is well known, that by the plants which live upon the earth's surface and in the atmosphere, those organic substances are prepared, of which the bodies of animals are composed—for though some animals are carnivorous, yet the animal food they eat obtained its first existence from vegetable food. Such a process, however, does not take place in all the animals which live in water. First, there is an infinite number of smaller animals—most of the Infusoria, for instance, which owe their production, growth, and increase to organic substances, either diffused through the water or dissolved in it, as is the case with plants of the lowest orders, such as moulds. It appears, besides, that some aquatic animals, of larger size, possess other sources of nourishment

than those from which the food of the larger land animals is derived. For we see that many of them, for a considerable time, live, increase, and grow, in a small inclosed quantity of river-water, provided only it be gradually renewed by fresh river-water. It may be that they can be satisfied with little food; but whence do they derive that small quantity? Whence, if not from substances similar to those on which plants subsist—from organic substances in a state either of minute division or of solution, of which a small portion is present in the river-water. A familiar example of this kind we have in the common leech.

"On this point, therefore, considerable obscurity still involves the economy of those animals that live in the water, which science is as yet unable to clear up. And though, among these animals, there are some herbivorous and others carnivorous, it is more than probable that many, like plants, can change organic substances, when minutely divided, into food. Perhaps from these organic substances Infusoria are formed in the first instance; then the larger-sized animals devour these, and so are nourished in the same manner as land animals are, upon vegetable and animal food."—(Mülder—Chemistry of Vegetable and Animal Physiology, translated by Fromberg, p. 124—130.)

SURGERY.

Enterotomy proposed as a remedy in all Cases of Obliteration of the Small Intestine.

M. Maisonneuve, who is the author of a memoir on this subject, presented to the Academie des Sciences, (December 2, 1844,) includes, under the term obliteration, three classes of disease; 1*st*, Obliteration from obstruction, viz. by invagination, or by a foreign body becoming impacted in the small intestine; 2*nd*, From contraction of the small intestine, caused by injuries of the canal, by ulceration of its coats, or more frequently the result of undue constriction, as in strangulated hernia; 3*d*, From internal strangulation, which includes various species of internal hernia, the situation of which cannot be ascertained, but the existence of which is evident from the accompanying symptoms. For the relief of these, M. M. proposes the formation of an artificial anus, by making an incision in the right iliac region, a few lines above Poupart's ligament, and searching for a portion of intestine above the obstruction, into which an incision is to be made longitudinally, from three to four centimetres (nearly from an inch to an inch and a half) in length. The wound of the intestine and skin are then to be united by means of sutures. The distended state of the canal above the obstruction, contrasted with the contracted state of the part below, points out the part of the intestine which is to be opened. The valvulæ conniventes may be felt easily through the coats of the intestine; if these are few in number, and can be only indistinctly felt, the portion of intestine is probably part of the ilium; if, on the contrary, they are felt to be numerous and prominent, the canal has been exposed much nearer the stomach, at the furthest possible point from which organ the artificial anus is to be formed. In a recent communication to the academy, the author gives the details of a case treated successfully by him in this way, where contraction of the intestine had taken place after the operation for hernia, and he refers to another case where a similar operation was performed by Renault in 1787, for the relief of an intestinal contraction following the reduction of a strangulated hernia, which also terminated favourably.—Archives, Gen. de Med., Avril, 1845.

While bent on giving immediate relief to the symptoms, it appears to us that the author attaches too little importance to the primary disease, for, although free exit is given to the fœcal matter, the accumulation of which gave rise to the symptoms, the cause of the obstruction remains, and, in the case of invagination, or internal hernia,

the disease continues to run its course, while, in the case of contraction from ulceration, the intestine not being any longer distended by the passage of the fœcal matters, is left in circumstances the most favourable to still farther contraction.

Sanguine of the success of his new operation, M. M. states, that from the results which he has obtained from experiments on dogs, where he has produced obstruction, by applying a ligature to the intestine, he has been led to draw very favourable conclusions as to the results of the operation. We already know how fallacious such experiments have proved in drawing any analogy between the effects of operations on man and the lower animals, and we therefore do not place the slightest reliance on them, as proving the safety or propriety of performing the operation in question.

Ligature of the external Iliac Artery in the case of the late Mr Seton, shot in the recent Duel at Portsmouth.

In the Lancet of June 21st, a pretty full report of this case is given by Mr J. B. Potter, of whose assistance Mr Liston had the benefit, both in the operation and at the consultation held previous to its performance. As this case has of late excited much attention, and is at the same time one of great importance, as bearing upon the diagnosis of aneurismal tumours, we shall extract the principal points of interest from the case as reported by Mr Potter :—

The patient was about 28 or 29 years of age, and remarkably fat ; he was understood to have lived very freely, and to have taken little exercise for several years : his constitution was described as delicate and impressible, and, when indisposed, he was always observed to be easily lowered by treatment. " On the evening of the 20th of May, Mr Seton received a gunshot wound across the lower part of the abdomen, the ball entering in the upper part of the right thigh, a little above and in front of the great trochanter of the former, and passing out about the middle of the fold of the left groin. The hemorrhage was very rapid, and described as florid, issuing in a large stream, and per saltum from both wounds, and as rising, when uncontrolled, in a jet, to the height of two to three feet from the wound in the right hip. No surgeon being then present, attempts were made to arrest the hemorrhage by pressure over the wounds, and by the application of a ligature round the upper part of the right thigh. Ultimately, the patient fainted, and the hemorrhage ceased ; not, however, before apparently a large quantity of blood was lost.

" When first seen by Mr Jenkins, the patient appeared almost lifeless ; but the bleeding had quite ceased, and stimulants gradually restored the circulation to a certain extent. The wounds were simply dressed, and warm applications, in the first instance, made use of, as most soothing and grateful to the feeling of the patient. The following day, the temperature of the surface became more natural, the pulse increasing in rapidity, and somewhat in strength. The track of the ball was marked by an elevated ridge, from one opening to the other, and some ecchymosis of the skin extended from this line over the lower part of the abdomen and scrotum. The patient suffered great pain in the groin and right lower limb generally, accompanied with a sensation of numbness of the front of the thigh, and partial loss of power over the muscles of that part of the limb. At a subsequent period, the application of iced-water and bladders of ice to the right groin gave some relief.

" In the course of the next few days little change occurred, but on the 27th, (the seventh day after the receipt of the injury,) the swelling over the track of the ball appeared more evident in the right groin, and was here observed, for the first time, to pulsate with each stroke of the heart. During the two following days this pulsation became gradually stronger, the swelling itself increasing in prominence and superficial extent ;

and, though the increase was not very rapid, yet it appeared greater on the 29th than during an equal period of time on the 28th. The patient did not experience any rigors."

On the evening of the 30th of May, the case was first seen by Mr Liston, and the question as to the necessity for surgical interference (already suggested) came to be discussed. The state of the case was then as follows :—

"The patient had all the appearance of a person who had lost a considerable quantity of blood, his skin being blanched and waxy, and his pulse rather quick and feeble. Although he suffered at times severe pain in the limb, there was no marked expression of anxiety in his countenance ; his manner was calm and composed ; and, as he kept perfectly quiet in bed, he felt his strength improving, and seemed hopeful as to the final result. On examining the wounds, that in the right hip (the opening of entrance) was found circular, filled with a dry, depressed slough, and having a narrow faint blush of redness round its margin. In the left groin, the opening of exit of the ball was marked by a jagged slit, already partly closed by a thin cicatrix. There was extensive mottled purple discoloration (ecchymosis) of the skin in both groins, and over the pubes, scrotum, and upper part of the right thigh.

"In the right groin was found a large, oval, visibly pulsating tumour, its long diameter extending transversely from about an inch and a half on the inner side of the anterior superior spinous process of the ilium to about opposite the linea alba, and its lower margin projecting slightly over Poupart's ligament into the upper and inner part of the thigh. On handling this tumour, it appeared elastic but firm, very slightly tender, and not capable of any perceptible diminution in bulk by gradual and continued pressure. The pulsation was distinct at all parts of the swelling, and was equally evident whether the fingers were pressed directly backwards, or whether they were placed at its upper and lower margins, and pressed towards the base of the tumour, in a direction transversely to its long axis, the parts being for the time relaxed.

"The femoral artery was slightly covered by the swelling, and the pulsations of that vessel were with some difficulty distinguished in the upper third of the thigh below the margin of the tumour. This appeared to depend partly on the natural obesity of the patient, and partly on a considerable degree of general swelling of this thigh. No pressure on the femoral artery, or over the abdominal aorta arrested the pulsation in the tumour, and pressure in the former situation was attended with severe pain.

"In the left groin, just above the opening of exit, was another smaller swelling, quite unconnected with, and of a different character from, the principal tumour. The skin over the smaller swelling was red, very tender, slightly pitting on pressure, hard round the margin, but yielding more in the centre, and even indistinctly fluctuating. The right testicle was enlarged to three or four times its natural size, extremely hard, and somewhat tender.

Diagnosis—"From the examination of the parts, it was inferred, in the first place, that the tumour was formed of extravasated blood, confined under the cellular tissue and fascia of the groin ; and, secondly, that its pulsation was owing, not to motion transmitted from the femoral artery, (beneath its outer margin,) but to an open and direct communication between a wounded artery and the fluid or semi-fluid contents of the tumour ; in short, that the case was one of circumscribed false aneurism.

"Beyond this the diagnosis was unsatisfactory, owing to the difficulty in estimating the thickness of the superficial layer of fat in the abdomen and thigh, and consequently in determining the precise course of the ball through the soft parts. With regard to the probable course of the ball and the artery wounded, it was supposed, from the general direction of the discoloured track, and the relative position of the two openings, that the bullet had passed through the tensor vaginæ femoris, and behind the sartorius,

perhaps wounding or bruising the anterior crural nerve, and dividing some branches of the external circumflex artery ; that it had then passed in front of the common femoral artery, (close to its commencement from the external iliac,) either slightly wounding the main vessel, or dividing one of its branches near its origin ; and, lastly, that it had wounded or bruised the right spermatic cord, and run over the pubes to the opening of exit.

Prognosis—" As the blood appeared fluid, the tumour pulsated very forcibly, and the strength of the circulation was gradually being restored, it was thought probable that the effusion, if left to itself, would continue to increase, as it had since its first appearance ; that when the sloughs should separate from the external wound, or wounds, renewed hemorrhage might occur, and would, in that case, and in the present weakened state of the patient, in all probability, prove fatal ; that, even supposing no external bleeding to occur, as the extravasation was limited only by the superficial membranous structure of the abdomen, an additional quantity of blood might be poured out at any moment, (from slight motion of the part, or any unusual exertion,) and spread itself upwards, and latterly, like urine from ruptured urethra ; and lastly, that, in either case, the effused blood would, to all purposes, be lost to the system, and the patient, weakened by its loss, would have to bear up against profuse suppuration, after the closure of the injured vessel by ligature or otherwise.

" The question of treatment next came to be considered :—1*st*, Did the case call for immediate operation ? 2*nd*, If so, what operation should be performed ?

" As long as the dangers above referred to existed, it was felt that the patient ought to be considered as in great, if not in imminent peril, and it was therefore deemed advisable that the sources of these dangers should, as soon as practicable, be removed or lessened. Pressure on the tumour, with or without the application of cold, was looked upon as quite insufficient to arrest even the further increase of the effusion, inasmuch as the bleeding vessel could not be more directly pressed upon than any other part ; and as, from the very form of the swelling, the compressing force would tend to drive the blood already extravasated further under the fascia of the abdomen.

" Cutting off the supply of blood to the tumour by ligature, therefore, appeared the desirable course ; and as, on the one hand, any increase in the quantity of superficial extent of the extravasation must add materially to the difficulties of effecting such an operation ; and, on the other hand, as the patient had rallied tolerably well from the first constitutional effects of the wound, and was willing and anxious to submit to anything that might be thought necessary, it was agreed that the sooner the above proceeding was carried into effect the better chance the patient would have of life.

" The last question related to the kind of operation. Was it advisable to lay open the tumour, search for the wounded vessel, and tie it above and below the wounded point ?

" In principle, this was admitted to be the first indication, and would have been clearly the proper practice, had the injury been inflicted an inch or two lower down ; but practically, it was thought to be unwarrantable under the peculiar circumstances of the case, and for the following reasons :—

1*st*, " An operation of this kind, even supposing the operator able to command the circulation by pressure on the proximal side of the wounded vessel, must be attended with a loss of blood dangerous to the patient in his present reduced state.

2*nd*, " As the supply of blood to the tumour could not, in this instance, be effectually interrupted by pressure on any large arterial trunk, the hemorrhage, in searching for the wounded vessel, would probably be unusually great.

3*d*, " Supposing that the common femoral artery should be found wounded, or one of its branches divided close to the main trunk, so as to render it necessary to apply

two ligatures to the common femoral itself, the chances of the recurrence of secondary hemorrhage, on the separation of the ligatures, would be very great, considering the frequency with which this occurs in cases where the common femoral is secured by a single ligature, and in the most favourable position that the operator can select.

"On the whole, therefore, it was deemed advisable to apply a ligature on the external iliac artery, and give the patient the chance of the occurrence of coagulation in the tumour, and closure of the wounded vessel, before the free re-establishment of the circulation through the femoral artery. In the present case, it was supposed that mortification of the limb was all the less likely to occur from the circumstance that the greater part of the effusion appeared in front of the abdominal parietes, and therefore exercised less pressure on the femoral vein, than if further extension into the thigh had taken place. The danger of peritonitis was by this proposal made a new element in the calculation; but it was estimated that the chances of this, and mortification of the limb taken together, were less unfavourable than the chances of immediate and secondary hemorrhage attaching to the other operation."

The operation was performed on the 31st of May, at 9 o'clock, A.M., and, we presume, was executed with Mr Liston's usual skill and dexterity. The sub-peritoneal membrane proved to be so loaded with adispose tissue, and, consequently, so firm and solid, that it was easily separated from the fascia iliaca, and, for the same reason, the peritoneum and intestines were more readily and completely held aside than is usual in this operation. When these were held aside, it was expected that the vessel might be seen or felt in the bottom of the wound, but, owing to the artery adhering more closely to the sub-peritoneal cellular membrane than to the other parts, it was drawn, along with this tissue, slightly out of its course, and it was not till the ball of the finger was turned inwards towards the cavity, instead of towards the brim of the pelvis, that the pulsations of the vessel were distinctly felt. A silk ligature was passed round the artery, and, before this was tied, it was ascertained that, when the vessel was pressed against the curve of the needle, the pulsation in the tumour was completely arrested.

The operation being completed, the wound was brought together by four points of interrupted suture and stripes of isinglass plaster. The right foot, leg, and thigh were enveloped in lamb's wool and flannel, and the limb elevated on an inclined plane of pillows, so as to favour the return of blood as much as possible and prevent venous congestion.

The day on which the operation was performed was passed in considerable pain, the patient being restless, and complaining of a sense of burning in the limb. An anodyne however secured him a tolerably good night's rest.

On the following evening (July 1st) tenderness and tension of the abdomen supervened. July 2nd, All the symptoms of peritonitis became more marked; pulse quicker and small. "Leeches were applied, and three-grain doses of calomel, with a little Dover's powder, ordered every three hours. The symptoms, however, became rapidly worse; the patient complained of severe pain in the right leg, and a sensation of great heat over the whole body, although the actual temperature was rapidly falling below the natural standard. The right leg also became cold sooner than the left. At seven P.M. he became more easy, and expressed an opinion that he should 'do well;' but in little more than half an hour he expired."

Mr Potter concludes with the chief facts discovered by post-mortem examination, as reported by Dr Allen, by whom the autopsy was conducted:—

"It appears, then, that the ball passed altogether in the subcutaneous fat; that it did not pierce the fascia lata; and that the only vessel wounded, and forming the false aneurism, was a superficial branch of the femoral artery. This vessel was divided close under Poupart's ligament, and nearly an inch from its separation from the main trunk,

its divided extremity being perfectly open. The blood effused, and forming the main tumour was coagulated, (forty-three hours after death). There were several pints of sero-purulent fluid in the cavity of the peritoneum, and several 'patches of inflammation' on parts of that membrane, covering the large and small intestines, and the parietes of the abdomen near the wound made for the application of the ligature. This wound had a sloughy appearance, and was filled with a thin purulent discharge. The artery had been tied about the middle of its course, and was but little separated from the surrounding parts. There was no coagulum in it, either above or below the ligature. The vein was sound and healthy. There was a small abscess in the left groin, in the situation of the smaller swelling already mentioned, and there was a collection of blood in the cavity of the tunica vaginalis. The cord was not divided, but blood was extravasated in patches along its course."

As this case will probably ere long become the subject of strict judicial investigation, and, as much must, in such a case, depend on the conclusions arrived at from the medical evidence, we shall then have an opportunity of hearing the case fully considered in all its bearings. It is needless for us then, at present, to offer many remarks on the subject.

That the case was one of extreme difficulty of diagnosis, is evident from many points in its history:—In the first place, the hemorrhage, on the receipt of the injury, was described as being very rapid, the blood of a florid colour, issuing in a large stream per saltum from both wounds, and as rising, when uncontrolled, in a jet of the height of two or three feet from the wound in the right hip. That this account (given, it must be remarked, by unprofessional persons) was exaggerated by the alarm excited by the nature of the accident, is now rendered evident by the facts elicited on post-mortem examination; for we cannot imagine it possible that a gunshot wound, of a superficial branch of the femoral artery (probably the superficial epigastric or superficial circumflexa ilii), should give rise to such a sudden and copious effusion of blood, as to rise, after passing for some distance under the skin, in a large stream, and per saltum, to the height of two or three feet.

The next point of difficulty, and which is the leading point of interest in the case, was the diagnosis of the pulsating tumour. The tumour appeared elastic, but firm, very slightly tender, and not capable of any perceptible diminution in bulk, by gradual and continued pressure. This resistance to pressure, it appears to us, must have been a strong argument against the existence of an opening in a large arterial trunk communicating with the fluid contents of the tumour.

The pulsation, again, being distinct at all parts of the swelling, and "equally evident whether the fingers were pressed directly backwards, or whether they were placed on its upper and lower margins, and pressed towards the base of the tumour in a direction transversely to its long axis," did not favour the idea of the pulsation being caused by the contiguity of the femoral artery, without the existence of a communication between the tumour and the interior of that vessel. But could the force, with which the blood was propelled from the small vessel, which proved to be wounded, be sufficient to cause strong pulsation in such a large tumour? We should think not; and we cannot but imagine that the pulsation, contrary to the opinion arrived at by Mr Liston, was chiefly, if not entirely, communicated from the external iliac artery lying under the tumour. In such cases, the sounds heard on applying the ear directly, or by means of the stethoscope, to the tumour, have been generally relied on with considerable confidence; and this case appears to have been one, the diagnosis of which might have been materially assisted by such an examination—no notice is taken of such an examination having been made, but we think this has possibly been an omission of the reporter. In the case of a direct communication between the interior of a large artery

and the fluid contents of an aneurismal tumour, we have almost invariably the characteristic blowing sound, caused by the rushing of the blood through the small aperture of the vessel. Had the tumour, in this case, contained much coagulated blood, or been nearly obliterated by fibrous deposits, this sound might have been obscured, or perhaps entirely absent; but it is stated in the report, that the blood appeared fluid, and that the tumour was increasing in size with tolerable rapidity.

But now that we have the actual condition of the parts laid before us by post-mortem examination, it is a much less difficult task for us to comment on the sources of error in diagnosis, than it would have been to have pointed them out at the bedside of the patient. The case, we repeat, was evidently one of extreme difficulty, and the error, which was made in the diagnosis, and which too probably proved fatal to the patient, should remind us of the extreme care and deliberation with which we ought to proceed in arriving at a conclusion in such cases.

Tracheotomy—Removal of a Foreign Body from the Right Bronchus.

In the number of the American Journal of the Medical Sciences for April 1845, a case is reported by Dr Hall, of a boy of four years of age, who, while amusing himself by sucking a piece of pipe stem, $1\frac{3}{4}$ inches in length, held between his teeth, drew it by a sudden inspiration into the windpipe. Violent fits of coughing and dyspnoea quickly ensued: a probang was introduced into the pharynx and œsophagus, to ascertain that the foreign body did not lodge there; and an emetic was administered in the hopes that the piece of pipe might be dislodged during the efforts of vomiting. As the symptoms were becoming gradually more aggravated, tracheotomy was performed by Dr Hall eighteen hours after the occurrence of the accident. Before the performance of the operation, the boy pointed repeatedly with his finger to the right side of the upper part of the sternum, as being the spot where the foreign body lodged. On the trachea being opened, search was made with a probe, which instrument, after some time, was fortunately made to enter the hollow of the pipe, as it lay in the right bronchus, two or three inches below the top of the sternum, and it was drawn out on the point of the probe. The patient suffered from dyspnoea for several hours after the operation, but subsequently made a speedy recovery.

In a contemporary journal we observe an extract of this case, where it is stated that the experiment was repeatedly tried of inverting the boy's body, and at the same time striking him on the back, so as to procure expulsion of the foreign body by its own gravity, but that the practice proved unsuccessful. Not a word of this is mentioned in the history of the case as reported by Dr Hall, from which we make this extract; and we are much interested in knowing whether the practice was pursued, which proved successful in the famous case of Mr Brunel, and in that recorded by Dr Duncan, in a late number of this journal (vol. ii., p. 220.) This case appears to have been a favourable one for such practice, as the foreign body was not of a shape so likely to endanger instant suffocation by falling across the larynx, and thus suddenly obstructing the passage of air through the windpipe, as a coin, which was the substance removed in both the recorded cases.

A Memoir on Uretro-Plastie. By M. Segalas.

"M. Segalas, in a letter addressed to M. Dieffenbach in 1840, stated his opinion, that the attempts at reparation of a breach of substance of the urethra had hitherto failed in consequence of the contact of the urine with the parts concerned not having

been prevented; and, at the same time, detailed the particulars of a case in which, this latter object being attained by making a preliminary incision in the perineum, and introducing a catheter through it into the bladder, a complete cure resulted. A second case was similarly treated by M. Ricord, and a third forms the subject of the present communication.

"This patient, aged 30, exhibited a large loss of the spongy portion of the urethra, the consequence of gangrene supervening upon a ligature he had attached to the penis when a child. The urine and seminal fluid passed entirely by this aperture, which was an inch in length, and occupied the entire thickness of the urethra, a deep transverse cicatrix being observed also to surround the corpus cavernosum. The portion of the urethra anterior to the loss of substance was much narrowed, but easily admitted a probe, and when the patient approached the two orifices of the defective portion he could force urine through it. The operation was divided into three stages; in the first, the prepuce, which was phymotic, was divided, in order to relax the parts afterwards to be operated upon. Six days after, a free opening was made into the membranous portion of the urethra, and a gum-elastic catheter introduced. The urine thus being prevented coming in contact with the canal, and the parts being in a tranquil state, the operation was completed, three weeks after the first incision of the prepuce, by dividing the edges of the defective portions of urethra and bringing them into contact over a bougie by means of the twisted suture. The wound healed kindly, except at one minute point, which remained fistulous for a very long period, notwithstanding the application of various cauteries, &c. It, however, eventually completely healed, though not until its orifice had been incised. The operation was performed the 18th August, and the catheter removed from the perineum the 26th November. Dieffenbach had objected to this operation, that the wound made in the perineum might itself remain fistulous. Such has not been the case in the other cases reported, and in the present one, it closed in a few days after the removal of the instrument. Although perfectly able to evacuate the bladder by the urethra, the patient was recommended to do so for a considerable time by means of a catheter. Throughout the treatment of the case, neither fever nor irritation manifested itself."—Memoires de l'Académie de Medicine, tom. xi. Paris, 1845.

We believe this proposal of M. Segalas to be a very valuable one. Every surgeon who has attempted these operations must be convinced of the want of success which almost invariably attends them, and of the truth of the opinion, that it is in consequence of the contact of the urine with the parts concerned. The means hitherto employed to prevent this have, we may say, completely failed. The retaining of a catheter in the bladder is insufficient, as the urine in a few hours begins to escape by its sides, and its occasional introduction only proves injurious. It is only by completely diverting, for a time, the urine from its usual channel, that the union of the parts concerned can be satisfactorily obtained, and we believe that this proposal is well calculated to attain this end.

MATERIA MEDICA.

On the Pharmacology of Quinine.

Desiderio, of Venice, instituted numerous experiments on sulphate of quinine, of which we shall mention the following:—1st, one scruple of the sulphate of quinine, in honey, suffices to kill a rabbit. The fatal effect is accelerated by acetate of morphia and by alcohol, but retarded, and even prevented, by laurel-water (aqua Lauro-cerasi).

Venesection was a more efficacious preventive. Rabbits, in which all the characteristic symptoms of poisoning by quinine were already developed, were perfectly restored by venesection. Pulv. herb. digital. purp. also proved curative as an antidote. These experiments were confirmed by Desiderio's observations on men. According to him, the effect of quinine on the organization is of a phlogistic nature.—(Buchner's Repertorium.)

Adulteration of Sulphate of Quinine, and a method of detecting it.

The sulphate of quinine of commerce is very frequently adulterated with *salicine.* If the proportion of the latter alkaloid present be half, or even one fourth, the fraud may be detected by the addition of concentrated sulphuric acid, which produces, with salicine, a characteristic red colour. But if less than a tenth of salicine is mixed with the sulphate of quinine, this red colour is not developed by the addition of sulphuric acid. In order to detect the presence of salicine in this or less proportions, this alkaloid must be isolated. For this purpose, take three or four grains of the suspected sulphate of quinine, and pour on it about six times its weight of concentrated sulphuric acid, which dissolves the salt, and if salicine be present, forms a solution of a brown colour, just like sulphuric acid soiled by some vegetable matter. To this add carefully and gradually some distilled water, until a white precipitate appears. This will probably be salicine, which will not dissolve in a moderately dilute acid solution of sulphate of quinine. Filter the liquid, and collect the precipitate on a watch glass, and it will now produce, upon the addition of concentrated sulphuric acid, the bright-red colour characteristic of salicine. If too much water be added, the precipitate will dissolve, and only a loose gelatinous precipitate will form, very difficult to separate.—M. Peltier, Journal de Chemie Medicale.

On some New Combinations of Iodine. By A. T. Thomson, M.D., F.L.S., &c.

Iodine, it is well known, has an extensive range of affinity; but hitherto, as far as my information extends, its compounds have consisted of its combination with simple substances: thus it combines readily with metals, but manifests little disposition to combine with their oxides, although it forms compounds with oxygen. It also unites with hydrogen, carbon, chlorine, sulphur, phosphorus, and nitrogen; but I am not aware of any attempts having been made to combine it with organized matters, except some that have been lately made by my assistant, Mr Blackwell. The nature and extent of his inquiries, I have every reason to believe, will be laid before the Society when they are more matured; my object, at present, is to direct the attention of its members to two iodides, prepared by myself, and to show them three of the extensive group prepared by Mr Blackwell.

The two iodides which I have prepared are those of quina and cinchonia, both of which are likely to form valuable additions to the Materia Medica, inasmuch as they contain in themselves the combined properties of a most efficient tonic, and one of the most valuable deobstruents which we possess. One of the great objections to the administration of iodine and iodide of potassium is the production of that derangement of the system which is denominated *iodism*, and which has occasionally terminated in death. Now this is likely to be prevented by the tonic influence of the quina or the cinchonia. It is true that we already possess such a combination in iodide of iron, but in many instances, where the influence of such conjoint powers is required, preparations of iron cannot be borne. But my object in bringing these preparations before the Society, is not in reference to their medicinal properties, but to induce such of its mem-

bers as have more time and opportunity than I can command, to examine their nature and determine their chemical characters.

The *Iodide of Quina* is prepared by triturating together, in a mortar, 164·55 grains of pure quina, and 126·3 grains of iodine; the latter being added to the former, until the whole is intimately mixed; and then boiling the mixture in a moderate quantity of distilled water at first; adding more by degrees, until as much is added as will give one grain of the iodide for each fluid drachm of the solution. During the boiling, a deep brown, resinous-like substance is formed, apparently insoluble in water, which subsides to the bottom, when the solution cools. This substance is brittle, tasteless, inodorous, and affords no indication of the presence of either iodine or quina; it is partially soluble in boiling alcohol. I have not been able to ascertain its nature.

The iodide of quina, in solution, is of a pale straw colour, limpid, evolving a faint colour of iodine, and impressing upon the palate the bitter taste of quina; that it contains no free iodine is evinced by testing it with starch, whilst the existence of the iodine is immediately demonstrated by the development of the deep indigo-blue colour of the iodide of amidine, on adding a drop of nitric acid to the solution containing the starch. The quina in the solution of the iodide is precipitated by infusion of galls, in the form of a tannate; and, in its simple state, when the solution of pure potassa is added to the solution. It is upon these grounds—namely, the existence of both iodine and quina in this compound, that I have been induced to name it *Iodide of Quina;* but the real nature of the salt contained in the solution has yet to be determined; and it is the hope of getting this point settled by those who possess the ability to examine it, and can command more time than is at my disposal, that has induced me to bring it before the Society.

The *Iodide of Cinchonia* is prepared in the same manner as iodide of quina, taking 156·55 grains of the alkaloid, instead of 164·55. The quantity of brown resinous-like matter is less than in the preparation of the iodide of quina; but it closely resembles it in its physical character, its insolubility in alcohol. The solution is nearly inodorous, has the bitter taste of the cinchonia, and a rather deeper straw colour than the solution of iodide of quina. It is limpid, and answers to the same tests as the iodide of quina.

I have not yet crystallized either of these salts, but I shall do so, and pursue my investigations both respecting their chemical characters and their medical influence, and lay the results before the Society as soon as my time will permit me.

The three other iodides made by Mr Blackwell, are those of *fibrin*, *albumen*, and *gelatin*. I will not anticipate his own account of them, and of many other compounds of iodine and organic bases which he has formed, but merely exhibit them, and demonstrate by re-agents the presence of both the components in each of them. All of them are limpid, inodorous, and tasteless, and, in my opinion, are likely to prove admirable means of conveying iodine into the system. I have prescribed the iodide of albumen in one case of eczema; and were it proper to draw an inference respecting its remedial value from a solitary case, I should say, with decided success. The nature of these compounds offers new matter of investigation to the chemist, and most probably many of them may display more valuable therapeutical powers than any of the preparations of iodine already in use.—Lancet, March 15th, 1845.

On Digitalic Acid. By M. Pyrame Morin.

To prepare this acid, the leaves of the plant are to be treated with hot water; the infusion is acid, and is to be evaporated by the water-bath to the consistence of a thick syrup; to the residue a large quantity of alcohol is to be added until it produces no

further precipitation ; it is to be suffered to remain for some days till a deposit is formed, and which ought not to be bitter, but which is so if the alcohol was too strong.

The liquid is then to be filtered and distilled in a water-bath, till it becomes a thick extract, which is to be treated with pure sulphuric ether, and kept at a moderate heat for an hour, and eventually boiled ; this operation is to be repeated several times.

The ethereal tinctures thus obtained are acid, and have a slightly greenish-yellow colour, especially the first portions. By this process the bitter principle, or digitalia, and the digitalic acid are dissolved ; to this ethereal solution barytes in fragments is to be gradually added, which forms a yellowish precipitate, and when any remains insoluble, or the solution restores the blue colour of reddened litmus, enough barytes has been added.

The liquor which contains only digitalia, but not perfectly pure, is then to be filtered. The precipitate is to be collected, which is to be washed with ether to remove all the bitterness, and then with alcohol, till it passes but slightly or not at all coloured.

The precipitate is to be diffused through cold water and mixed with sulphuric acid to precipitate the barytes ; and it is better to leave some digitalate of barytes undecomposed than to add too much acid. By filtration a strongly acid, reddish-coloured solution is obtained ; this is to be slowly distilled in a glass retort in order to separate much of the water, and care is to be taken that the heat is not too great. On cooling, a small quantity of a brown substance decomposes, the clear liquor is to be poured off, and sufficient alcohol is to be added to it to precipitate any digitalate of barytes which may have escaped decomposition ; by evaporating the liquor *in vacuo*, crystals are abundantly formed.

In all these operations it is requisite to avoid the contact of air as much as possible, for the digitalic acid is converted by it into a brown substance ; notwithstanding the evaporation *in vacuo*, the formation of this substance cannot be prevented, and the crystals are consequently formed in a liquid of a deep colour ; the more the action of the air is prevented, the purer are the crystals obtained. The crystals are to be separated by and pressed between filtering paper, dissolved in a small quantity of alcohol, and again crystallized *in vacuo*, by which they are obtained white.

The properties of digitalic acid thus obtained are, that it crystallizes in long needle-form crystals ; it possesses a slight peculiar odour, which is increased by heat, and it yields a suffocating vapour, a small quantity of which occasions coughing ; at a higher temperature it melts, becomes black, and burns with a white flame ; it leaves a charcoal which readily burns without residue ; no ammonia is produced during the decomposition by heat.

The acid when pure is perfectly white ; but the action of light, heat, and air upon it is very great, readily converting it into a brown product, which colours the solution, and from which it is difficult to free it, and on this account the greatest care must be taken during its preparation. When the acid is dissolved in a small quantity of water, it may be converted during evaporation by the water-bath into a deep-coloured substance ; this is itself acid, insoluble in water, slightly soluble in ether, and readily so in alcohol.

Digitalic acid becomes still more readily brown by the action of alkaline bodies ; thus in preparing it excess of barytes, must be avoided.

Digitalic acid has a sour but not disagreeable taste ; it immediately reddens litmus paper, expels carbonic acid from carbonates, and forms digitalates, and combines directly with basic oxides, and the soluble salts which it forms become readily yellow in the air.—Jour. de Pharm. et de Ch.

Gelatinous Capsules.

M. Lecanu presented a report relative to gelatinous capsules, for which the inventor wished to take out a patent. The reporter concluded, that there was nothing new, and that, consequently, the patent ought not to be granted.—Sitting of the French Academy of Medicine, 11th June 1845.

On Antimonate of Potash.

It is not easy to prepare the antimonate of potash, so as to use it as a certain test of soda. Frémy distinguishes, 1. An insoluble antimonate of potash (called the binantimonate of potash by Berzelius, the antimonium diaphoreticum ablutum of the ancients); 2. A gummy deposit (simple antimonate of potash); 3. A deliquescent; and, 4. A granular antimonate of potash—the latter only can be used as a test for soda. To obtain it, melt antimony with nitrate of potash, wash the mass with lukewarm water, dry the insoluble residue, and heat it with three parts of hydrate of potash, till the mass becomes soluble in water. If this antimonate of potash is then dissolved in water, two salts are obtained by evaporation,—*a*, the deliquescent salt, to be washed out with cold water, till the residue has become granular; and *b*, the granular salt, which is white, and difficult of solution in cold water. Frémy considers it is isomeric with the gummy antimonate of potash, the solution of which gives a gelatinous precipitate with salts of soda, whilst the precipitate caused by the granular salt is immediately deposited in crystals. The granular antimonate of potash consists of

61·3 (1 atom) antimonic acid
16·9 potash (1 atom)
21·8 water (7 atoms)

100·0

Its watery solution is not precipitated by a diluted solution of sal-ammoniac, whilst a precipitate is formed in the gummy salt. The cause of this difference lies in the circumstance, that the granular salt is bi-basic, for at 200 deg. it only loses six atoms of water, and retains the seventh. At 300 deg. it becomes anhydrous, like the gummy salt. The granular antimonate of potash will discover 1-300dth part of soda in solution. If the soda should not be immediately thrown down, the addition of alcohol will aid its precipitation; but then the precipitate must be washed with water. The test prepared as a watery solution will keep for some time, but ultimately it passes into the gummy, or even into the insoluble antimonate of potash, when of course it becomes useless. If the soda be combined with an organic acid, it is advantageous to transform it, before its precipitation, into a carbonate, muriate, or sulphate, because a flocculent precipitate is easily formed in organic salts. The antimonate of soda possesses the same stœchiometrical constitution as the neutral (granular) salt of potash; for Frémy found it to be composed of

64·2 antimonic acid (1 atom)
11·9 soda (1 atom)
23·9 water (7 atoms)

100·0

It also loses six atoms of water at a temperature of 200 deg. Several chemists maintain the antimonous acid of Berzelius is nothing but antimonate of oxide of antimony, $Sb^2\ O^3 + Sb^2\ O^5$. For if the so-called antimonous acid be treated with concentrated potash lye, antimonate of potash is obtained, and the oxide of antimony is separated by dilution with water. If the antimonous acid be melted with potash, the effect is the

same; only in long-continued melting under the influence of the air, the oxide of antimony enters into a higher degree of oxidation, and only antimonate of potash is obtained. Those acids which combine with oxide of antimony, separate antimonic from the antimonous acid.—Buchner's Repertorium.

On the Chemical Knowledge of Tartar Emetic.

Tartar emetic is decomposed by alkalies and the stronger acids, and a precipitate is formed of oxide of antimony. This caused several chemists to doubt the accuracy of the formula for tartar emetic: K O Ta—Sb^2 O^3 Ta. On this account, Dr Schweizer has instituted several experiments, which tend to elucidate the subject. In order to decompose tartar emetic, he selected ammonia from among the bases, and nitric acid from the acids, because the separated oxide of antimony is almost completely insoluble in an excess of these substances, which can only be removed by heat. I. *Action of ammonia on tartar emetic.*—If you put ammonia into a perfectly saturated solution of tartar emetic, the latter becomes cloudy in a few minutes. A flocculent precipitate of oxide of antimony is formed, and gradually increases. The precipitation takes place immediately in heat. Notwithstanding an excess of ammonia, the liquid filtered from the precipitate still contains oxide of antimony, because it is soluble in alkaline liquids, but it amounts to so small a quantity, that it can only be regarded as an impurity of the tartrate of ammonia, which can be separated from the filtered liquid as a crystalline precipitate by means of alcohol. From one hundred parts of tartar emetic ammonia precipitates 43·35 parts of oxide of antimony, and in the filtered liquid only forty-one per cent. of the latter oxide is contained, as has been shown by precipitation with sulphureted hydrogen. This result closely agrees with the analysis of Dumas, who found in tartar emetic, 44·86 per cent. of oxide of antimony. II. *Action of nitric acid on tartar emetic.*—Nitric acid immediately produces in the solution of tartar emetic a considerable precipitate of oxide of antimony, which is increased by heat. But all the oxide of antimony is separated by this re-agent. Dr Schweizer always found tartar emetic in the liquid decanted from the precipitate, which could be precipitated by spirit of wine; besides the products of decomposition, consisting of tartaric acid and nitrate of potass. The precipitate obtained by nitric acid from the tartar emetic is not a pure oxide of antimony, for Schweizer found it to contain nitric acid, as basic nitrate of oxide of antimony. He convinced himself at the same time, that nitric acid added in excess removes, by the help of heat, not only oxide of antimony, but also potash, thus liberating tartaric acid, which again acts as a solvent on the part of the precipitate, re-producing tartrate of oxide of antimony. The decomposition of tartar emetic proceeds more quickly, when the quantity is small, and the solution much diluted. Larger quantities and concentrated solutions are only partly decomposed. When the author decomposed the diluted solution of a small quantity of tartar emetic at a low temperature, the precipitate of basic nitrate of antimony amounted to 41·20 per cent. of the weight of tartar emetic employed. Also, by decomposing it with hydrochloric acid, a thick caseous precipitate resulted, as a basic chloride of antimony, which was re-dissolved in an excess of hydrochloric acid. The preceding experiments lead to the following conclusions:—1st, That in the action of alkaline bases on tartar emetic, the base employed takes the place of the oxide of antimony, which is then precipitated; 2d, That in the action of powerful acids on tartar emetic, all the oxide of antimony is precipitated with the acid employed, as a basic salt, by which means bitartrate of potash is formed, but that an excess of the acid employed causes fresh decomposition; 3d, That, consequently, the whole quantity of oxide of antimony exists as a base in tartar emetic, and thus the stœchiometrical formula—K O Ta + Sl^2 O^3 Ta, is correct.—(Dr Schweizer, of Zurich, in Buchner's Repertorium.)

PATHOLOGY AND PRACTICE OF PHYSIC.

Measles—Transmission by Inoculation. Dr M. Von Katona.

Dr M. Von Katona inoculated 1122 persons in 1841, with a drop of fluid from a vesicle, or with a drop of the tears of a patient with measles. It failed in seven per cent. of those on whom it was tried; but all the rest had the disease mildly. The course of the symptoms appears to have been regular.—Oesterr. Med. Wochensch, July 1842. (Extracted from Dr James Ridson Bennett's Report on the Progress of Pathology, &c., Br. and For. Med. Rev. for July.)

On the Treatment of Strumous Peritonitis.

In our review of the recent work of Dr Marshall Hall, a few numbers back, we alluded to the interest attaching to this disease; and we gladly extract from Dr James R. Bennett's "Report," the following paragraph:—"Sir H. March, Bart., and Dr F. Churchill (Dublin Jour. Med. Science, March 1843), have detailed several cases of strumous peritonitis, with effusion, and given some valuable remarks on the diagnosis and treatment of the affection, which, they observe, sometimes assumes an acute character; but is more frequently met with in the chronic form, in which the early symptoms are very obscure. It is said (contrary we believe to the generally received opinion) oftentimes to yield to judicious treatment, if early detected. It is confined to persons of from three or four to about thirty years of age. In many cases the fluid is limpid and serous, and may be wholly absorbed, and leave but few adhesions. The gradually increasing distension of the belly has, in more than one instance, been mistaken for pregnancy. [Their observations do not confirm Louis' statement, that when occurring in adults, the lungs always present tubercles. He affirms that the existence of tubercular peritonitis alone will justify the diagnosis of pulmonary tubercles, though no pulmonary symptoms may be present.] In two of the cases detailed by Sir H. Marsh, occurring in adults, it is distinctly stated that the lungs are free from all traces of tubercle. Attention to the history of the case, and to the early symptoms, affords the chief means of diagnosis. Diarrhœa is a very frequent accompaniment, at first often the main symptom, and should not be suddenly checked by astringents, but is best treated by leeches, blisters, and fomentations, and anodyne enemata. The remedies of most importance are topical blood-letting, blisters, diuretics, mercury, and iodine. When the most acute symptoms have been thus subdued, diuretics, particularly inf. digitalis, with nitrate of potash, are of great use. 'But of all the curative agents we possess, that which is most valuable is mercury; of all diuretics it is the best: in some cases it must be resorted to at once; in others, it is necessary as a preparatory step, to subdue the more acute symptoms, by detractions of blood.' It is best introduced by inunction, and is sometimes with advantage conjoined with iodine. Iodine internally is occasionally useful, particularly when it acts as a diuretic; and for this purpose it should be associated with liq. potassæ. Sir Henry thinks the opinion that mercury is inadmissible in strumous disease in general, not well founded. Dr Churchill confirms the utility of the treatment recommended by Sir H. Marsh; [and his statements respecting the symptoms and diagnosis correspond with Abercrombie's.] In those cases where there is no pain and but slight tenderness, with little disorder of the digestive organs, the principal guide to diagnosis is the enlargement of the abdomen, which ultimately always occurs, and the fluctuation, which, by little care, may always be perceived. A case

recorded by Dr O. B. Bellingham (Dub. Med. Press, July 5, 1843), offers a good illustration of the obscurity of the symptoms. The patient, a woman aged 26, presented as the only constant symptoms, a tumid state of the abdomen, quick pulse, emaciation, and a dry but not coated tongue, redder than natural at the tip. The case proved fatal by perforation of the walls of the intestine. Numerous tubercles and some lymph were found on the peritoneum, but *the lungs were quite healthy.* Dr Meredith Clymer (Philadelphia Med. Exr., Nov. 11, 1843), contends that the evidence at present collected does not justify the conclusion to which Sir H. Marsh has arrived, that mercury is the chief remedy. In a paper by Dr A. Toulmonche of Rennes, will be found some further observations on this subject, especially with reference to the causes of the difficulty of diagnosis.—(Gaz. Med. de Paris, Nos. 35 and 49, 1842.)

Treatment of Neuralgia. By Dr J. C. B. Williams.

If the cause of irritation can be found, the sooner it is removed the better. Disorder of the functions, and of the digestive organs should be traced out, and treated accordingly. Where there are symptoms of inflammation, and where the disease has arisen from cold, local antiphlogistic treatment may be useful. Where there are no such signs, the nervous sensibility should be treated. For this narcotics and anodynes to reduce the nervous sensibility and metallic tonics are indicated. The most proper narcotics and anodynes are, aconite, belladonna, stramonium, Indian hemp, and opium. These remedies may be applied externally or internally. Creosote has been effectual in relieving toothache, which is obviously a neuralgic affection. Counter irritants, too, are sometimes of use, and strong liquor ammoniæ has caused a remarkable improvement in neuralgic affections.

Aconite and veratria, well rubbed in, seem to act as a counter irritant. These sometimes succeed, and occasionally fail; they have been tried in all their various shapes in bad cases, and it is remarkable how they have succeeded in different cases.

Another very useful remedy is the acetous extract of colchicum, applied in combination with belladonna to the part. It has afforded more relief than any remedy, owing probably to the disease having some connection with rheumatism.

Of the more permanent remedies, the metallic tonics, those which deaden the nervous sensibility, carbonate of iron, in large doses, appears to be the best; but it very often fails. Its efficacy is only temporary, and it seems to be most adapted to persons of weakly constitution—anæmic subjects.

Nitrate of silver, in some local affections, such as excessive sensibility of the eye, and of the stomach, seems to have some title to be classed along with the other remedies. The vapour bath, the hot douche, and cold affusion have succeeded.—Medical Times.

The variety of causes on which neuralgia depends, has led, of course, to the proposal of a great variety of remedies for its treatment. Our readers may find it useful to possess a catalogue of the more recent of these:—

Acetate of Morphia. M. Vincent Cristin, Turin.—One grain to be dissolved in four ounces of distilled water, and one ounce of syrup of gum-arabic to be added; a spoonful of the mixture to be taken every hour. When the pains are relieved, or sleep is about to commence, it should be given every two hours only, or suspended altogether, depending upon the narcotic effects produced.—Br. and For. Med. Rev., Jan. 1840, p. 252.

Extract of Aconite. Dr Burgess.—More especially in headache from exhaustion of a neuralgic character.

Half grain doses of the fresh extract, to be repeated every two or three hours, the bowels being previously gently moved with the aloes and myrrh pill.

Strychnine. Dr Pidduck and others.—One-twelth of a grain three times a day.

Tincture of Aconite externally. Dr Pereira and Mr Curtis.—Lancet, June 26, 1841.

Electro-Magnetism. Mr James.—Two needles of gold or platina are introduced into the nerve, and current of electricity, magnetism, or electro-magnetism transmitted through them.—Ed. Med. and Surg. Jour., July 1841.

Oil of Turpentine, in doses of 20 drops, M. Martinet.—Cormack's Journal, 1842, p. 157.

Indian Hemp. Dr Lynch.—45 drops of a tincture of gr. iii. to ℥i.—Prov. Med. and Surg. Jour., April 1, 1843.

Arsenic. Dr Hunt and various authors.

Belladonna has long been prized as a remedy in neuralgia; but we are recently indebted to Dr Hutchison for an investigation into its therapeutic action, and the cases to which it is adapted.—Lancet, Sept. 8, and Oct. 14, 1843.

Inoculation of Solutions of Morphia and Veratria. M. Lafargue and others.—Ann. de Therap., 1844.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Is it possible in cases where a female has a small pelvis, and where it is desirable that the child should be small, by any means, dietetic or medicinal, to arrest the development of the foetus, without injury to its health, and yet permit it to enjoy the full term intra-uterine residence? By Dr B. Ritter.

In consequence of the author having, in the course of his practice, met with a patient who had already, on three occasions, been with much difficulty delivered of dead children, in consequence of narrowness of the pelvis in the conjugate direction, he endeavoured, by means of starvation, purging, and venesection, to arrest the development of the foetus. The paper from which we quote contains the result of his experiment. He first makes a few historical remarks on the subject. Lehndardt's draught of health, (*Gesundheitstranke,*) which at one time acquired considerable celebrity for this purpose, consisted of a mixture of solution of glauber and Epsom salts, with a little red wine. Wigand and Benninghausen successfully employed starving. Ackermann found venesection useful. Dewees and Holcombe have observed, that women who took frequent purgatives during pregnancy, produced small children. Kluge has noticed the same to result from the use of calomel. Hueter and Schlesinger have made the same observation in women who have suffered from long-continued or habitual diarrhœas. Osiander recommends that the females should confine themselves to light vegetable and animal diet, observe fasting regularly, and take from time to time a saline purgative. Richard recommends the induction of the lacteal secretion, as he has observed that women who lose milk during pregnancy, produce small children. In the present case, Dr Ritter forbade the use of flesh and eggs, and confined the patient to milk, farinaceous food, thin watery soups, and roasted fruit, and even these were to be used sparingly. She was ordered to take saline purgatives daily—to labour hard in the fields, and was bled three times during the latter half of pregnancy, to the extent of not more than six ounces each time. Ten days before her delivery, she was so much exhausted and emaciated that

more nourishment was allowed, and the saline draught omitted. She was suddenly seized with labour pains in the field, and having hurried to the house, a dead child was born by the feet, without any artificial aid, before a medical practitioner could be procured. This woman became again pregnant—the same treatment was again pursued; when labour came on, the arm presented, the membranes being unruptured, the child was turned, and the head extracted with forceps; animation was for a time suspended, but ultimately both mother and child did well. The child was 18 inches in length, and fully developed.—*Correspondenzblatt des Würtemberg Arztl. Verin.* 1845, No. 1. We certainly think, that under all the circumstances, the treatment adopted in the present case has nothing to recommend its employment in preference to the induction of premature labour in the eighth month. One of this woman's previous children weighed *twelve pounds*, and was born by means of the forceps; the present, in spite of the treatment, was of the ordinary size of mature children, and the one immediately preceding was born without artificial aid. Surely the contraction of the pelvis was not so excessive but that the induction of premature labour in the eighth month would have answered all the purposes,—the chances of life to the child would have been but little, if at all diminished,—the comfort of the mother not interfered with, and her constitution uninjured by the depleting and debilitating treatment.

Labour complicated with Tumour in the Cavity of the Pelvis. By Dr Von Scharf.

The patient, ætat. 31, had two years before borne without difficulty, a healthy female child. Having on the present occasion been in labour for twelve hours, without any advance being made, the midwife in attendance sent for a medical practitioner. On examination, he found a tumour as large as the head of a small child, filling up two-thirds of the pelvic cavity. He considered that there was sufficient room for turning. The seizing of the feet, and the bringing down of the body were in the highest degree difficult. Having in time succeeded thus far, the operator tugged at the body until the neck gave way; forceps were then in vain tried for the extraction of the head. After much exertion and fatigue, it was at length dragged out by means of the perforator and hook. He had scarcely time to extract the placenta, before the woman died. On examination of the body after death, a laceration was found extending the whole length of the vagina, and four inches up into the uterus; the inner surface of the abdominal parietes, the neighbouring cellular tissue, and the left ovary and tube were much ecchymosed and discoloured; the tumour lay upon the four upper sacral vertebræ was elastic, and covered with the shining tendinous pelvic aponeurosis; its circumference was $11\frac{1}{2}$, and its diameter $3\frac{1}{2}$ inches; the pelvis itself was spacious and well formed.—*Neue Zeitsch für Geburtsk*, 1845. Bd. 17. Hft. 2. The author regrets at the conclusion of this narrative, that cesarian section was not resorted to; and well he may, turning being about the most hopeless scheme which could have been tried under the circumstances. With a tumour $3\frac{1}{2}$ inches in diameter, there was not room to use the perforator with safety, much less to turn or apply forceps; of course the exact diameter of the tumour could not have been discovered in the living body; but yet sufficient knowledge of the space between the tumour and the pelvic bones might have been been ascertained. The proper practice would have been to have resorted at once to cesarian section. Nothing can justify using such violence as is necessary to drag the body from the head of a child not putrid.

FORENSIC MEDICINE AND MEDICAL POLICE.

On Evidence of Poisoning with Prussic Acid derivable from the Odour of it in the Dead Body. By Mr Taylor. Guy's Hospital Reports. April 1845.

In one case at least the accused has been convicted on the odour as the only evidence afforded of the nature of the poison swallowed, and Mr Taylor agrees with Dr Christison that the presence of the odour in the blood, distinct to several persons, affords very strong evidence of poisoning by prussic acid. It is very unsafe to pronounce an opinion against poisoning, merely from there being no odour about the mouth of the deceased. Owing to the free exposure of this cavity, it is liable to disappear from it in a much shorter time than from the interior of the body. A powerful odour of the acid is not always to be perceived, and the real cause of death has therefore occasionally been overlooked or discovered only by mere accident. The odour of prussic acid is commonly very persistent. Dr Lonsdale found in his experiments on animals, that it might be perceived eight or nine days after death, although he could not detect the acid chemically for more than four days after death. In the case of Ramus, no odour of the poison was detected until the contents of the stomach had been submitted to distillation. In the case of the woman poisoned by Tawell, Mr Taylor, on the authority of Mr Norblad, states that no odour of the acid could be perceived 18 hours after death; and characterises the case as the most remarkable one that has ever occurred in this respect. (This is somehow incorrect, for it was perceived in the stomach by Messrs Champney and Pickering *). In Mr Creed's case, 18 hours after death, the odour was very powerful. In Dr Letheby's cases, 18 hours after death the odour was very strong. In Mr Crisp's case, there was no odour in any part of the body 70 hours after decease. The odour may disappear, from long exposure of the body to a free current of air or stream of water, or it may be carried away by imbibition, and evaporate entirely. In ordinary cases, it appears to be lost about the third or fourth day. Though the odour may have disappeared, the acid may still be detected by distillation. Secondly, The odour may be imperceptible from the smallness of the dose. Thirdly, Where the dose is small and the party survives some time, as the acid is taken into the blood, it may be eliminated either by respiration or cutaneous transpiration, and the odour may thus disappear from the body.

On the Delicacy of the Tests for Prussic Acid.—Mr Taylor found that a solution of the nitrate of silver gave a decided precipitate with prussic acid (containing one per cent of anhydrous acid), diluted in 13,200 times its weight of water. Between one-third and one-fourth of a grain of cyanide of silver equal to from 1-20th to 1-15th of a grain of anhydrous acid was sufficient, on being heated in a short tube, to produce enough of cyanogen to show the characteristics of the gas. A minute flame of cyanogen was obtained from 1-10th of a grain of cyanide of silver, equal to two drops of the Pharmacopœial acid, or less than one drop of Scheele's acid, or 1-50th of a grain of anhydrous acid. This is the limit of the silver test. The iron test will detect prussic acid (one per cent) diluted in 150,000 times its weight of water. Thus, 1-50th of a grain of anhydrous acid was detected in 3000 parts of water, the liquid at first had only a greenish tinge, but gradually a decided blue precipitate fell. Mr Taylor clearly shews that the odour of prussic acid may be perceptible though no chemical re-agents can detect it. In short, the value of the odour as a test for the presence of prussic acid may be summed up thus:—The odour of the acid is no proof that the acid is present or can be detected, and the absence of the odour is no proof that it is not present.

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* Vide Northern Journal of Med., No. 7, vol. ii. p. 339.

How long have the bones in question been buried?—Dr Schubert was requested, in connection with a criminal investigation, to examine and report, whether a certain skeleton had lain longer than twenty years in the ground or not. The skeleton was found in the city of Dramburg, in the digging of a cellar, and was that of a male about twenty years of age. All the bones were in good condition; the soil in which they had been found was sandy marl, (*sand mergel*). According to Wagner, in the course of thirty years, the bones of an adult, buried in the usual way in a coffin, all disappear, with the exception of the skull-cap, the femur, and the humerus, (the last being but seldom found); and, according to the same writer, the decay of bones is most rapid in a sandy soil. Thus, on these principles, the skeleton in question could scarcely have lain twenty years in the ground; but, the reverse was in reality the fact. In the same place were found eight other skeletons, all in a line, with their faces to the east. In the old chronicles of the city, it was found that this spot of ground had been used as a burying place in the beginning of the 17th century, so that they had in all probability lain in the soil for at least 200 years.—*Casper's Wochenschs.* 1845. No. 5.

Part VI.—MEDICAL MEMORANDA.

The Transactions of the Provincial Medical and Surgical Association came lately to hand. The volume contains a very complete retrospective address by Dr Charles Cowan of Reading, extending to near 150 pages, and embracing the whole history of practical medicine for the previous year. A Retrospect of Anatomy and Physiology, by Dr William Budd of Bristol, of 100 pages; and three papers besides, one by Dr Hocken of London on Inflammation of the Iris, another by Dr Crosse of Norwich on Inversion of the Uterus, and the third, a short case of Congenital Malformation of the Urinary Organs, by Henry Giles, Esq., surgeon of Stourbridge. We have had no more than time to glance at the volume. We look forward to much instruction from a deliberate perusal. One passage, however, near the end of Dr Cowan's address, as it concerns ourselves, could not escape even the rapid glance we have given to the volume. He says, "our periodical literature has continued to advance, both in extent and activity. Limiting our observation to Great Britain, we would simply remark, that the north of Scotland now boasts a Journal of its own."—(P. 132.)

There is a slight corrcction requisite on this passage, namely the omission of the two words "of Scotland." We are desirous, most certainly to make our Journal the journal of the north of Scotland, yet not exclusively of the north of Scotland, but of the northern half of the island. Dr Cowan has not observed, that though our Journal be named the Northern Journal, it issues from Edinburgh, the metropolis of the northern division of Britain. It is the Northern Journal of Medicine, as being published to the north of the only two places besides in Great Britain, in which medical periodicals are published, namely, London and Worcester. We will only add to our friends of the Provincial Medical Association, whose head-quarters are at Worcester, and therefore, but little short of the southing of London.

"Ask where's the north? at York, it's on the Tweed;
In Scotland, at the Orcades, and there,"
&c. &c.

The Secrets of Homœopathy—Hahnemann and his System. By Dr Schubert of Dramburg.

We hear it continually asserted that Hahnemann placed no confidence in the powers of nature in curing disease; but, from my intercourse with him, I am quite satisfied that no physician ever trusted more to the *vis medicatrix naturæ*. It requires, indeed, but very little reflection to enable us to perceive, that it was through the closest acquaintance with the curative powers of nature, that Hahnemann was led to adopt his new system of medicine. I have heard him declare, that he looked with contempt upon medical practice, and he thought that a patient would be none the worse if left to himself. He had a thorough conviction that all curable diseases might, under proper attention to diet, be removed by the efforts of nature alone. He looked upon these as his sheet-anchor. On one occasion, he said to me, "I give medicines but very seldom, although I always prescribe small powders! I do this for the sake of keeping up in the patient's mind the firm belief that each powder contains a particular dose of some medicine! Most patients will get well by adopting a simple mode of living, and by placing a boundless confidence in their medical attendants. Ordinary practitioners know nothing of this practically, although they are always talking of the healing powers of nature. If a patient recover under their treatment, they immediately ascribe it to the numerous drugs which they have poured into him, although these commonly do more harm than good." He never hesitated to promise recovery to every patient, without concerning himself about the nature of the malady; and I have seen some most ludicrous results follow these predictions. His plan was to demand for the cure, in the shape of a fee, a good round sum—one half to be paid down,—*unlimited confidence* in his treatment, doses of sugar of milk, and a particular diet! The dieting, which simply consisted in the denial of all stimuli, he considered to be absolutely necessary in order to allow nature to have free play. *Unlimited confidence* in the treatment was his great support in carrying out this system; and he invariably insisted upon this from every patient, well knowing that it was the important secret of life and death in such cases. Further, he used to observe, "We must not attend patients for nothing, or let them have even a pennyworth of medicine gratuitously; the greater the sum paid for physic and physician, the greater is the confidence placed in both."—Casper's Wochenschrift, März 1845.

We add the remarks of the Editor of the London Medical Gazette on the above passage:—"It is to be regretted that Hahnemann's followers do not display the candour of their master. The secret of the apparent success of homœopathic treatment has been long known; but it is satisfactory to have it confirmed by so free a confession on the part of the founder of the system. Some of the homœopathists allege that the "*small powders*" contain active principles brought, by trituration, to a *spiritualized* state! and this is the answer which we have heard seriously given to the objection, that in their globules you cannot, by the most delicate chemical test, detect the smallest quantity of the substance said to be present (sulphuric acid for example). We believe that the "small powders" act in the way suggested by the founder of this gross delusion; but the disciples go farther than the master. We knew a case in which sugar of milk was prescribed, with a promise of cure, for a patient labouring under confirmed amaurosis! Why are not such impostors prosecuted for obtaining money under false pretences?"

PROCEEDINGS OF MEDICO-CHIRURGICAL SOCIETY.

Wednesday, March 5, 1845.—Dr GAIRDNER in the Chair.

(*Concluded from p.* 128.)

Case of Suppuration of the Blood, independent of Inflammation. By J. HUGHES BENNETT, M.D.—The statements of various authors, that pus existed in the blood, independent of any local inflammation, have hitherto been very vague; because no measures were taken to ascertain whether the purulent-looking matter was really pus. The purulent collection found in the heart and blood-vessels by Jardin and Andral, have been ascribed by Gulliver to the mechanical softening of fibrin. Dr Bennett considered the following case valuable, as it would serve to demonstrate the existence of true pus formed universally within the vascular system, independent of local inflammation.

"Case—John Monteith, aged 28, was admitted into the Royal Infirmary on Feb. 17, 1845, under Dr Christison. The leading features in his complaint were the existence of a tumour in the left hypochondrium, which had latterly given him pain. This tumour was ascertained to be owing to enlarged splcen. There was œdema of the lower extremities, but his general health, otherwise, was good. On March 15, he was attacked with febrile symptoms; pulse 110, he was pale, and had slight diarrhœa. March 14.—Fever continues; but there is no prostration. On the 15th he died suddenly.

"On examination, four days after death, the blood throughout the body was found to be much changed in the right cavities of the heart, pulmonary artery, and also in the large veins of the trunk; it was firmly coagulated, and formed a mould of their size and form internally. The clot was separated into a red or inferior, and a yellow or superior portion. The latter, when squeezed out of the veins, as was sometimes accidentally done when they were divided, resembled thick creamy pus. On the surface of the brain, the veins and longitudinal sinuses appeared as if partly covered with pus, and partly with red coagulum. The vessels themselves throughout the body were perfectly healthy. The clot was nowhere adherent, but, on the contrary, readily slipped out of the vessel when an accidental puncture was made in it. The liver and spleen were enormously enlarged owing to simple hypertrophy. The former weighed 10 lb. 12 oz.—the latter 7 lb. 12 oz.

"On examining the blood microscopically, the yellow coagulum was found to be composed of coagulated fibrin in filaments, intermixed with numerous pus corpuscles, which could be readily squeezed out from it when pressed between glasses. When it was unusually soft, the corpuscles were more numerous, and the fibrin was broken down into molecules and granules intermixed with broken pieces of the filaments. The corpuscles varied in size from the 100 to 120th of a millimetre in diameter. They were round, had the cell wall granular, and presented all the appearance of pus globules. That they really were such, was proved by the action of water and acetic acid; the former of which caused them to swell and lose their granular appearance, whilst the latter dissolved the cell wall, and caused a distinct nucleus like that in the pus globules to appear. On stripping off a portion of the pia mater, and examining the capillary vessels of that membrane, they were found crowded with the same corpuscles. This fact was confirmed by Dr Allen Thomson, to whom a portion of the brain was sent."

Case of Sudden Death in which on Examination a Portion of the Fibres of the Heart was found to be Ruptured, and the blood Extravasated among the Ruptured Fibres. By Dr ANDREW.—Dr Andrew's paper appeared at length in our number for May.

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Fig. 1.

LEFT EAR-BULB

J. Mercer, del.

Fig. 2.

RIGHT EAR-BULB

F. Schenck, Lith. Edin.

THE

NORTHERN JOURNAL OF MEDICINE.

No. XVII.—SEPTEMBER 1845.

PART I.—ORIGINAL ARTICLES.

CONTRIBUTIONS TO ACOUSTIC PATHOLOGY.

PART II.—*Case of Congenital Deaf-Dumbness, with the Appearances presented by Dissection.* By JAS. MERCER, M.D., Fellow of the Royal College of Surgeons, and Lecturer on Anatomy, &c. &c., Edinburgh.

JOHN C—, æt. 35, born of healthy parents, and of a robust constitution, was suddenly seized in September 1844, with extensive pneumonia, that proved fatal on the fourth day of the disease.

From the earliest period of infancy, he never manifested the capability of perceiving sonorous vibrations, however loud, or however powerfully these might be made to fall on his organs of hearing; and from repeated experiments made on him shortly before his last illness, and after repeated explorations into the conditions of his accessory organs of hearing, which were found normal and healthy, it was evident that he had not the slightest perception, and could not comprehend the mental sensation either of objective or subjective sounds. As a necessary consequence of this congenite deficiency in the perception of sound, dumbness was the result. In all other respects, however, the other organs of the senses were most perfect in their structures and functions; his sense of tactual impressions, or percussions, were of the most delicate and acute kind; and he often expressed himself, as other individuals in the same unfortunate condition have done, that "the lightest footfall on the same floor was quite sufficient to attract his attention, or even to arouse him from sleep."* But,

* The Lost Senses, Deafness, by John Kitto, D.D., p. 40.

though unable to comprehend or to understand the mental sensation of sound, yet he was sensible of its existence, when of a powerful kind, and produced near him, and without the intervention of any medium by which the intensity of its transmission could be destroyed. Under these circumstances, however, the feeling excited was described to be similar to that produced by a body in a state of vibration, brought in contact with any of the more acutely tactile parts of the body.

At an early age, he was placed under the tuition of a teacher of the deaf-dumb, and in a short time he made himself perfectly master of the language of symbols, and could communicate to his friends his ideas, his feelings, and wants, with great rapidity and fluency; and, though capable of understanding the language of expression, as conveyed to him by the movements of the eyes and lips of the speaker, and to give utterance, *viva voce*, to a few short monosyllables, in reply to a conversation, yet his facilities for the former mode of expressing himself, rendered the latter irksome, and even painful and uncertain to him. His mental capacity and qualifications were of a superior kind; for not only did he possess an extensive acquaintance with the English language and literature, but even in the dead languages, and in the higher departments of algebra, geometry, and mathematics in general, he was considerably proficient, and took great pleasure in their study.

In his own necessary professional calling he was very active and expert; and for many years had managed the details and correspondence of an extensive business.

At the time of his death, he left a family of three children, all healthy, and perfect in their organism, in every respect.

Post-mortem appearances of the organs of Hearing, twenty-four hours after death.—The base of the cerebrum and cerebellum, with the central fossæ of the base of the skull, embracing the entire structures of the organs of hearing, were carefully removed in connection. Excluding the congested state of the membranes of the encephalic mass, and a slight gelatinous effusion into the subarachnoid tissue, consequent on the asphyxiated condition in which death had taken place, no other intrinsic morbid appearances or abnormal condition were presented in any part thereof, except in the general size and development of the auditory nerves.

The accessory organs of Hearing.—The auricles, on both sides, were well formed, and prominently set on the sides of the head. The conchæ were large and capacious, and the commencements of the external auditory canals were open and free. These auditory passages were of their normal length, about one inch and a quarter; in calibre and diameters they were rather narrower than usual; but this was not to such an extent as could, in the slightest degree, impede the transmission of sonorous undulations to the membrana

tympani on either side. The soft tissues of the meatus presented no indication of any morbid action having ever existed there; the ceruminous glands were distinct, and poured out a healthy and moderate lubrication of ear-wax over the greater part of the tubes.

The Membrana Tympani.—In consequence of the smaller diameters of the meatus, these membranes were also of a smaller size than natural,—the long diameters scarcely exceeding one-third of an inch, and the short diameters being somewhat less. In external conformation they were normal, being distinctly concave without, and convex within. They were perfectly entire, and transparent in their whole extent, and the attachments of the handles of the mallei were perfect and intimate, and were confined only to the convex point of their central umbilici. The obliquity in the termination of the inferior walls of the meatus was to their usual extent, and the size of the tympanic cavities was normal.

The Ossicula Auditus.—The ossicula in both cavities were perfect and complete. The mallei had their usual extent of attachment to the membranes, and their articulations, with the corresponding incudes, were free and perfect. The incudes were also freely articulated, by means of their orbicular processes, to the shallow cavities on the heads of the stapedes; and these latter bones again, with their corresponding fenestra ovalis. On the right side, a small process of bone extended from the base of the pyramids, downwards and forwards, between the crura of the stapes, and became attached to that portion of the promontorium tympani that forms the anterior and inferior margin of the foramen ovale. This bony process limited, in a slight degree, the free movement of the stapes on the membrane of the foramen ovale; but this was not to such an extent as to prevent the oscillations of this entire chain of bones. I have observed a similar bony connection through the crura of the stapes, between the pyramid and the promontory, in the ears of other individuals whose hearing was most perfect.

The Tensores Tympani and the *Stapedei Muscles* were fully developed, and had their normal situations and attachments, and derived their usual nervous filaments from the facial nerves in the aquæductus Fallopii.

The Chordæ Tympani Nerves pursued their usual course, from the postero-internal angle of the cavity, downwards and forwards, between the handles of the mallei and the long processes of the incudes, to the canals of Huguier, in the anterior margins of the fissures of Glasser. There existed no morbid thickenings around these nerves; but in their whole course through the cavities, they were free and perfect.

The Tympanic Plexuses were traced most perfectly on both sides—the tympanic branches from the anastomoses of Jacobson,

being well developed. These latter nerves had a free anastomosis with the carotid plexuses before entering the tympanic cavities; and after the tympanic plexuses were formed, branches could be traced to the Eustachian tubes, the fenestræ rotundæ, and fenestræ ovales, to the facial nerves, and also to form the tympanic connection with the small petrosal branch from the ganglion of Arnold. The motific, the sensific, and the organic nervous filaments were most perfectly developed on both sides; no defect, therefore, in the sensibility of the ears could be traced to any deficiency in the arrangement of these structures.*

The Mastoid Processes were of a normal size, and the cells contained within them communicated freely with the general tympanic cavities. They were lined throughout by a continuity of the general fibro-mucous membrane, which presented only a slight degree of that livid congestion, in which the whole mucous membrane of the upper part of the ear-passages partook. No morbid products of any kind existed in the cavities or cells.

The Eustachian Tubes.—These tubes were pervious throughout their whole extent, and in length were respectively one inch and seven-twelfths from their commencement in the tympana, to their free openings in the posterior parts of the inferior meatus of the nasal fossæ. The narrowest parts of their calibre (at the articulation of the osseous with the cartilaginous parts of the tubes) were sufficiently great, to admit and contain freely the violin string E, about $\frac{1}{32}$ part of an inch in diameter. The canals for the tensor tympani muscles were completely separated from the general Eustachian tubes, by their perfect bony processes; and the pharyngeal openings of the tubes were perfectly patent, and were not influenced by the situation and contractions of the levatores palati muscles. The chondro-mucous lining of the tubes exhibited a slight degree of livid congestion, but this was not to such an extent as impeded the free ingress of air along them. In the pharyngeal opening of the right tube there was a small quantity of very viscid mucus, evidently of recent origin, and thrown out from the mucous glands that abound in this situation.

The Fibro-mucous Lining of the Tympana.—This membrane generally was of a darker colour than natural, and was also somewhat congested. This was particularly the case along the floor of the cavities and the superior walls, where the blood-vessels pass from the parietes on the processes of the small bones. All the membranous tissues, however, were perfectly diaphanous, and this congested state of the membrane must, as already stated, have been coincident with the necessary condition of the general gastro-pulmonary mucous membrane, induced by the pulmonary disease. With the exception, therefore, of this state of passive hyperæmia,

* *Vide*, Swan Jos on the Diseases and Injuries of the Nerves, p. 272. London, 1834.

there was no positively morbid thickening of the membrane; no fluid contents within the cavities; no membranous bands passing from one part of the cavities to another, bracing down and limiting the movements of the ossicula auditus;* and the only abnormal condition that existed in these cavities was the slender osseous spiculum that extended on the right side, from the base of the pyramid, between the crura of the stapes, to the margin of the promontorium tympani.

The Ear-bulbs or Labyrinths.—Having found little to account for the cause, either of temporary and partial, or permanent and perfect deafness, in the accessory organs of hearing, considerable care was taken in the dissection of the different structures entering into the formation of the ear-bulbs; and here deficiencies were found to such an extent as certainly went far to explain the causes of deafness.

The left Osseous Labyrinth.—The osseous vestibule on this side was of its normal size, and in its conformation was natural. It had a free communication with the cavity of the tympanum, by the fenestra ovalis, with the semicircular canals, by their five openings, and with the cochlea, by the internal or scala cochleæ. The lamina cribrosa, separating the vestibule from the meatus auditorius internus, presented no morbid condition, and gave free transmission to the vestibular branch of the auditory nerve. The fibro-mucous membrane lining the osseous labyrinth, was natural in appearance, and the perilymph secreted by it, and in which floated freely the vestibular division of the membranous labyrinth, was limpid and transparent, and of its usual quantity.

The Osseous Semicircular Canals.—On laying open the parietes of these tubes, the first deficiencies in the structures were observed. At their vestibular origins they were perfectly natural in size and relations, and the ampullary dilatations were perfectly formed. The *anterior canal* was perfect in calibre, conformation, and structure. The *external canal*, at its most convex part, presented a perfect osseous septum that obliterated the entire calibre of the tube. This septum fully exceeded the twelfth part of an inch in thickness, and in structure was of the same dense nature as the surrounding osseous substance. The calibre of either extremity of the obliterated canal was of its usual size, up to the face of the septum, where each terminated abruptly in a smooth surface. The fibro-mucous lining of the canal had the same conformation as the osseous tube; it was healthy in appearance, and the extremities of the obliterated tube terminated in blunted cul de sacs, pervious to their extremities, and which rested on the surfaces of the osseous septum.

The *posterior canal* presented an exactly similar conformation.

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* *Vide*, an excellent Paper on the Pathology of the Ear, by Jos. Tonybee, Med.-Chirurg. Trans. London. Vol. xxiv., p. 208.

At its most convex part, an osseous partition also existed, of the same thickness, structure, and appearance; and the lining membrane of this tube terminated in the same manner as did that of the external canal. By the microscope, no morbid condition could be detected in any part of this lining membrane; and, as in the vestibule, the perilymph that surrounded the membranous canals was perfectly transparent and healthy.

The Cochlea.—The extreme space occupied by the cochlea was about the usual extent; but a great difference existed in the arrangement and termination of the second and third circles. On removing the outer wall of the tube from the promontorium vestibuli to its termination in the cupola, the conformation, calibre, and internal arrangements of the first turn were natural. Instead, however, of another complete turn being made, the tube abruptly terminated in the next, and formed a large, rounded, and general cavity. The central axis, or modiolus, extended no farther than the commencement of this second circle, and did not pass through the entire breadth of the cochlea to its infundibulum. *The lamina spiralis* extended from the promontory in the vestibule around the first circle, but stopped short in a well-defined hook-shaped margin, before it had completed a half of the second turn. The lining membrane of the cochlea was healthy. The *zona mollis* was perfect in the first turn, but in that part of the next turn in which it existed, it was fully twice its natural breadth, depending on the large size of this portion of the tube and the shortness of the lamina spiralis. *The helicotrema* was twice its natural size, and allowed a very free and perfect communication between the scala vestibuli and scala tympani. *The membrane of the fenestra rotunda* was perfect, and the fluid of the cochlea was healthy and transparent,

The left Membranous Labyrinth.—The Saccular and Utricular Sinuses of the vestibule occupied their usual extent in this cavity. The membrane itself, when examined under the microscope, appeared healthy; and the *endolymph* was perfectly fluid and limpid. This *endolymph* was carefully extracted from the saccule and examined with the glass, but no distinct crystalline particles of otolithes could be detected. The communications between the vestibular division, and the tubular prolongations of the canals were free; the *ampullary dilatations* existed in their usual situations; and the blinded extremities of this endolymph membrane, in the external and posterior canals, terminated abruptly, like the lining membrane of the osseous walls; but they were free and distinct, and had been separated from the obliterating septa by a thin layer of perilymph. These tubes were perfectly pervious up to the points of obliteration.*

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* For an accurate view of the appearances presented in both ear-bulbs, see the accompanying plate.

The right Osseous Labyrinth.—In this side there was not the same deficiency as on the opposite. In all its conformation and structures, it was perfect and normal, except in one part.

The Osseous Vestibule was of its usual size, and had its natural communications free and perfect.

Of the Semicircular Canals.—The *anterior* and *posterior canals* were perfectly developed in size and structure, but in the *external canal*, there existed an osseous septum, at its most convex part, similar in every respect to those already described, as found existing on the left side.

The Cochlea was natural in size and conformation. The fibro-mucous membrane lining the osseous labyrinth, except the tubular portion of the external canal, was healthy, and the perilymph was clear and transparent, and of its proper quantity.

The Membranous Labyrinth was also natural in its structure, conformation, and contents, excepting the tubular portion of the external canal.

The Auditory Nerves.—The auditory nerves had their usual origin in the floor of the fourth ventricle, and the fasciculi of fibres that constituted either nerve followed their courses through the margins of the crura cerebelli. No abnormal appearances were found in or around the nerves, whilst contained in the substance of the cerebellum; but on emanating from this, and becoming free, the nerves were much smaller than usual, and atrophied. This was especially the case in the left nerve, the substance of which was smaller than its accompanying portio dura. No change, however, existed in the ultimate structures of these nerves. On tracing the left nerve to the base of the meatus internus, it divided as usual into its vestibular and cochlear branches. The former division was nearly of a normal size, and its fibrils could be traced through the lamina cribrosa into the vestibule, and on its membranous content, and also to the ampullary dilatations of the membranous canals. The cochlear branch was extremely small, and after entering the canal of the modiolus, became entirely expanded through the tractus spiralis foraminulentus, on the lamina of the zona mollis, in the first or perfect circle of the cochlea. Except the diminution in size in the right auditory nerve, its distribution was otherwise natural. In both internal auditory canals, there existed a perfect communication by the filaments of Wrisberg, between the portio dura and portio mollis. The arteriæ auditoriæ interiores not having been injected, I am unable to relate the conditions of the vascular tissues in the labyrinths.

Remarks.—The pathological conditions, congenital or acquired, of the deeper-seated structures, and especially the ear-bulbs, of the organ of hearing, is a subject on which our information, as to facts, is extremely limited; and, consequently, our success in treating the diseases to which such parts are liable, and which are

of so very frequent occurrence in practice, is any thing but encouraging. The pathology of deaf-dumbness, resulting from congenital defects, or acquired morbid causes, is even much less known than the diseases of the other divisions of the organ; and, indeed, it may be said that they are less understood than any other class of diseases to which the human body is liable. With the exceptions of the dissections of Thurnam,* of Cock,† and of T. W. Jones,‡ there are no others to be found recorded in the medical literature of this country. Insulated facts, such as those which have been detailed in the foregoing report, as also those which have been noticed by the latter named observers, may at first be apparently trifling, yet when taken into a general account, may produce something of the greatest importance. Our knowledge of the actual condition of the deaf-dumb, taken generally, is as yet but in a most rudimentary state. In the estimation of the majority of mankind, these unfortunates have been too long consigned to the class of semirationals; but "the deaf-dumb are, in fact, neither depressed below, nor raised above, the general scale of human nature, as regards their dispositions, or their physical or mental endowments, and they are human beings individually differing from their kind only by an accidental defect." ‖ Deaf-dumbness is not of itself an independent form of disease; on the contrary, it is the result of many complicated and differently located forms of disease in the organs of hearing, the peculiarity of which must be established before a correct opinion can be formed as to what the deaf-dumbness depends on.

In a physiological point, it is difficult to harmonize the generally accepted theories of the acoustic properties of the different structures of the osseous and membranous labyrinths with the structural changes and actual mental condition of the patient, as above described; and, though it may be conceded, that the derangement was so great and so extensive on the left side, as to destroy entirely the functions of that organ, yet these were not to such an extent on the opposite side, as could, to any great degree, impair the general functions of it. Practically considered, it is an instructive example of the necessity of careful and extensive pathological investigations. It has been asked, "What are the diseases and conditions of the external, middle, and internal ear, which occur in the deaf-dumb; and what is the condition most frequently met with in them?"§ To this it must be replied, that we are at present without the requisite positive data to give even an approximate opinion; and until a proper interest

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* Medico-Chirurgical Transactions, vol. xix. 1835.

† Guy's Hospital Reports, vol. iii. 1838.

‡ Cyclopedia of Practical Surgery, vol. ii., p. 55.

‖ On the Deaf and Dumb, by Joseph Watson, LL.D., p. 17. London, 1809.

§ Kramer. Diseases of the Ear, by J. R. Bennett, p. 297.

be excited among professional men, in behalf of these unfortunates, and, at the same time, more frequent and more extensive opportunities be afforded for anatomical investigations into the nature of their disorders, it must happen that they shall still continue to be disqualified among the general race of mankind. It is unquestionable that there are many among the deaf-dumb who might have been, or who, if proper examination were made of them at a period of life, when physical treatment can be alone available, could be perfectly restored to their positions in society; but until an improvement in this respect takes place, and a better and more careful classification of sourd-muets be adopted, in the asylums and institutions of the country, such a prospect cannot be anticipated.

50 Northumberland Street,
Edinburgh, Aug. 1, 1845.

EXPLANATION OF PLATE.

Fig. 1.—Ear-bulb of left side, exhibiting the conformation and structures of the osseous and membranous labyrinths.

a.—The anterior semicircular canal, perfect in its conformation and structures.

b.—The external semicircular canal, *deficient.*

c.—The posterior semicircular canal, *deficient.*

d.—The osseous septum in the external canal.

e.—The osseous septum in the posterior canal.

f, *f.*—The blind terminations of the tubes of the membranous labyrinth of the external canal.

g, *g.*—The blind terminations of the tubes of the membranous labyrinth of the posterior canal.

h, *i.*—The utricular and saccular sinuses of the vestibule, natural.

k.—The commencement of the cochlea at the promontorium vestibuli.

l.—The abnormal state of the cochlea, caused by the merging of the whole of second turn, with the last half turn of the tube, into one general cavity.

m.—The helicotrema, twice its normal size.

Fig. 2.—Ear-bulb of right side, exhibiting the conformation and structures of the osseous and membranous labyrinths.

a.—The anterior canal, perfect in its conformation and structure.

b.—The external canal, *deficient.*

c.—The posterior canal, perfect.

d.—The osseous septum in the external canal, with the blind terminations of its membranous labyrinth.

e.—The vestibule, with its membranous labyrinth, natural.

f.—The cochlea, perfect in its conformation and structure.

g.—The second turn of cochlea.

h.—The third, or half turn, with the helicotrema.

The drawings are enlarged about three times their natural size.

Note on the Inoculability of Tinea Favosa (Porrigo Favosa of Bateman.) By John Hughes Bennett, M.D., F.R.S.E., Lecturer on the Practice of Physic, and on Clinical Medicine, &c.

It is well known that the numerous experiments made by Alibert,* Gruby,† and myself,‡ to determine whether the tinea favosa be communicable by inoculation, had all failed. In 1842, Dr Remak of Berlin favoured me with a number of the Medicinische Zeitung for August 3d of that year, in which he announced the successful inoculation of favus on his own arm. He fastened portions of the crust upon the unbroken skin, by means of plaster. In 14 days, a red spot covered with epidermis appeared, and in a few days more, a dry yellow favus scab formed itself upon the spot, which, examined microscopically, presented the mycodermatous vegetations characteristic of true favus. This experiment I have lately repeated with success; and that the disease is really inoculable, there can be no longer any doubt.

John Bangh, æt. 8, applied to the Royal Dispensary last June, labouring under the usual symptoms of tinea favosa of the scalp, in its most advanced stage. The disease was of three years' duration, and the crusts, when examined microscopically, exhibited the usual cryptogamous branches and sporules. After explaining the present state of our knowledge of this disease to the Poly-Clinical Class, one of the gentlemen in attendance, Mr M—, volunteered to permit his arm to be inoculated. I accordingly first rubbed a portion of the crust removed from Bangh's head upon his arm, so as to produce erythematous redness, and to raise the epidermis. Portions of the crust were then fastened on the part by strips of adhesive plaster. The results were regularly examined at the meetings of the class every Tuesday and Friday. The friction produced considerable soreness, and, in a few places, superficial suppuration. Three weeks, however, elapsed, and there was no appearance of tinea favosa. At this time, there still remained on the arm a superficial open sore about the size of a pea, and Mr M. suggested that a portion of the crust should be fastened directly on the sore. This was done, and the whole covered by a circular piece of adhesive plaster about the size of a crown piece. In a few days, the skin surrounding the inoculated part appeared red, indurated, and covered with epidermic scales. In ten days, there were first perceived upon it minute bright yellow-coloured spots, which, on examination with a lens, were at once recognized

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* Traité des Maladies de la Pean, fol. p. 443.

† Comptes Rendus, t. xiii. p. 72 et 309.

‡ On Parasitic Vegetable Structures found growing in Living Animals. Edin. Phil. Trans., vol. xv. p. 227.

to be spots of favus. On examination with the microscope, they were found to be composed of a minute granular matter, in which a few of the mycodermatous jointed tubes could be perceived. In three days more, the yellow spots assumed a distinct cupped shape, perforated by a hair; and in addition to tubes, numerous sporules could be detected. The arm was shown to Dr Alison; and all who witnessed the experiment being satisfied of its success, I advised Mr M. to destroy each favus spot with nitrate of silver. With a view of making some further observations, however, he retained them for some time. The capsules were then squeezed out, and have not since returned.

Mr M. has light hair, blue eyes, a white and very delicate skin. There is every reason to believe that the strips of plaster employed in the first attempt shifted their position, and that the crust was only properly retained by the circular piece of plaster employed in the second experiment.

Poisoning by American Flour. By William Tait, M.D., Surgeon of the Edinburgh Police.

About one o'clock on the morning of the 28th September 1844, I was called to the house of a respectable victual-dealer in town, where several members of the family were reported to have become seriously unwell. On my arrival, my attention was first directed to the mistress of the house, a corpulent-looking female, about 47 years of age. At this time, she was lying in bed, supported by one of her daughters, and presented a countenance which was pale and collapsed, cold extremities, and a quick feeble pulse. She seemed to comprehend every thing which was said to her, but was so oppressed as to be unable to return any answer to the questions put, otherwise than by a slight inclination of the head. The pupils were rather contracted and very sensible to light. The tongue was covered with a thick frothy mucus. Thirst was incessant, and fluid was only swallowed a very few minutes before it was rejected. Her agony always appeared much increased before vomiting. This was evinced by a constant rolling of the head and eyes, a twisting of the body, and a convulsive pressing with both hands over the umbilical region. The matter vomited in my presence appeared to be simply the fluid which was swallowed, mixed with mucus, and a few streaks of blood. She could not tolerate the slightest pressure over the epigastrium or other part of the abdomen. The bowels had been repeatedly opened, but unfortunately the stools had not been preserved, and I had no opportunity of obtaining any exact information regarding them.

Besides Mrs J., Mr J., two daughters, and three sons, the

youngest of whom was fifteen years of age, were affected in a similar manner. The symptoms in all, however, were not exhibited in the same degree of intensity; and whilst they were nearly similar in their origin and progress, some of them were altogether absent. Mr J., for example, had no vomiting, although he suffered more from sickness and tormina than any of the others.

So many individuals exhibiting similar symptoms in the same family, led me at once to suspect that all must be attributable to the same cause; and this, I had no doubt, was of a poisonous nature. On inquiry into the history of the cases, I learned that, besides broth and meat, the family had, on the preceding day, partaken of an apple-dumpling, the paste of which had been made of American flour. This, from its fine appearance, was considered to be of a very superior quality. Soon after dinner, a heavy uneasy sensation was felt in the stomach. This was accompanied by great sickness and inability to sit in an erect posture, which in some members of the family was soon followed by vomiting. Two of them, who got speedily rid of the contents of the stomach, recovered quickly. In four, vomiting did not take place before five and six hours had elapsed. In these the sickness was accompanied with lancinating pains in the stomach and bowels, and a burning heat in the epigastrium, a dry sensation in the mouth, thirst, pain in the forehead, and restlessness. When vomiting took place, relief was obtained for a short time, until it returned. The vomiting was succeeded by purging, general depression, paleness, and collapse of the countenance. In all, but one young man, the pulse was quick and feeble, and in him it was full and bounding. He complained much of headach, and his eyes were prominent and congested.

The treatment pursued was varied according to circumstances. Vomiting was encouraged by draughts of tepid water in some; sedative draughts were administered in others; and warm water enemata to those who had still a desire to go to stool. A vein was opened with complete relief in the young man with the full pulse; and the mistress of the house, besides receiving sedative draughts to allay the irritation in the stomach and bowels, had bottles of warm water applied to different parts of the body to preserve the heat, and a large sinapism over the epigastrium. In two hours from my arrival, all had experienced almost complete relief, and some of them had fallen asleep. Next day all had headach and thirst, but this in twenty-four hours after entirely disappeared. The mistress of the house was the only one who appeared to have permanently suffered. For several weeks she continued pale, and suffered from irritability of the stomach and bowels, and is still in an infirm state of health; but her period of life may also have had its influence in producing some of the ailments of which she complains.

The next question to be considered is, What was the cause of

these symptoms? That it was something in the flour will appear probable from the facts, that some members of the family dined solely on the broth and meat which was at the table that day, and were in no way affected; and those of them who partook of the apples, and did not taste the paste, also escaped with impunity. Mrs J., who was much worse than any of the others, took none of the apples, but dined almost entirely upon the paste. In short, after the fullest inquiry, I found that the severity of the symptoms was in direct proportion to the amount of the paste which had been taken.

Previous to making use of any of the flour referred to, Mr J. had sold two stones of it to two different parties; but as these were both strangers, he had no opportunity of finding them out, or ascertaining whether its use was followed with any bad consequences.

A careful analysis by myself, and my highly accomplished friends, Messrs T. and H. Smith, chemists, Duke Street, made separately, showed no trace of mineral poison; and the only other conclusion left for me to adopt is, that some acrid vegetable poison was mixed with the flour. The symptoms did not exactly resemble those which are said to follow the taking of the Darnel grass, but approach them more nearly than those of any other poison with which I am acquainted. In two members of the family, along with their irritant effects, they seemed to act also on the nervous system. Mrs J. was reported to have fainted twice before I saw her. She had a good deal of rolling of the eyes and twitching of the muscles; and headach continued for a considerable time after. All had headach next day; and one had very decided symptoms of congestion of the brain at the time, which was relieved by venesection. These conjectures, however, are merely thrown out for the purpose of directing attention to the subject, in the hope that some one with more time at his command than I have, and better qualified for the inquiry, will endeavour to give a more satisfactory explanation than that which I have so imperfectly attempted to submit.

Police-Office, Aug. 15, 1845.

Case of Perforation of the Cervix Uteri by the Foot of the Child, occurring during Parturition. By Thomas Williamson, M.D., &c. Leith.

Mrs B——, aged 19 years, strong and healthy, expected to be confined with her first child about the middle of last May.

At eleven o'clock on the evening of 14th May, I was requested to visit my patient, as both she and her friends supposed that labour had commenced. Upon making a careful examination, I ascertained that labour at that time had made little or no progress,

inasmuch as the os uteri was wholly unaffected, and the presentation so high up as to prevent me satisfying myself with regard to its nature. Under these circumstances, I took my leave, requesting to be called, should the uterine pains become more urgent.

At half-past ten o'clock on the succeeding morning, I was requested to visit my patient. I then learned that she had slept the greater part of the night, nor was it until morning that she was seized with regular uterine pains.

Examination now enabled me to discover the os uteri dilated to about the circumference of a half-crown piece, with a thin and yielding margin. The left foot presented, and, notwithstanding the previous escape of the liquor amnii, was still fully retained within the uterus.

For about an hour and half previous to my second visit, the pains had been recurring every five minutes, but were by no means severe. I had not been above twenty minutes in the house, and certainly not more than a quarter of an hour elapsed from the period of my second examination, when my patient was seized with three strong and remarkably violent pains, following each other in close succession.

From the character of these pains, I was induced to make a third examination. My surprise was very great at finding the change which had taken place. Instead of the left foot being still within the uterus, and fairly placed for exit through the *os*, as formerly, I now found that it had effected a complete passage through the *substance* of the anterior section of the uterus, about an inch from the margin of the natural orifice. In fact, not only had the foot passed through this oblique rent, but the whole leg up to the knee ; the limb to this extent lying in the vagina. No hemorrhage resulted.

Scarcely had I time for deliberating as to the proper mode of procedure under these circumstances, ere another pain, as violent as the three preceding, forced the foot, leg, and thigh, beyond the external parts, carrying with them a thick band of uterine substance, formed by the tissue between the natural and preternatural openings.

I found myself called upon to adopt some immediate step for the safety of the patient. The thigh was riding as it were over this thick uterine band, and I was not without much apprehension that, should another labour pain of similar violence with the preceding supervene, one of two effects would inevitably result ; either the thick band of uterine fibres would give way, or more likely, the rent would extend through the uterine wall and peritoneum. The *former* termination, as the least of two evils, I was now determined to anticipate (provided uterine action should supervene), by at once cutting through the tight encircling band. But the immediate performance of this operation was rendered unnecessary by the suspension of uterine action.

I had previously sent for the assistance of my friends, Drs Anderson and Combe, and was glad at the arrival of the former gentleman, to avail myself of his long and extensive experience. In consulting upon the case, it was at first thought indispensably necessary to divide the opposing *band.* Alive, however, to the risk of hemorrhage incurred by this procedure, it was afterwards agreed that delivery should be attempted, by endeavouring to return the protruding member through the lacerated opening, and bring the foot through the proper *os uteri.* The cessation of labour pains favoured me in this undertaking, in which I succeeded, although not without experiencing considerable difficulty. Shortly thereafter, the uterus again commenced to act, and in little space of time the body was delivered. Some little difficulty was experienced in disengaging the head from the pelvis; but through the assistance of Dr Combe, who had by this time also arrived, complete delivery of the child was effected. The placenta speedily followed, and my patient was left comfortable and happy in the possession of a living child. For *three* days no bad symptoms followed; the milk was secreted in proper quantity, and the pulse remained about 80 beats in the minute. On the morning of the fourth day, however, my patient experienced a severe rigor, followed by febrile symptoms. Her pulse rose to 180 beats in the minute, and continued so for the subsequent three days, when it again fell, and the febrile symptoms disappeared. There was not, during this attack, the slightest evidence of local pain or irritation; and the patient, upon the tenth day from delivery, was perfectly free from complaint, and able to sit up.

I regret to say, that owing to my patient shortly afterwards removing to the country, I was thus deprived of the opportunity which I desired, of making a thorough examination of the uterus several weeks after delivery.

So far as my information extends, I am not aware of any recorded case, entirely similar to that which I have now detailed. In the 11th vol. of the London Medico-Chirurgical Transactions, I find a case narrated by "P. N. Scott, Esq., surgeon of Norwich," in which, during severe labour, a separation of "a portion of the uterus, containing the os uteri and an irregular part of the cervix surrounding it," was effected.* Mr Scott's case only bears analogy to mine, in so far as it substantiates the liability of the uterus to become ruptured through its os or cervix. In his case, the noise attendant upon the rupture was said to have been distinctly heard, and the accident was "attended with a discharge of blood, fainting, cold sweats, feeble pulse, and a vomit-

* Dr Ramsbotham, junior, in the 2d Edit. p. 195 of his work on Midwifery, relates a case resembling that published by Mr Scott; and Dr William Campbell of Edinburgh informs me, that, in the practice of Dr Lever of London, another of those unusual lacerations occurred during 1844.

ing of a brownish fluid." In the case of Mrs B—— no unusual feeling or symptom was either experienced or perceptible upon the occurrence of the rupture. It is difficult, in my case, to offer any thing like a reasonable explanation of the *cause* of accident. On the contrary, every circumstance was present, which, in connection with the peculiarity of presentation, seemed to favour an auspicious and safe delivery. The patient herself was remarkably healthy, and by no means over plethoric, whilst the os uteri was thin and dilatable, offering no indication whatever of disease.

Leith, 13th August 1845.

Part II.

SURVEY OF THE RECENT LITERATURE OF THE HISTORY AND TREATMENT OF DISEASES.

No. I.—*Bright's Disease of the Kidney.* By Alexander Wood, M.D., F.R.C.P., Lecturer on the Practice of Medicine.

(*Continued from page* 153.)

PART II.—PATHOLOGY OF THE DISEASE.

In the last number, an estimate was attempted of the comparative frequency with which affections of other organs were found to accompany Bright's disease of the kidney, and the discrepancy of opinion existing on this subject among the best observers was pointed out. Cotemporaneously with it, there appeared in Cormack's Journal (No. LVI. August 1845), an interesting paper by Dr Peacock, late pathologist to the Royal Infirmary of Edinburgh, which had for its object to decide the frequency with which phthisis and Bright's disease are found to co-exist, as well as the importance, frequency, and relative priority of the different visceral complications of the kidney-disease.

The data on which Dr Peacock founds his observations, are drawn from the paper of Dr Gregory, in the Edinburgh Journal, the work of M. Rayer, "and a considerable number of unpublished cases, examined and recorded by himself, in the 7th and 8th volumes of the Register of Dissections of the Royal Infirmary of Edinburgh."

The general results are as follows:—

"Of 117 cases of decided granular disease of the kidneys, extensive tubercular disease of the lungs existed in 26, and a smaller number of tubercles of recent origin in 10 others; or, out of the 117 cases, 36, or nearly one-third (30·7 per cent.), contained

more or less extensive advanced tuberculous deposition in the lungs."

The following table, derived from the same sources, enables us better to estimate the relation existing between the renal and pulmonary affections, as compared with the other organic diseases of the lungs, and other viscera, which occur in the bodies of persons who have died of renal disease :—

" The Heart was examined in	102	cases, and found diseased in		37, or 36·4	per cent.
The Liver	,,	99	,,	36, or 36·6	,,
The Lungs were	,,	117	,,	84, or 71·8	,,
			Phthisical .	36, or 30·7	,,

" Or otherwise, that the diseases of the heart and liver were of equal frequency, and occurred in about one-third of the cases; while the lungs were affected in different ways, in two-thirds of the cases, and were tuberculous in nearly one-half of these, or in scarcely a less proportion than the whole of the several affections of the heart and liver. This very large proportion afforded by the tuberculous diseases of the lungs, in so considerable a number of cases, can, I conceive, scarcely be regarded as accidental, and renders the conclusion almost necessary, that the causes predisposing to the renal and pulmonary affections are closely allied."

With regard to the priority of the two affections, " it appears that of thirteen cases out of fourteen—the whole of those in which more or less decided tuberculous disease of the lungs, and granular disorganization of the kidneys, co-existed,—the priority of the affections was doubtful in one; in two, the disease of both viscera was secondary to other chronic affections; and in one, or perhaps two, the disease of the kidneys was the primary affection; while in eight cases the lungs were obviously diseased, primarily and predominantly."

The valuable paper of Dr Peacock concludes as follows :—

" We see, therefore, that the supervention of the renal disease, during the progress of pulmonary consumption, both by the great liability which it induces to inflammation of the parenchymatous viscera, and nervous sacs, and also by the direct effect of the elements of the arrested renal secretion, tends very much to add to the severity, and hasten the progress of the pulmonary disease."

III.—MORBID CHANGES IN THE FLUIDS.

A. *Morbid Changes in the Blood.*—Great as has been the attention paid to pathological chemistry on the Continent, and complete as is the work of Rayer on all subjects connected with diseases of the kidney, it is with pleasure that we find not only Rayer, but Simon in his Chemistry of Man, deriving from the pages of our own Professor Christison, their chief information relative to the changes in the blood in this disease.

As Franz Simon gives a succinct and accurate summary of the views of Dr Christison, in opposition to those of Andral, and confirms them by some original observations of his own, I feel that I cannot better illustrate this part of the subject than by reprinting that part of Dr Day's excellent translation which treats of the state of the blood in this disease.

"Andral and Gavarret describe the blood in this disease as characterized by a deficiency of albumen in the serum.

"It is evident, however, both from my own and from Christison's researches, that the decrease of the solid constituents of the serum is not always the leading character in this disease. I have thought it right, therefore, to arrange this disease, on account of the nearly constant presence of urea in the blood, under the form heterochymeusis.*

"Christison, who has attentively studied the blood in this disease, describes it in the following manner:—The blood in the first stage of the disease coagulates with a thick, firm, and cupped buffy coat. The serum is usually rather turbid, and when shaken with ether yields a small quantity of solid fat. The decrease in the density of the serum at this stage is very remarkable. While in healthy blood it is estimated at 1029—1031, it now sinks to 1020, or even 1019; and in connection with this circumstance we find a large quantity of albumen in the urine.

"Another very remarkable peculiarity is the presence of a certain quantity of urea in the serum.

"The following changes occur in the progress of the disease:—(1.) There is an excess of serum, the clot often constituting not more than one-fourth of the blood. (2.) The density of the serum returns to its normal state, or even exceeds it; sometimes, however, it remains low, even in the advanced stages. (3.) The urea disappears as the disease advances, but usually reappears, towards the termination of the case, in even a larger amount than previously. (4.) The fibrin, which is increased in the first stage, returns to its normal amount as the disease advances, and only becomes considerable again during inflammatory complication. (5.) The most remarkable character of the blood in the advanced stage is the great decrease of blood-corpuscles, which frequently amount to only one-third of the normal proportion.

"I have analysed the blood in four cases of Bright's disease, and obtained the following results:—

	Analysis 36.	Analysis 37.	Analysis 38.	Analysis 39.
Water . . .	830·590	826·891	823·461	839·700
Solid constituents .	169·420	173·109	176·539	160·300
Fibrin . . .	7·046	3·060	5·000	3·500
Fat . . .	2·403	1·860	2·520	2·680

* This name the author gives to blood containing a substance which is not present in the normal state.

	Analysis 36.	Analysis 37.	Analysis 38.	Analysis 39.
Albumen . .	103·694	109·432	97·010	63·400
Globulin . .	40·151	41·300	54·090	71·300
Hæmatin . .	3·808	4·377	5·100	4·910
Extractive matters and salts	12·348	13·280	12·819	11·380

"The blood in analysis 36 was taken from a man aged 40, who had been treated for some time in our hospital for this disease: traces of urea were detected in the extractive matters, by the method given in page 183.—The blood in analysis 37 was taken from a man aged 20, whose feet and arms were so œdematious as to render venesection a matter of some difficulty. Considerable quantities of urea were found in the blood.—The blood in analysis 38 was taken from a man aged 30, in whom the disease was not so advanced as in the former cases. A considerable quantity of urea was found in the serum, which exhibited a remarkable milk-white turbidity, not caused by fat in a state of suspension, but (as shown by the microscope) produced by numerous minute solid granules, which, by diluting the serum, and then allowing it to rest, were collected, washed, and analysed. They were not soluble in alcohol or in ether, but dissolved after a continuous digestion in dilute acetic acid, from which they were precipitated by ferrocyanide of potassium. Hence I concluded that they were fibrin.

"The blood in analysis 39 was taken from a man 36 years of age, at the commencement of the disease. Hæmaturia had occurred a few days previous to the venesection. The quantity of urea in this blood was very considerable.—The urine was albuminous in all these cases, especially in the last two.

"It is worthy of remark that I have found the hæmatoglobulin more abundant in hæmatin in these than in ordinary cases. It varied from 8% to 9·5%.

"Christison gives the following results of analyses of blood in Bright's disease:—

	Water.	Solid constituents.	Fibrin.	Blood-corpuscles.	Residue of serum.
1	863·8	136·2	2·8	57·4	76·0
2	844·1	155·9	4·4	57·7	93·8
3	808·3	191·7	3·0	133·9	54·8
4	831·0	169·0	2·8	111·1	55·1
5	836·3	163·7	2·7	104·6	56·4
6	825·2	174·8	4·3	95·5	75·0
7	859·2	140·8	8·2	75·5	57·2
8	885·3	114·7	6·2	56·4	52·1
9	862·8	137·2	3·2	72·1	61·9
10	855·5	144·5	4·5	42·7	97·3
11	862·6	137·4	8·5	72·8	56·1
12	887·0	113·0	5·6	49·1	58·3
13	841·6	158·4	3·4	91·6	63·4

"Christison's average composition of healthy blood being:

775·7	224·3	3·8	137·1	83·4

"The blood in the 3d analysis was taken from a robust man,

aged 55 years, in the first stage of granular degeneration, and suffering from anasarca. The urine was very albuminous, but not bloody: the serum was milky, and abounded in urea.

"The blood in the 5th analysis was taken from a man aged 48, suffering from anasarca and continued fever. The kidneys were in the first stage of granular degeneration; the urine contained a considerable quantity of albumen.—In the 6th case, the disease had reached the middle stage: the patient was at the same time suffering from anasarca and chronic catarrh: the blood contained urea.—In the 7th case, the disease was in the first stage: the patient (a man aged 42) was also suffering from peripneumonia and anasarca: the blood contained urea, and the urine was albuminous.

"8th analysis. Blood of a youth aged 16 years, suffering from dropsy; kidneys in the middle stage of granular degeneration. The serum was peculiarly rich in solid constituents, and contained a considerable quantity of urea.

"9th analysis. Blood of a man aged 23. The granular degeneration was more advanced, the blood contained urea.

"10th analysis. Blood of a man aged 23, after having recovered from scarlatina. The disease in the kidneys was in an advanced stage: the blood was remarkable for the small quantity of corpuscles.

"11th analysis. Blood of a woman aged 25 years, suffering from anasarca, catarrh, and chronic rheumatism. The degeneration of the kidneys was in a very advanced stage. The blood contained urea, and the urine was albuminous.

"12th analysis. Blood of a man aged 32, suffering from pleuritis and anasarca; kidneys in an advanced stage of the disease. Blood remarkable for the small quantity of corpuscles, and for the large amount of urea.

"13th analysis. Blood of a woman aged 56, with anasarca and ascites; the disease of the kidneys was in a very advanced stage.

"These observations entirely coincide with my own, as far as regards the decreased quantity of solid constituents, the small amount of blood-corpuscles, as the disease advances, and the presence of urea in the blood.

"Andral and Gavarret have analysed the blood of three persons with Bright's disease.

"The following are their results:—

	Venesection.	Water.	Solid constituents.	Fibrin.	Blood-corpuscles.	Residue of serum.
1st Case	1	801.0	199·0	1·6	127·6	69·1
2d „	1	867·0	133·0	2·3	61·6	68·4
3d „	1	849·0	151·0	3·2	82·4	64·8
	2	836·0	164·0	3·0	88·2	72·7
	3	845·9	154·1	4·2	71·0	78·9

"The second venesection in the 3d case was ordered at a time when the urine was less albuminous than it had been: the third was prescribed after a considerable interval, and when the urine

contained no albumen."—Animal Chemistry, with reference to the Physiology and Pathology of Man, by Dr J. Franz Simon, pp. 321—325.

B. *Morbid Changes in the Urine.*—Dr Christison was the first to point out the necessity of drawing a clear distinction between the early and advanced stage of Bright's disease, in reference to the characters of the urine. "In the incipient stage, according to this accurate observer, there are a reduction, but only a moderate reduction, of density, a strong albuminous impregnation, and a material diminution of the daily discharge of solid ingredients: in the advanced stage, again, is found a great reduction in density, and an equal reduction of the daily discharge of solids,* frequently associated with the presence of albumen in small quantity. Deviations are, however, more apt to occur in this than in the early stage; and among these the most important to be kept in view are, the frequent absence of albumen, and the daily discharge of the full amount of solids, owing to spontaneous diuresis. The only character absolutely invariable, is great lowness of density, with, of course, a reduced *proportion* of solids." (On Granular Degeneration of the Kidneys.) With regard to the method to be employed for the detection of albumen in the urine, it is not always safe to trust to those re-agents, by which its presence in pure water can be ascertained. Alkaline urine does not become turbid by the action of heat; while the artificial admixture of milk with urine will cause cloudiness on ebullition, or on the addition of nitric acid. But the same admixture will cause it to coagulate on the addition of acetic acid, which is not the case with albuminous urine. The following excellent precautions, taken from the recent work of Dr Golding Bird, will prevent any mistake in this matter:—

"As a *general rule*, if urine becomes opaque by heat, and on the addition of nitric acid, albumen is present. It is important to bear in mind that certain sources of fallacy exist when one only of these tests are used.

"1. Heat will produce a white precipitate in urine containing an excess of earthy phosphates. Distinguished from albumen by disappearing on the addition of a drop of any acid.

"2. Heat being applied to urine containing deposits of urate of ammonia, will sometimes, if actual ebullition be prolonged, produce a deposit of an animal matter, insoluble in nitric acid. This is rare, but is distinguished from albumen by being deposited only after protracted ebullition.

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* On this point there exists a little difference of opinion. Becquerel, in almost all his analyses, finding the quantity of solid ingredients diminished; while, on the other hand, the analyses of Simon make it approach to the normal proportion. Dr Christison, it will be observed, speaks of deviations.

"3. Nitric acid will often produce white deposits in the urine of patients under the influence of copaiba, cubebs, and perhaps some other resinous diuretics. Distinguished from albumen by not being produced by heat.

"4. Albumen may be present in urine and not be precipitated by heat, providing the secretion be alkaline. If, therefore, urine suspected to be albuminous, is capable of restoring the blue colour of reddened litmus paper, nitric acid must be used as the test, as albumen, when combined with alkalies, does not coagulate by heat.

"5. It may occasionally happen that albumen may be present in the same incipient or hydrated state in which, according to Dr Prout, it occurs in chyle. Heat scarcely affects this variety of albumen, except by protracted ebullition; but nitric acid immediately coagulates it. This form of albumen must be regarded as rather possibly than probably occurring in urine. I have never met with it."—Golding Bird on Urinary Deposits, pp. 226–27.

Dr Wells has attempted, by adding known quantities of albumen to urine, to ascertain the appearance produced on the coagulation of definite proportions. He has found that when albumen exists in urine, in the proportion of 1 to 640, it barely conceals the bottom of the phial from sight, if equally spread over it, and that in other proportions, degrees of coagulability ensue, which are represented by the following numbers:—

$\frac{1}{320}$th of serum	gives a coagulum of	$\frac{1}{20}$th.	
$\frac{1}{160}$	"	"	$\frac{1}{8}$
$\frac{1}{80}$	"	"	$\frac{1}{5}$
$\frac{1}{40}$	"	"	$\frac{2}{5}$
$\frac{1}{30}$	"	"	$\frac{1}{2}$
$\frac{1}{25}$	"	"	$\frac{3}{5}$
$\frac{1}{20}$	"	"	$\frac{3}{4}$
$\frac{1}{15}$	"	"	$\frac{4}{5}$
$\frac{1}{10}$	"	"	$\frac{7}{8}$

The only way of *accurately* ascertaining the precise proportion of albumen present, is by washing the coagulum in alcohol, drying and weighing it, and then subtracting the amount from the total weight of the urine employed. Dr Christison is of opinion, "that it would singularly promote the future study of the disease were physicians to employ some common nomenclature for the different degrees of coagulability. Important scientific and practical conclusions might then be drawn, which at present are unattainable." He proposes the following as well defined, and in practice convenient:—"1. *Gelatinous by Heat.* 2. *Very strongly coagulable*, where a precipitate distinctly separates by heat, and yet occupies in 24 hours the whole, or nearly the whole, fluid. 3. *Strongly coagulable*, where the precipitate in 24 hours occupies half the volume of the fluid. 4. *Moderately coagulable*, where

it occupies a fourth of the fluid. 5. *Slightly coagulable*, where it occupies an eighth of the fluid. 6. Feebly coagulable, where it occupies less than an eighth of the fluid. 7. *Hazy by heat*, where the urine becomes cloudy, but does not form visible flakes a few seconds after being boiled. In appreciating the last degree of impregnation, it is convenient to heat only the upper half of the fluid in the tube."

The appearance presented by different specimens of albuminous urine is found to vary very considerably. Sometimes it contains some of the colouring matter, as well as the albumen of the blood, and it then presents a deep red tint. Occasionally it is clear, and then it usually exhibits an acid reaction, or it may be of a pale-greenish yellow colour.

Sometimes it is turbid, and this turbidity may be removed by treating it with ether, which dissolves the fatty matter on which the cloudiness depended. But where that has arisen from the presence of a considerable quantity of mucus, the ether produces no effect, but it may be clarified by filtration. By means of the microscope, the pus, mucus, or blood globules, and the particles of lithic acid and lithate of ammonia, so often entangled in the coagulum, may be detected. A microscopic examination of albuminous urine often detects the presence of membranous scales, varying in size and irregular in form. Their surface is areolar, dotted, and semi-transparent. This transparence is, however, by no means general over the whole surface, for in some places they appear almost opaque. M. Rayer has particularly observed these scales, when the urine was decidedly acid, and deposited crystalline grains of uric acid. Cherer has also pointed out the occurrence of tortuous thready bodies in the urine of Bright's disease; these Henlé regards as inflammatory exudations moulded to the form of the uriniferous ducts. I had lately satisfactory evidence that the occurrence of these is not confined to albuminous urine; for, in examining the urine of a patient, who, after exposure to cold, was seized with smart fever and anasarca, I found no evidence of albumen being present; on examining it by the microscope, crystals of uric acid were observed, which to the naked eye presented the appearance of small grains of orange-coloured sand, and innumerable tortuous thready bodies were seen floating through the fluid, along with a considerable number of mucous globules and some amorphous matter.

We are called on here to notice another difference of opinion with regard to the relation that obtains between the amount of albumen present in the urine, and the extent to which the disorganization of the kidneys has proceeded. M. Martin-Solon regards an increasing proportion of albumen to be indicative of advancing disorganization. Dr Christison again thinks that the albumen is most abundant in the early stage, and that where it is seen in quantity at an advanced period, it arises from the super-

vention of an acute attack. Rayer has often found the quantity of albumen present in the acute greater than that in the chronic variety, while Dr Osborne has invariably observed that the extent of the disease has been in proportion to the coagulability of the urine.

As the urine in its normal state contains in solution a considerable proportion of urea and saline matter, its density is of course greater than that of pure water. But even in healthy urine the density varies considerably; and, accordingly, we find that it has been variously estimated by different observers. It is, of course, of the utmost importance to obtain some standard by which to determine the existence and amount of the variations of the density in disease. But we find considerable difference of opinion on this point, thus:

The following are the estimates of the most esteemed authors:

Dr Prout, ...	1,010 to 1,015.
Dr Christison, . .	1,024 to 1,025.
Dr Bostock, . . .	1,020
M. Martin-Solon, .	1,020
M. Rayer, ...	1,018
Dr Craigie, . . .	1,022 to 1,026.
Becquerel, in man, .	1,0189.
——— in woman,	1,0151.

Giving as the mean in the two sexes, 1,017.

In patients affected with Bright's disease, the density varies very much. Dr Gregory found the average density in fifty cases of persons supposed to be labouring under Bright's disease 1013·18; in twenty-five fatal cases of these it was 1011·88; and in twenty-five terminating favourably or relieved, it was 1014·48. In nineteen of Dr Bright's cases, Dr Bostock found the specific gravity of the urine to be 1017.

As the density of the urine depends much on the presence of its characteristic principle urea, so the diminution of that density is usually accompanied by a corresponding diminution in the amount of urea. According to the analyses of Berzelius, which corresponds with that of Lehman, sixty parts of the solid residuum of healthy urine contained about thirty of urea. The presence of albumen, and the absence of urea have suggested the idea that the presence of albumen is vicarious of that of urea. Facts, however, contradict this, for, 1st, The increase of albumen is not in the inverse ratio of the diminution of urea. 2d, When, during the progress of the disease the amount of albumen sensibly diminishes, this is attended by no corresponding increase in the amount of urea. It is in this state of the system, and while the normal amount of urea in the urine is very sensibly diminished, that we find its presence in the blood as before noticed. This exactly corresponds with the experiments of many observers,

who have found, that when, from any cause, the kidneys ceased to separate urea, that principle was found in the blood.—(See *e. g.* Prevost and Dumas, Ann. de Chimie, tom. xxiii. p. 90; Segalas Journ. de Magendie, tom. ii. p. 359; Tiedemann and Gmelin. Zeitschrift fur Physiologie, t. iv. p. 14. Velpeau, Arch. Gen. de Med., tom. vii. p. 306; Rees' Lond. Med. Gaz., vol. xii. p. 676; Brett, &c. ibid. vol. xii. p. 708; Nysten Journ. de Chimie Med., 2 ser. tom. iii. p. 257; Marchand l'Experience, tom. ii. p. 43).

In Feb. 1845, Dr Schloss-berger published a paper, professing to discuss the question, "Whether the relative proportions between the quantities of the different healthy solid constituents of the urine are not anormal in Bright's disease?" but the author does little more than furnish us with an analysis of one case of the disease. A translation of the paper is given in Cormack's Journal for August 1845.

C. *Morbid Changes in the Serous Exhalation—Dropsy.*—The most usual form of dropsy in Bright's disease is anasarca, which is almost invariably present at some stage of the disease. It is certainly not an essential accompaniment, inasmuch as cases are on record where it never appeared, but these are exceptional. It may occur suddenly, or its approaches may be very gradual. It is often accompanied by hydrothorax, which is however perhaps scarcely so common as ascites. Dr Christison is of opinion that neither ascites nor hydrothorax occur in Bright's disease without anasarca, unless in these rare cases where either is developed by the disease of the kidney through the intervention of pleurisy or peritonitis. The same experienced physician is disposed to consider as usually arising from the kidney-disease, a very great proportion of cases of inflammatory dropsy—all cases where the œdematous parts do not pit on pressure—all dropsies where the urine is steadily above the healthy standard in point of quantity, except in cases of saccharine diabetes—and also (although on this point he does not speak with the same confidence) all dropsies where the urine, not being above the healthy standard in quantity, is also below 1010 in density.

The effusions in the serous membranes are seldom considerable, unless when organic diseases of the heart, lungs, or liver are also present; this is most conspicuous when the renal disease is complicated with cirrhosis of the liver, in which case the ascitic effusion may proceed to a very considerable extent.

Nysten has detected the presence of urea in the peritoneal effusion in a case of ascites, (Journ. de Chimie Med., 2d. ser. tom. iii. p. 268); but he has neglected to state whether or no the urine was coagulable. Guibourt, however, unequivocally detected its presence in a case where ascites and anasarca co-existed with Bright's disease; and Dr Barlow has obtained it in a similar case from the serum contained in the ventricles of the brain. Dr

Schloss-berger has also detected it in the fluid of the ventricles in a patient who died of Bright's disease in the Catherine Hospital at Stuttgart.

[*This subject has extended to such a length that the pathological remarks must be deferred to next Number, in which it is trusted this series of papers may be completed.*—A. W.]

Part III.—REVIEWS.

A Practical Treatise on Inflammation, Ulceration, and Induration of the Neck of the Uterus, &c. By James H. Bennett, M.D., &c. &c. London, 1845. Pp. 212.

This performance professes to furnish on the diseases which it embraces, not only the experience of the author, while attached for several years to the Parisian Hospitals, but also the opinions and practice of the superintendent medical officers of these institutions. We admit that at first we rather hesitated to enter on the analysis of this publication, having too frequently had cause to be dissatisfied with productions savouring of French opinions and practice; but on the present occasion we are glad to confess that we have been agreeably disappointed.

In the treatise before us, Dr Bennett has wisely, almost entirely, omitted those useless speculations, generalizations, and tiresome details, in which such of our brethren, as have become enamoured of Continental principles, are wont to indulge. The *first part* of the work is devoted to the consideration of inflammation, ulceration, and induration of *cervix uteri* in women who have not borne children. After informing us (p. 3) that the cervix uteri, in the healthy state, is furnished with a little cellular membrane, is indistinctly muscular, but very vascular, which anatomical condition accounts for its being so frequently the seat of inflammation, the author proceeds to detail the symptoms of this disease in females who have not conceived.—In them we are told (p. 9) that this morbid action is nearly always, except in cases of general metritis, confined to the mucous membrane, and is attended with leucorrhœa, varying in quantity, lumbar, and sometimes deeply-seated hypogastric, uneasiness, pain behind the pubis, with unusual suffering during sexual congress, to which last, as a diagnostic, much importance is attached; the volume of the cervix is more or less increased, and with the upper part of the vagina, unusually hot; while that unctuous, greasy feel, which characterizes the uterine neck, is absent. The author,

instead of the velvety surface by which some pathologists distinguish ulceration, considers induration a more certain sign, and that it is at the orifice of the uterine cavity the ulcer usually forms. Although much importance is attached by Dr Bennett to the detection of induration, as affording good grounds for the presence of an ulcer, yet he very properly admits that this sign is not infallible; and, indeed, it must be frequently remarked by practitioners of observation, that the cervix is indurated to a considerable extent, and even continues so for some time, without such a change being attended with much uneasiness, or terminating in ulceration. The author thinks that in virgins severe inflammation of this region of the uterus is rarely met with, which exactly corresponds with our own experience, for we remember of only one instance, on which occasion it was produced by violence.

On inspection by the speculum (p. 12), when the cervix is inflamed, it is observed to be tumefied, intensely red, and of a glistening hue, instead of its natural pale, dull, whitish colour. On its surface may frequently be observed small white, or red vesicles, or papular elevations, and the os uteri and upper part of the vagina thickly lined with muco-purulent matter. The foregoing we consider not, by any means, an overdrawn, but a faithful description of the state of the diseased structure, which, as well as the upper part of the vagina, we have in some instances seen so congested as to be of a dark purple colour; and under these circumstances, we have known females annoyed with strong inclinations for connubial intercourse—indulgence being invariably followed by an increased desire for sexual congress. In extent, the ulcer may be so slight as to be scarcely perceptible, and even to require not only the mucus to be removed, but the lips of the os uteri to be separated before the lesion can be detected; while, in other instances, a considerable portion of the cervix is involved. Leucorrhœa is considered by the author, in most cases, as pathognomonic of inflammation and ulceration of the cervix.

The following case (p. 16) is given by Dr Bennett, in illustration of the disease, as it is met with in unmarried females:—

"A lady, æt. 24, apparently enjoying good health, experienced, nearly from the time of her marriage, pains in the loins, affecting the pelvis generally, unattended, during the first three weeks after union, by any uneasiness during cohabitation, which, however, after this period, became insufferable. There was no leucorrhœa. On examination, the upper part of the vagina felt unusually warm, the cervix uteri tumefied, but soft and pulpy; and the anterior lip of the os uteri also obviously more tumefied than the posterior one, while there was an induration of several lines in extent on its margin. By the speculum, the upper part of the vagina and cervix uteri were seen in a state of inflammation, and the os tincæ superficially ulcerated to the extent of a shilling. The entire surface of the cervix and upper part of the vagina were cauterized

with the solid nitrate of silver, which was also repeatedly passed within the os uteri, and the use of the caustic was scarcely attended with any pain. The two succeeding days cold water simply, was repeatedly, each day, thrown into the vagina, and thereafter a solution of the sulphate of zinc; corporeal and mental exertion were interdicted, as also sexual congress. Two days after cauterization, all the symptoms enumerated had abated. On the eighth day, the caustic was re-applied—the tumefaction of the cervix had much diminished, as also the inflammatory congestion, and the ulcer was decidedly smaller. The former treatment was continued. On the 21st and 25th days, the caustic was re-applied, but more slightly; and previously to these last operations, the patient had not only been permitted to indulge in carriage exercise, but even to walk with moderation. No medicine was given internally—all her complaints rapidly yielded to the foregoing plan, and no induration could be detected."

The case which has just been narrated, is considered by our author rather a severe form of the disease, and to have arisen from the irritation of sexual congress. On the authority of M. M. Gendrin, Emery, and Jobert, Dr Bennett (p. 21) informs us, that young females, living in connubial intercourse, rarely conceive whilst suffering from this affection, owing, as our author thinks, to the os uteri being obstructed partly by congestion, and partly also by the increased mucous exhalation; but that as soon as the disease has been removed, they become pregnant. This we consider a most valuable fact, and tends to throw some light on those cases of protracted sterility for which we are often consulted, arising, in too many instances, from undue indulgence in hymeneal intercourse; and sometimes, though by no means so frequently, after a severe labour. In the first variety, a temporary separation from the husband is the usual plan recommended for such females in this kingdom; but if there was less reluctance among our countrywomen to the use of the speculum, and the pathological state of the organs known, how much unhappiness and suffering might be prevented by a more efficient practice.

In speaking of inflammation, ulceration, and induration of the cervix uteri (p. 28) in women who are pregnant, or have borne children, Dr Bennett informs us that, from the greater vascularity of the uterus in them than in virgins, they are more subject to hysteritis, while, in the latter, the same causes would generally produce ovaritis. From numerous opportunities, it is the opinion of our author, that of "20 cases of non-venereal inflammation of the part referred to, 17 may be directly traced to abortion or to labour, two to other causes, and occur in women who have borne children, while one only will be found in females who have never conceived." When the morbid action does not arise from the foregoing causes, Dr Bennett thinks, and very correctly, we have no doubt, that sexual irritation, the extension of vaginitis and

aphthæ may be concerned, under which circumstances the induration and hypertrophy are primary, and the ulceration secondary; but contrary to the opinions of some of his Parisian preceptors, he also believes that in a great majority of instances, superficial ulceration is the first change, and that this is succeeded, and not preceded, by hypertrophy and induration.

The *symptoms* (p. 49) in this class of patients, differ from those who have neither been pregnant nor borne children, in being more intense, while the inflammatory action more readily extends to the deeper-seated structures of the uterus. We transcribe the following case (p. 65), as illustrative of our author's experience of a mild form of the disease, as it appears in matrons :—"A young woman, æt. 21, robust, enjoying tolerably good health, was delivered at 19 of a child at maturity, and soon recovered. Three months and a half previously to her application to the author, she produced a second child, which was born two months prematurely, followed by hysteritis. After the use of leeches, quietude, and other means, in three weeks she felt well, and left the hospital; but severe lumbar and hypogastric pains recurring as soon as she began to walk, she returned to the institution; again, after a short residence and an improvement, she left the hospital a second time, but, in consequence of her uneasy feelings, accompanied by leucorrhœa and cardialgia recurring with increased intensity, she came back a third time to the hospital, when the os uteri was found rather patulent, with a velvety senation, and surrounded by an ulcer the size of a sixpence, while the cervix was considerably tumefied, and its vessels very turgid. She was ordered baths, rest in the horizontal position, astringent vaginal injections, and cauterization with the acid nitrate of mercury. Six or eight days thereafter, the lumbar and hypogastric pains being diminished, cauterization was a second time resorted to. Two days thereafter, in consequence of uterine tenderness, 40 leeches were applied to the hypogastric region and groins, and the menses, which had been suspended, appeared the following day. Twice thereafter, at intervals of from ten to twelve days, this patient was again cauterized, and left the hospital quite recovered."

We extract the following case (p. 84), somewhat abbreviated, as an illustration of a severe form of the disease, supervening to an abortion, in "a woman aged 35 years. She was naturally of a robust constitution, had produced, after easy labours, eleven children at the full time, and when pregnant with her twelfth, in the eighth month, she was seized with hemorrhage, in consequence of the infliction of great corporeal violence; after the flooding had continued four days, forceps were used, and a dead child extracted. After this event, she remained in bed for a month, in a very debilitated condition; and on application at the hospital, furnished the following history, viz. extreme emaciation, contracted sallow features, cephalalgia, loaded tongue, loss of appetite, cardialgia, febrile accessions

in the evening, diarrhœa, severe lumbar and hypogastric pains, sense of weight in the pelvis, sanguinolent leucorrhœa, painful micturition, congestion of the external genitals, relaxation of the vagina, two deep fissures in the cervix uteri, which was extremely indurated, considerably enlarged, descended within an inch of the vulva, and thrown back on the rectum. The cervix was sensible on pressure, presented a velvety feel, and when the finger was withdrawn, it was tinged with blood, which exhaled an offensive odour. By the speculum, an ulceration, with large bleeding granulations, was elicited. The ulcer was cauterized with the acid nitrate of mercury, emollient injections ordered five times daily, poultices to the abdomen, absolute rest in bed, with general baths at night, emollient enemata with a few drops of the tincture of opium, and a mild diet. The cauterization was resorted to weekly; and this woman, who was admitted on the 1st of June, had, under the foregoing treatment, a complete recovery, and left the hospital on the 20th July."

To show that the foregoing practice may also be adopted with impunity in pregnant females, we cannot abstain from adding the following case, (p. 90):—"A woman, aged 29 years, and only two months advanced in her third pregnancy, after having about a year previously produced a child at maturity, and sometime afterwards aborted at $2\frac{1}{2}$ months, applied for relief on the 28th Feb. 1843. On the cervix, an ulceration, covered with fungous, vegetating granulations, three quarters of an inch in diameter, considerable inflammatory induration and hypertrophy, were discovered. The hypogastrium was constantly painful, and there was a copious muco-purulent discharge. March 1st, ulcer cauterized with solidified potassa fusa, and repeated weekly; a ball of lint, spread with mercurial ointment, was daily applied to the sore, and a vaginal decoction of walnut leaves used three times daily. April 1st, nitrate of silver was substituted for the other caustic, and this treatment continued until the 15th May, when she had a complete recovery, and left the hospital; all uneasiness had ceased, but the part of the cervix on which the ulcer had existed, was still red."

The next portion of this treatise is devoted to syphilitic ulcerations of the cervix, (p. 92.) The opinions of writers regarding the frequency of these are somewhat conflicting; but according to our author, and other practitioners who have directed their attention to the subject, and have enjoyed good opportunities for observation, as Cullerier, Duparcque, Gibert, and Ricord, what is considered true chancre is exceedingly rare. The ulcer is deeply excavated, its surface covered with a yellow or greyish film, and its edges irregular, elevated, and indurated. The ulcer varies in size, being occasionally of considerably smaller diameter than a fourpenny piece, and sometimes difficult of detection, as it may be within the os uteri, attended with an opaque muco-purulent

discharge. The incipient symptoms are very obscure, but as the sore increases in size, they resemble precisely those which accompany the more simple ulcerations already considered. They may heal spontaneously, according to Duparcque, or degenerate into a chronic state, giving rise to induration of the cervix, resembling ulcerated scirrhus. In these cases also, our author cauterizes the chancre weekly with the acid nitrate of mercury, gives the bichloride of mercury internally, and sarsaparilla. Several cases are given in illustration, in some of which the acid nitrate of mercury, in others, the nitrate of silver was used for cauterization, and all the patients had a complete recovery within a period of from two to three months.

In the treatment of these affections, although our author speaks in very laudatory terms of the acid nitrate of mercury, nitrate of silver, and a preparation styled the Vienna paste, which is composed of equal parts of quick-lime and hydrate of potass, reduced to a fine powder, and intimately mixed, he nevertheless acknowledges that slight cases, such as are to be met with among females who have not borne children, and in whom the inflammatory action is not so apt to extend to the deeper uterine tissues, recovery may be accomplished by rest, emollient vaginal injections, leeches, and avoiding sexual intercourse. Slight ulcers even may cicatrize under this treatment, while he very properly insists on the leeches being applied immediately to the diseased structure; he also speaks in deservedly high terms of the beneficial influence of the nitrate of silver when applied to the inflamed mucous lining of the vagina, and to the cervix uteri.

For various reasons we have been seduced into a more elaborate consideration of this little work than we had intended. We unhesitatingly style it *multum in parvo*, for it contains, on very important subjects, much practical information in a dense form, which will deservedly recommend it to men who have not much time for reading. It is written in an independent style, yet with becoming modesty, which, in our estimation, is no small recommendation to a person beginning his career as an author. From Dr Bennett having enjoyed such excellent opportunities of observation, we attach much importance to his opinions; and the very becoming manner in which he speaks of, and recommends the use of the speculum, does him credit. In the first number of this Journal, we strongly recommended to our professional brethren a work on Uterine Pathology, by Dr Lever, of whose performance, we are happy to observe, our author also speaks favourably; and we have now much satisfaction in stating that we consider Dr Bennett's treatise as a most valuable addition to our knowledge on the same subject. Our analysis of it is by no means so full as we could have wished, but we earnestly advise those of our brethren who devote their attention to the diseases of females, to consult the work for themselves.

Lectures on the Theory and Practice of Surgery. By the late Abraham Colles, M.D. Edited by Simon M'Coy, Esq., F.R.C.S.I.

Dr Colles was thirty-four years Professor of Surgery in the Royal College of Surgeons of Ireland. The present medical practitioners of that country have been all, with few exceptions, pupils of that eminent surgeon, and to them the publication of those lectures, to which they had listened in former years, must be a matter of considerable interest. Dr Colles was distinguished by great industry. He enjoyed most favourable opportunities for extensive clinical research; and of these he availed himself with indefatigable zeal. As a lecturer, he was extremely popular, being a fluent and pleasing speaker, while the instruction which he communicated was eminently practical; and his descriptions of surgical diseases and accidents had all the spirit and truth of sketches from nature. These qualifications are fully testified by this transcript of his lectures. It was compiled by Mr M'Coy, from notes of the lectures taken by him on several successive sessions, and carefully collated with the manuscripts of other pupils; it was originally published in the Medical Press, with the assent of Mr W. Colles, and contains, as we are assured, in the opinion of competent judges, a faithful record, both of the matter and manner of the Professor.

In forming a judgment on the merits of this work, it would be unfair to try it by the standard of our present state of surgical knowledge, or to apply to it the same principles of criticism by which we would judge a work offered to the profession by the author himself. Tried by such a standard, it would be adjudged defective, meagre, and in many instances erroneous. But judged by its own intrinsic merits, it will be pronounced to be a very sound and practical treatise on surgery. It savours strongly of *clinical* instruction—the most valuable of all kinds of lectures. Every disease, and every operation is described as if the object of description were before the eye of the lecturer; and the pictures are completed by those nice touches and minute details, which evince personal and extensive experience. Although there is much that is trite and common-place, even to a tyro in surgery, there is at the same time much which the most experienced will take pleasure in perusiug, and comparing with his own experience; and there are many hints scattered throughout the work, even in regard to the management of the most familiar diseases and operations, in their occasional varieties and complications, from which the most skilful may derive instruction. We have read these lectures with the same sort of pleasure, and the same advantage, with which we can again and again peruse the graphic delineations

of John Bell. They contain a great deal of surgery which can never grow old, and never cease to be instructive.

The following paragraph, taken *ad aperturam libri*, will give our readers a fair specimen of the style of our author:—

"In gunshot wounds of the thorax there are not the same causes for apprehension as in others; what you have to fear most in injuries of the lungs is hemorrhage. Now, suppose a musket or pistol ball has gone through the thorax, you will have little bleeding; and why? Because the ball has suffered such a diminution in its velocity by the resistance it met from the parietes, that it only lacerates the soft tissue of the lungs, and by this laceration the bleeding is in a great measure prevented, and therefore it follows that this kind of wound is much less dangerous than a less extensive wound given by a small sword. It is to the loose soft texture of the lungs that this safety is owing, for if the substance of the lung was harder, the ball would *contuse* it instead of lacerating it. From the same cause also comes the remarkable circumstance that we very seldom see sloughing of the lung from gunshot wounds; any sloughing that occurs is in the external parts, which suffer like any other parts from contusion. It is with great astonishment some read of a man whose thorax was transfixed by the shaft of a gig, which absolutely pinned him to the wall, and had to be drawn back again through his chest, yet the man recovered. Now, I see nothing at all surprising in the matter, and I doubt very much if there was not less danger in this accident, than if the man was pinned to the wall by a small sword, and for the very same reason as in the case of the gunshot—namely, the laceration it produced. Hemorrhage is our more immediate source of apprehension from a wounded lung, and lacerated wounds are the least of all others inclined to bleed. I do not mean to say that all gunshot wounds of the lungs are absolutely exempt from the dangers of hemorrhage; if the ball goes through the lung near its root, where the blood-vessels are very large, there may be hemorrhage, and that even so violent as to cause instant death; I merely intend to say that those wounds are less subject to it, than simple incised or punctured wounds. There is another process that prevents bleeding in gunshot wounds of a lung, it is that lymph is quickly poured into the cellular membrane of the lung, which closes up the wound or passage of the ball; if undisturbed, this becomes a permanent obliteration of it, and the lung will soon resume its functions. If the surgeon is not too busy with his fingers or probes—too curious to know what will be of little use, the wound in the lung may be united to the external wound, and nothing from the former can fall into the cavity of the pleura."—Pp. 214, 215.

In the lecture on Injuries of the Head, a curious and unique fact is recorded in the following passage, which illustrates at the same time the quaint and quiet humour which forms a characteristic feature of these lectures:—

"Surgeons formerly were very anxious, when they discovered the corded pain in the head, and vomiting, to treat it immediately as inflammation of the brain, but I believe the practice is now laid aside by every observing practitioner. Read Pott, and you will really think you never can trepan often or soon enough, but recollect, the operation itself may cause inflammation of the dura mater; and that this is not a mere matter of opinion, I will tell you an incident in proof, which I heard either old Mr Dease or Mr Obrey mention. It is valuable for this, that it would be difficult to find another instance where trepanning was performed, and where the consequences could not be attributed to any thing but the operation itself.

"Dr Evatt had taken it into his head that lunacy was owing to the brain becoming too large for the cranium to hold it, and, full of this notion, he succeeded in getting permission to try if he could cure it by trepanning. Accordingly, three lunatics, in sound bodily health, were subjected to the operation; and what was the consequence? Why, that two out of the three died from the experiment; and recollect they were all in perfect health previous to the operation."—Pp. 145, 146.

Outlines of Chemistry for the use of Students. By William Gregory, M.D., Professor of Chemistry in the University of Edinburgh. Part II. Organic Chemistry, 1845. London, Taylor and Walton.

This is the second and concluding part of Dr Gregory's useful work, the first part of which we noticed formerly.

It will be welcomed by students as a valuable addition to our works on the difficult but important branch of chemistry of which it treats. The author observes in the preface, that, "in the present state of organic chemistry, a complete and scientific arrangement is quite unattainable." In accordance with this opinion, he adopts an arrangement, "so far convenient, that substances of analogous properties and composition are treated of together; but it is only in the case of the known or admitted organic radicals that it is at all systematic.

In prosecuting this plan, Dr Gregory has shown as much ability, as he did in the discussion of the details of inorganic chemistry.

A work of the kind before us scarcely admits of analysis. We can only cordially recommend it, as containing an exposition of the present state of organic chemistry, such as will be found in no other English book.

The style is very clear and perspicuous, and the account of the different groups of compounds as full as the size and scope of the work admit of. We rejoice also to see that, though Dr Gregory is well known to be a personal friend and warm admirer of Liebig, he has not given undue pre-eminence to the chemists of the Giessen school. M. M. Laurent and Gerhardt, the French chemists, are warmly recommended. So are Dumas and Boussingault. Berzelius, of course, is not forgotten; and a just and deserved compliment is paid to Mulder, the distinguished Dutch chemist, who is proving himself so formidable a rival to Liebig.

This is as it should be. The more catholic the feeling of our students towards the great chemists of Europe the better. The more likely are they to become founders of higher and greater schools than any of the existing ones. As indirectly inculcating this precept, we welcome Dr Gregory's book, and consider it an additional reason for recommending it to our readers.

An Inquiry into the Physiological and Medical Properties of the Aconitum Napellus; to which are added Observations on several other Species of Aconitum. By Alexander Fleming, M.D., President of the Royal Medical Society of Edinburgh. London, 1845. Pp. 160.

The work, the title of which we have quoted, is the substance of an Inaugural Dissertation, for which a gold medal was awarded by the Senatus Academicus of the University of Edinburgh, at the Graduation of 1844. It is highly creditable to the author, and affords a fair promise of future eminence in his profession.

A first part gives an account of the botany, and the other particulars in the natural history of the aconitum napellus; a second, of its physiological action on animals and vegetables; a third, of its physiological action on man, detailing its local and general effects on the several systems of organs, and including the history of it as a poisonous agent; a fourth, of its therapeutic action; a fifth, of its internal and external use; and a sixth, of the physiological action of other species of aconite. An appendix recounts experiments illustrative of the physiological action of the aconitum napellus on animals; cases illustrative of its physiological and therapeutic action; and, lastly, cases of poisoning.

After much pains bestowed on the subject, Dr Fleming is led to the conviction that the aconitum napellus should be fixed as the officinal species. This is the best known species of aconite—the only one that can be procured easily in this country; and it was under this name that Störck first recommended aconite for use in medicine. It is time that the long and useless controversy as to the proper species of aconite to be employed medicinally were brought to an end. Following Decandolle, Dr Fleming states that there are in all 107 varieties of aconitum, included under 22 species, and reduced under the four sections:—Anthora, Lycoctonum, Cammarum, and Napellus. Dr F. has made observations on the 12 following species and varieties procured from the Edinburgh Botanic Garden:—Under *anthora*, aconitum anthora; under *Lycoctonum*, A. lycoctonum, A. barbatum, A. ochroleucum, var. puberulum; under *Cammarum*, A. paniculatum, A. variegatum, A. lasiostonum, A. nasutum, a variety of paniculatum, A. tortuosum (A. neomontanum); under *Napellus*, var. Tauricum, var. Schleicheri.

After detailing the experiments, &c. to which he subjected these species and varieties, Dr F. thus sums up on the subject:—

"It is thus evident that the only species of aconite, whose activity is such as to render them eligible for medicinal purposes, are those belonging to the section napellus.

"The above series of observations also shows that the amount of numbness and tingling felt on chewing the root indicates, with accuracy, the respective activity of the various species—a circumstance at once explained by the fact, that the power of exciting these sensations, hitherto incorrectly termed acridity, undoubtedly resides in the

aconitina which the plants contain, and is greater or less according to the amount of that principle."—P. 90.

With regard to the aconitum paniculatum which the London and Dublin Colleges have adopted as the officinal species, Dr F. reports that he has used the tincture, to the extent of half an ounce, without any effect; and, moreover, details experiments first made on rabbits by Dr Christison, and afterwards repeated by himself, with a carefully prepared spirituous extract of the leaves, in which hardly any sensible effect was observed.

The A. neomontanum or tortuosum of the above arrangement does not appear to have been administered internally; its inertness, as compared with A. napellus, is inferred from the feebleness of its action in producing numbness or tingling when chewed. It appears, that besides the aconitum napellus, the A. anthora, A. lycoctonum, A. paniculatum, lasiostonum, helegynum, intermedium, neomontanum, &c. have been recommended for medical use. As it appears to us, however, Dr F. has brought forward conclusive evidence of his position, that except those in the section napellus, the other species and varieties of aconite, including the paniculatum of the London and Dublin Pharmacopœia, and the A. neomontanum of the former edition of the Dublin Pharmacopœia, are either altogether or nearly inert.

In a question of this kind, however, where length of time has given a sanction to erroneous views of the subject, Dr Fleming must not expect the medical world to be at once convinced, even by all the pains he has taken to set things in their proper light. Towards this end, we shall add to Dr F.'s researches a word or two on the origin and history of this error regarding the proper medicinal species of aconitum.

Dr F. has properly omitted the sterile controversy as to the identity of the ancient aconite with the modern; and in this we follow him, notwithstanding the encouragement at first sight held out by Dr Bennett's recent successful solution of the similar question in regard to conium.* There can be no doubt, however, that ages before Störck wrote, the aconitum napellus, the English wolfsbane, was familiarly known as one of the most powerful of poisons. Numerous authors had noticed its poisonous effects, under the name napellus, derived from the slight resemblance of its tubers to the turnip root. Wepfer is full on its poisonous effects; and the other early writers on poisons do not fail to mention it. In the course of the 16th century, it is reported to have been administered to criminals under sentence of death, first at Rome, by command of Pope Clement the 7th, and afterwards at Prague, by order of the Emperor of Germany, apparently with the view of determining how far it might be applicable to the cure of diseases

* See Edin. Med. and Surg. Jour., July 1845; also Northern Jour. of Medicine, July 1845.

—and in both cases some of these criminals perished. The name Wolfsbane was given to this plant from an ancient practice of mixing the root with hashed meat for the purpose of destroying wolves. The French name "tue loup," appears, however, to apply to the A. lycoctonum, as well as to this species. Altogether, then, it seems certain that over Europe the aconitum napellus has been known for ages, to quote the words of Merat, as "la plus celebre et la plus deletere de toutes." Why, then, should not this be universally acknowledged as the proper medicinal species? The answer is, that Störck, on whose authority the modern use of it originally rested, did not use the A. napellus, but some other species which he mistook for that species. Störck quotes Linnæus's description of the A. napellus, and calls it by that name. Moreover, it is certain he designed to use the A. napellus, whether he used it or not; for all that had been said by medical writers of aconite up to that time, plainly referred to the napellus; and he says, that in making up his mind to experiment on this substance, he had resolved to banish from his thoughts all that medicine had previously taught respecting it. There is not one word in the whole of Störck's account, from which it could be inferred, that he employed any other species than the napellus. But it seems he published a figure of the plant, and this figure has been judged to resemble some other species or varieties more than the napellus. This figure we have not seen—it was not copied in the English translation of Störck's work, and, indeed, does not appear to have been contained in the original Latin edition of his work, published at Vienna in 1762—at least, in the copy of that edition before us, there is no plate, and no reference anywhere to a plate. A plate, however, he must have published somewhere, and this unlucky plate is the cause of the confusion which reigns to this day in the Materia Medica, with respect to aconite. It appears that Haller first pronounced Störck's figure to represent the aconitum cammarum of Linnæus, and thence concluded that species to be possessed of the properties described by him. The distinguished author of the "Apparatus Medicaminum" defends the figure, affirming that the varieties which it exhibits from the common form of the napellus, are not unknown in that species; while he affirms that it does not at all resemble the true figure of the aconitum cammarum. We gather from Murray's account of the figure, that its inflorescence shows some appearance of a panicle instead of a spike; but Decandolle's definition of napellus shows that a lax panicle is not unknown among the varieties of that species. The easier solution probably is, that the artist failed to represent the plant with the requisite accuracy. When we say that Haller was led by Störck's figure to ascribe all that he had said to the A. cammarum, instead of the aconitum napellus, we take up the idea suggested in the "Apparatus Medicaminum." Yet it seems hardly probable that so exact an au-

thor as Haller should have gone so far as he has done on mere faith in the accuracy of a figure. For not only has he ascribed to the A. cammarum all the virtues assigned to aconite by Störck's experiments, but all the destructive effects recorded of aconite, as respects man and animals, from the earliest times. If the authority of Linnæus himself, in the determination of a botanical species, is not to be received, what trust can be reposed in botanical knowledge. Yet Haller's assumption implies such a breach of allegiance to the great botanist. Linnæus relates the case of a surgeon who was poisoned by an aconite, which, on examination, he pronounced to be the A. napellus; and yet Haller, in referring to that case, describes it as the A. cammarum, a species, which be it remembered, Linnæus acknowledged. We regard it, then, as impossible to agree with Haller; and it seems likely that he had taken up some erroneous idea of the limits within which the aconitum napellus is confined. Bergius so far follows Haller, as to affirm that Störck used the A. cammarum, that species being more common around Vienna than the A. napellus.

We discover, then, that the original source of that confusion on the subject of aconite which has proved so perplexing to writers on the Materia Medica for little short of a century, is some irregularity in the mere figuring of a most variable plant. The high authority of Haller, and the variability of the whole species have, to this day, kept up and have served continually to renew this confusion, in spite of numerous attempts to rectify to it. To perpetuate this perplexing state of things, the London and Dublin Colleges have unfortunately lent the weight of their authority, the latter College having first abandoned the specific name of napellus for neomontanum, and then for paniculatum, which last name the former College has also adopted.

On this, Pereira well remarks, "I confess myself unacquainted with any just grounds for this preference. The aconitum napellus is one of the most active species of the genus, and no good evidence has yet been adduced to prove its inferiority to the aconitum paniculatum var. storckianum, which Störck published," (this we doubt), "as A. napellus officinalis. Moreover, the roots of the A. paniculatum are not found in commerce, nor is the plant grown (except in botanical gardens) in this country; so that druggists and apothecaries cannot, if they would, obey the directions of the London and Dublin Colleges."* Christison makes similar observations.

We proceed to extract some passages from the work before us:—

"The stem, leaves, flowers, fruit, and seed, are destitute of smell; but all possess, more or less, the property of exciting numbness and tingling when chewed; nor is this diminished in any part of the plant by its being dried slowly at a low temperature. The different parts of the plant, however, vary much in the degree in which they excite these sensations.

* Elements of Materia Medica, vol. ii. p. 1337.

"To ascertain their respective activity, I prepared tinctures of all of them, in every case the proportions of the part employed, and spirit being those indicated for the preparation of the tincture of the root.* From the comparative observations which I then made, I drew the following conclusions:—First, The tuber is the most powerful part of the plant. Two doses of five minims of the tincture, an interval of two hours intervening, produce the effects described under the second degree of operation. (See Physiological Action in medicinal doses.) When chewed, it causes more intense numbness and tingling than any other part of the plant. Second, The sensations felt on chewing the seeds, are considerably less intense than in the former case. Generally speaking, a third, or even a fourth dose, of five minims of their tincture, is necessary to induce the second degree of operation. Third, Three doses, of ten minims each of the tincture, prepared from leaves gathered before the flowering season, are requisite to effect the same object. Fourth, The flowers rank next in point of activity; while the fruit and stem are the least active of the whole, only slight numbness and tingling being produced by them, and that only after continued chewing or brisk application of their tinctures."—P. 7, 8.

Dr F. arrives at the following practical inferences as to the effects of aconite on the circulation and respiratory system.

"1. That it is a powerful antiphlogistic.

"2. That it is calculated to be of great value in all cases, when there is inordinate activity of the circulation.

"3. That it is contra-indicated, when there is obvious mechanical impediment to the passage of the blood, particularly through the heart or lungs. It is requisite, therefore, in every case, to ascertain that no such obstruction exists before commencing its use.

"4. That it is contra-indicated whenever there is irritability of the circulation, with great diminution of power, such as occurs after severe hemorrhage."—Pp. 36, 37.

"1. Aconite will probably be found a highly advantageous antiphlogistic in pneumonia, pleuritis, &c.

"2. It seems calculated to be serviceable in spasmodic asthma.

"3. It is contra-indicated in difficulty of breathing, arising from any other cause than inflammation or spasm.

"4. In cases of advanced bronchitis, with excess of secretion, it would prove highly injurious, by diminishing still further the power of expectoration."—P. 38.

On the poisonous effects of aconite, Dr Fleming remarks:—

"Aconite is a direct sedative poison. According to the amount of the dose, and consequent rapidity with which the fatal result ensues, we observe three varieties in the symptoms and mode of death:—*First*, It may prove fatal by a powerfully sedative impression on the nervous system. *Second*, It may prove fatal by suspension of the respiratory function. *Third*, Aconite may prove fatal by syncope.

"*Appearances on dissection.*—General venous congestion, to a greater or less extent, has, for the most part, been found. In some instances, there were engorgement of the brain and cerebral membranes, and considerable sub-arachnoid effusion. In the cases recorded by Pallas,† Degland, and Dr Geoghegan,‡ evidences of gastro-intestinal inflammation were also present."—Pp. 41—44.

Dr Fleming has given in the appendix, cases of poisoning by

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* See section on Administration.

† "Thèse Inaugurale, Paris, 1822, quoted by Orfila, Toxicologie, 1843, ii. 359."

‡ "See Appendix, Part III. Cases of Poisoning, iv. and v."

aconite; to these has to be added the melancholy and rather inexplicable case of Dr Male of Birmingham, the report of which has just appeared. Dr Male was 66 years of age; it appears that he had complained for several weeks before his death of pains in the back and loins, for which, at last, finding the ordinary remedies of little avail, he had resorted to tincture of aconitum. He began to take the tincture six days before his death, in doses of five drops, two or three times a-day, the dose being afterwards increased to six, eight, and ten drops. The exact quantity which he had taken before the fifth day, when symptoms of poisoning showed themselves, is not very distinctly made out. These symptoms were cold extremities, the general surface of the skin cold and clammy, the pulse 130 feeble; cramps and pains in the legs, and spasmodic pains in the stomach, the head confused. He lived forty-eight hours after these symptoms came on. On a post-mortem examination, the body, with the slightest possible exception, was in a healthy state—the blood was unusually fluid.

The coroner's jury returned a verdict of "accidental death from an overdose of aconite taken medicinally by the deceased." We forbear to say more of this unfortunate case. What we have just stated is taken from the Medical Times of August 9th. We trust, however, that the medical men who were about the deceased at the time of his illness and death, will give us all possible particulars in a more authentic shape. It is hardly possible to believe that Dr Male did not take a much larger quantity of the drug than the report indicates. It appears that Dr Male was led to resort to aconite by reading Dr Fleming's book.

Under the head poisoning by aconite, we will take the opportunity of stating that we are satisfied, from a specimen of aconite politely sent to us, at our request, by Mr Ramsay of Broughty Ferry, that the plant which proved fatal in the very interesting case published by him in this journal last year, was not the aconitum neomontanum, but the aconitum napellus. The statements in some of our works of Materia Medica are so loose and inaccurate, that the unwary reader can hardly escape the idea, that the botanical error ascribed to Störck is the calling the common aconite napellus, when it should have been termed neomontanum or paniculatum.

Dr Fleming speaks of the medical use of aconite in neuralgia, hemicrania, odontalgia, otalgia, neuralgia of the thoracic and intercostal nerves, neuralgia of the extremities, cephalalgia, the general pains of fever, in diseases of the heart and great vessels, in acute rheumatism, in chronic rheumatism, in erysipelas, in pruritus, in hysteria, and spasmodic asthma.

We have already expressed our very favourable opinion of this work. We again congratulate the young author on the compliment which has been already paid to his talents, and on the successful reception which his book has obtained from the medical public.

PART IV.—PERISCOPE.

ANATOMY AND PHYSIOLOGY.

Abridgement of a New Memoir on Animal Heat. By LIEBIG.

THE object of this memoir is to show, in opposition to the conclusions of several experiments, particularly of Dulong and Despretz, that there is no real want of correspondence between the amount of heat given off by an animal in a given time, and the quantity of oxygen consumed in the same time. The conclusion drawn from the experiments of Dulong and Despretz is, that an animal can part with caloric in a given time, to an extent from 1-10th to 1-5th beyond the quantity which the oxygen consumed in the same time is calculated to produce by its combination with carbon to form carbonic acid, and with hydrogen to form water. Hence has arisen the opinion that there is some other secret source of caloric in the animal economy, besides the union of oxygen with the two organic elements of animal substance just mentioned. Liebig affirms that it is unnecessary to assume any other source of animal heat than the continual production of water and carbonic acid by the combination of the oxygen, supplied chiefly by respiration, with the constituent hydrogen and carbon of the animal organism.

Liebig enters minutely into the details of these experiments, and into the grounds on which the calculations applied to them are founded. He shows satisfactorily that a greater amount of caloric must be extricated in the direct conversion, by oxygen, of carbon into carbonic acid, and of hydrogen into water, than had been allowed for in the calculations of Dulong and of Despretz. Among other sources of error, he points out that Dulong's results are founded on the conclusions of Lavoisier and Laplace, as to the amount of caloric which disappears on the liquefaction of ice—conclusions which have since undergone correction. He shows that Dulong himself, in his posthumous works, has left results in regard to the caloric produced by the direct combination of both hydrogen and of carbon with oxygen, altogether at variance with those derived from Lavoisier and Laplace, employed in his estimate of the disengagement of animal heat. These later views of Dulong, as respects hydrogen at least, he regards as incontrovertible; and, moreover, they have been verified by another chemist, M. Hess. In regard to the combustion-heat of carbon, Liebig considers much of the difficulty to arise from the impurity of the charcoal of wood, and the obstacles to burning it with the requisite exactness in a proper apparatus. He therefore prefers determining the combustion-heat of carbon from that of its compounds; for example, from that of olefiant gas, of alcohol, or of ether. Alcohol may be regarded as composed of certain proportions of olefiant gas and water; and ether, in like manner, of certain other proportions of olefiant gas and water. The composition of olefiant gas being known, if its combustion-heat be exactly determined, and that which belongs to its hydrogen be deducted, the remainder is the combustion-heat of its carbon. A similar result is obtained by determining the combustion-heat of alcohol or ether; for the combustion-heat of these severally is altogether dependent on the proportion of olefiant gas which each contains. From Dulong's own experiments on these three substances, the combustion-heat of carbon is brought out much higher than the number which he used in his examination of animal heat.

Liebig next proceeds to give a tabular view of the corrections required on the results

given by Dulong and by Despretz—of the amount of caloric parted with by different animals in correspondence with the consumption of a certain amount of oxygen. A few examples will show the extent of the corrections made.

According to Dulong's table, five cats parted with 100 degrees of caloric each, while the consumption of oxygen accounted for no more than 72 degrees in the first, 68 degrees in the second, 71 degrees in the third, 75 degrees in the fourth, 73 in the fifth—fractions omitted. The following is Liebig's correction on these five experiments :—The first, instead of 72 degrees, afforded 94 degrees of caloric; the second, instead of 68 degrees, 90 degrees; the third, instead of 71 degrees, 91 degrees; the fourth, instead of 75 degrees, 98 degrees; the fifth, instead of 73 degrees, 95 degrees—fractions here also omitted. By the same table, three dogs are represented as having parted with 100 degrees of caloric, while the consumption of oxygen accounted for no more than 72 degrees in the first; 80 degrees in the second; and 79 degrees in the third—fractions omitted. On these three experiments Liebig's correction is :—The quantity of oxygen consumed afforded in the first, instead of 72 degrees, 94 degrees; in the second, instead of 80 degrees, 104 degrees; in the third, instead of 79 degrees, 103 degrees—fractions omitted.

Similar corrections are made on the table constructed by Despretz; of which the following are examples :—Three hares parted with 100 degrees of caloric each, while the consumption of oxygen accounted for no more than 90 degrees in the first; 85 degrees in the second; and 86 degrees in the third—fractions omitted; but according to Liebig, the first, instead of 90 degrees, produced 107 degrees, or, according to other data, 102 degrees; the second, instead of 85 degrees, 101 degrees, or, on other data, 96 degrees; the third, instead of 86 degrees, 101 degrees, or, on other data, 96 degrees—fractions omitted.

On these tables Liebig thus sums up :—These figures speak for themselves; they prove, beyond doubt, that the number of degrees of caloric which an animal yields to the surrounding bodies, is exactly what the same apparatus would collect, if a quantity of oxygen equal to that contained jointly in the carbonic acid found, and the water formed were converted by combustion into carbonic acid and water; and the solution of the question as to the source of the temperature of the animal body, is contained in them.—Annalen der Chemie und Pharmacie, vol. liii., cah. 1., p. 63.—See also Journal de Pharmacie, Juillet 1845.

Structural Anatomy of the Veins.

In a paper on this subject by Dr Norman Chevers, in the London Medical Gazette (of 8th August), the author shows that the conflicting and contradictory statements of various observers have arisen from their having examined different sets of veins; and that while Willis could only have dissected the deep veins of the trunk, Meckel, Bichat, Quain, and Henlé had confined their examination to the superficial and external veins. The following are the conclusions which Dr Chevers deduces from his own observations :—" The veins have three tunics; the proper or middle tunic of the deep *veins* of the trunk is almost entirely composed of long parallel circular fibres, generally without any intermixture of longitudinal fasciculi (except at one or two points where a few filaments take a vertical direction.) The exceptions to this rule are few. The middle tunic of the *external*, and, with one or two exceptions, of the *superficial* veins, is formed within of a strong layer of fibres, the whole of which take a longitudinal course in the intervals between each set of valves; and these fibres are immediately backed by a distinct layer of circular fasciculi which cross them at right angles, but without any interlacement. This outer layer forms distinctly a part of the proper tunic of the veins, and is perfectly separate from their external cellular investure."

SURGERY.

Wounds in Dissection. By J. M. Chelius, M. D.

" Wounds in dissection do not always cause the same symptoms ; much in this respect depends on the constitution of the wounded person, on the constitution of the atmosphere, and on the condition of the subject. Cuts are not so dangerous as punctures, and the latter are less dangerous on the front than on the back of the hand. Often merely an active inflammation takes place at the wounded part, with severe pain and swelling of the lymphatic vessels. With these local symptoms (which mostly occur after from ten to sixteen hours) symptoms of nervous fever are often connected. In these injuries the wound must be carefully cleansed, allowed to bleed sufficiently, washed with water, sucked, covered with sticking plaster, and protected, so that it cannot come anew into contact with putrid matter. I have constantly found it very advantageous to wrap up the finger from its tip onwards with a closely applied bandage. If severe inflammation take place, leeches must be applied, warm narcotic remedies used, and when abscesses are formed they are to be opened early. When the symptoms of nervous fever come on, the usual mode of treatment is to be employed.

" Many believe that the symptoms after injuries in dissection do not depend on the absorption of putrid matter, but on the constitution of the injured person, wherefore they reject all escharotics. Whether this opinion be well founded or not, I however agree with them in regard to the application of caustic ; as thereby irritation and inflammation of the wound, with its consequences, which otherwise would not have happened, would be only too easily produced. [1]

" Shaw, J. [2], distinguishes those which occur in dissection, into such as arise from the examination, a short time after death, of subjects which have died from inflammation of the serous membranes, and those from bodies already putrid ; the latter of which are least dangerous. He recommends after sufficient bleeding from the wound, fomentations of Goulard-water and laudanum, then a smart dose of calomel and antimony, and two hours after, a large dose of opium. If the pain still continue, the whole arm is to be bathed with lukewarm Goulard-water and opium ; some ammonia to be given and hot drinks allowed. He considers leeches and venesection improper.

" Basedow [3] considers that the wounds produced by poisoning in dissection agree with Malignant Pustule.

" A careful collection of the various opinions on the nature and treatment of these injuries is given by M. Leo-Wolf. [4]

[The question of absorption of poisonous matter into wounds received in dissection, has been much disputed. But I must confess, that, after nearly twenty years constant employment in the dissecting-room, I almost entirely agree with the opinions held by Lawrence on this subject. " It seems to be very doubtful," says he, " in those cases whether any thing actually venomous or virulent is introduced, or whether the results of these injuries must be said to arise from such wounds, considered merely as me-

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[1] " Cooper, Astley, Lectures on the Principles and Practice of Surgery ; with additional notes and cases, by F. Tyrrel. London, 1824, vol. i. p. 19—21."

[2] " On the Treatment of Wounds received during Dissection ; in London Med. and Phys. Journal, vol. liii. p. 369. 1825."

[3] " Ueber die Schwarze Blatter ; in von Graëfe und Walther's Journal, vol. xii. p. 185."

[4] " Diss. de morbo qui lesione ; in cadaveribus dissecandis haud raro sequi solet. Heid., 1832."

chanical wounds. If these be poisonous wounds, the poison certainly follows other laws than those we observe in cases in which we are more intimately acquainted with the poison. * * * If they arise from a poison, then it is one of a very uncertain, and, almost you might say, capricious kind. In the first place, in the great majority of instances of wounds received in dissection, no injurious effect is produced. There are hundreds and hundreds of such wounds always occurring without any injurious consequences. It is really only in a very small proportion out of the whole number of wounds that are received, that any prejudicial effects are produced in the human frame. We can perhaps quite as well explain the occurrence of these effects when they do take place, by a reference to the particular state of health of the individual in whom they occur, as by any particular virulent property that might be applied to the wound. Now it happened to myself, when I was employed in dissection, to cut myself hundreds of times in dissecting bodies that have died under every variety of disease, and I never experienced any ill effect but once, and then I was not in very good health. I had an inflammation of the finger, with swelling up the hand and arm, and subsequently swelling of the glands in the axilla, with suppuration. There are cases, however, in which important local effects are produced, and in which very serious and even dangerous symptoms occur. * * * We cannot point out any particular state of a dead body, nor any condition of previous disease, that will certainly give rise to any set of symptoms in these cases : indeed, we shall observe an individual receive a prick or a cut in dissection of a certain subject, and suffer certain inconveniences from it ; while others, who have dissected the same subject, suffer no injurious consequences at all from a similar injury. In the majority of instances, the effects that are produced seem to be nearly such as would arise from the infliction of the wounds considered in themselves, without any reference to the state of decomposition of the dissected bodies in which they occur," (pp. 651, 2.) " There are some other cases," continues the same writer, " in which the local and general symptoms have been rather different, and it is in those particularly that the agency of poison has been regarded as the true cause." And he then mentions the case of Dr Pett,[1] who pricked himself at eight o'clock in the morning of the 28th of December without being aware of it, in sewing up the body of a female who had died of puerperal peritonitis. On the evening of the same day, feeling some heat and uneasiness, he carefully examined his fingers, and at the tip of one observed a blush, with a very minute opening in it. This he touched with nitrate of silver and nitric acid, without, however, causing pain ; but as the uneasiness continued, he again applied the nitrate of silver later in the evening, till he felt it sensibly, and then the pain became agonizing. On the morning of the 29th, after having passed a very restless night and had shiverings, the eschar was noticed as large as a split pea, and at 1, P. M., the finger had become swollen, had a livid appearance, and was very painful. An incision was then made down to the bone, which gave no pain, nor did any blood flow, and the last two joints were gangrenous ; red lines extended along the fore arm to the elbow, and pain up to the axilla ; complete prostration of strength ; irregularity of breathing and considerable torpor came on ; and, during the rest of the day, he had much heavy sleep, occasionally disturbed by severe attacks of pain : the pulse soft and between 90 and 100. The hand and arm continued swelling, the absorbents inflamed, as also the axillary glands, accompanied with an erysipelatous blush, which extended over the side of the chest, and the torpor and difficulty of breathing increased. Punctures were made, but without giving vent to any pus, and he died at 6, A.M., on the 1st of January.

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[1] " For full particulars of this case, see Travers on Constitutional Irritation," p. 292—306.

The most certainly dangerous punctures, as far as my observation goes, are those which have happened in the examination of cases of peritonitis, either of the common or puerperal form; which certainly would lead to the presumption that, in such instances, there is an absorption of poison. But, on the other hand, I am sure that almost if not quite as severe symptoms have occurred when the wound has been received in examining a body recently dead and quite fresh. With regard to putrid subjects, or those just beginning to be so, my experience proves that wounds from them are almost invariably the least formidable kind. How these facts are to be explained other than by the assumption of a peculiarity in the constitution at the time of receiving the wound, I do not presume to say; but certainly, as regards the affections from peritoneal disease, there does appear to be a very strong presumption of poisonous matter having been absorbed.

"In wounds received in dissecting, I believe the mischief is often very considerably increased, if indeed it be not excited, by the very improper application of escharotics, either nitrate of silver, nitric acid, or caustic potash. All that I ever thought of doing for myself, or recommending to be done, was to wash the hand carefully, and then suck the wound for ten minutes or so, and afterwards to apply a poultice. If the matter did not rest there, but inflammation with swelling and great pain came on, leading to the belief of the sheath of one or other tendon, or of the palmar fascia, (according to the situation of the puncture,) or of the cellular tissue, having inflamed, then free leeching was resorted to, and more or less deep incisions to relieve the tension and permit the escape of any pus that might have formed, which in an irritable constitution will happen in a few hours. As a general rule, whenever pus in these cases is found, it must be evacuated immediately, as the longer it is left, the more it increases the constitutional excitement.

"It not unfrequently happens after wounds received in dissection have passed through the more aggravated symptoms, that the scar remains red, angry, tender, swollen, elevated, and spread, so that that which was primarily a mere pin-hole wound becomes as large or larger than a sixpence, and is covered with a soft scaly cuticle, beneath which an ichorous exudation is continually produced, and has somewhat the appearance of an inflamed soft wart. This often continues for months, and resists all kinds of treatment, till change of air is made, soon after which it commonly subsides without any farther assistance. Another consequence, after every other symptom has subsided, and all trace of the original injury has disappeared, is, a creeping erythema, first beginning about the injured part, and then travelling about the hand and arm. I have frequently seen it run up one side of the finger to its tip, and down again to the knuckle, then pass to the next finger, up and down it, and on again to the next; and having made the circuit of all the fingers, repeat its course. Positive pain in these cases there is none, but itching is plentiful and the annoyance scarcely credible. Simple spirit wash, or camphorated spirit wash, or lead wash, or grease of any kind are alike useless. And the only remedy I have seen at all efficacious is change of air, but even this, often for a long while, fails of getting rid of this troublesome companion. —J. F. S.]"

Peculiar Disease of the Prostate Gland.

In patients complaining of unusual frequency of micturition, with more than ordinary straining, his urine depositing a good deal of muco-purulent sediment, and possibly a muco-purulent discharge from the urethra, the prostate is frequently found enlarged in either lobe; and, upon pressing on one particular spot, we feel the point of the finger sink, as if into a cavity. Occasionally, too, this pressure is found to cause the discharge, per urethram, of a quantity of this purulent fluid. In these circumstances, Mr Colles

of Dublin has found great relief to be obtained by evacuating such an abscess by puncturing it from the rectum. For this purpose, Mr C. has employed a pharyngotome from the inconvenience attending the use of the common lancet. The danger of a fistulous communication being thus established between the bladder and rectum is very small. The cases which are considered most favourable for the performance of the operation, are those in which the discharge of gleet takes place at intervals, and where the patient says he is made aware of the moment of its escape by some peculiar sensations. Mr C. has resorted to this operation in cases of simple enlarged prostate, where nothing like a cavity was to be felt, and where the enlargement was free from knobs or excrescences, but without any good effect.

Three cases of this operation, in which the results were very favourable, are selected from a record of twelve patients, who underwent the operation with various success. In some of the cases, the abscess pointed in the perineum, but the opening of these did not give the relief which was obtained from the direct opening of the abscess from the rectum; and Mr C. seems to consider an opening in the latter situation much less likely to be followed by urinary fistula, and that, as a general rule, these direct communications close much more readily than when there is only a tortuous passage for the urine or matter to make its way through.

Mr C. concludes by stating, that in no case, whether the result was favourable or not, was the operation followed by any serious injury, and that the operation may be repeated as often as the symptoms demand its performance, and always with benefit.—Dublin Journal of Medical Science, July 1845.

Treatment of Aneurism by Compression.

In the same journal from which the above extract is made, a list is given by Dr Bellingham of Dublin, of the cases of popliteal and femoral aneurisms, which have been cured by compression of the artery, between November 1842 and February 1845. It is as follows :—

Popliteal Aneurism.

Dr Cusach	2	Dr Kirby	1
Dr Hutton	1	Dr Allan	1
Dr Bellingham	1	Mr Greatrex	1
Dr Harrison	1	Dr Porter	1

Femoral Aneurism.

Mr Liston	2	Dr Bellingham	1

These, it must be remarked, are the cases of *cure* by this method of treatment.

It appears to us, that the most judicious method of gaining the confidence of the profession in a new operation, is to publish all the cases which have been *operated on*, and to give as fully the cases in which the practice has failed, as those in which it has succeeded. But we fear that this has not been in Dr Bellingham's power, as we have little doubt that the cases of failure in the treatment by compression, have not been reported with that degree of candour, without which the merits of any new practice cannot be properly estimated.

Dr B., in his remarks on this subject, combats with much eagerness the objections made by surgeons to this revived plan of treatment. Mr Syme has already expressed his dissent from the propriety of the practice, and backed his assertion of the safety of the application of the ligature, by stating the fact, that he had " tied the femoral artery thirteen times for aneurism, and never met with the slightest symptom of an unpleasant nature." Dr B., however, attaches little value to this fact, as thirteen cases, in his

opinion, is too small a number to draw any conclusion from. Surely, if the successful result of Mr Syme's cases, *thirteen* in number, is not a sufficient number, from which to draw any conclusion on the subject, the advocates of compression should not speak with such boundless confidence of the safety and efficacy of their method of treatment, till they can boast of more than a list of *twelve* cures !

Treatment of Venereal Warts.

M. Vidal (de Cassis) recommends for this purpose the application of a powder of equal parts of alum and savin, afterwards increasing the proportion of alum to two-thirds. This is applied twice a-day, the parts being previously moistened with equal parts of water and aromatic wine. If the glands is naturally covered by the pressure, in returning the latter, the powder is retained in its place. If the glands is not covered by the pressure, a simple dressing, such as a piece of dry lint, ought to be employed. By the contact of this powder, the vegetations dry up, shrivel, and lose their adhesion, so that they crumble off without any pain.—Archives Générales de Médecine. Juillet 1845.

Gonorrhœa in Females.

M. Cullerier finds the application of nitrate of silver in the solid form, or in solution, however strong, to have little or no effect in vaginal gonorrhœa, and ascribes the want of success to some part of the mucous membrane being unavoidably left untouched by the caustic or the solution. When the discharge proceeds from the urethra, however, the application of the solid nitrate to the affected surface is found to be quite effectual, though very painful, and frequently requiring repetition.—Archives Générales de Médecine. Juillet 1845.

Removal of a Fish-hook from the Œsophagus.

In the New Orleans Medical Journal, Dr Kilpatrick reports the case of a fishing-hook removed from the œsophagus without an operation.

An old lady enjoying her afternoon nap, and sleeping with her mouth widely opened, suggested to a child the idea of dropping his barbed hook into it. "The titillation caused her to awake suddenly, and, as her mouth was dry from exposure, she closed it, and swallowed the hook two or three inches below the uvula. As soon as she discovered her situation, the whole family was assembled by her calls and cries of distress. Some gentle efforts were essayed to remove the hook, both by the patient and some of the family; but, being apprehensive of fixing the barb in the throat, they ceased all efforts, and dispatched a messenger for Dr Antony, who resided in the neighbourhood. When he arrived, and found that the hook was not fastened into the flesh, he suggested a plan by which it could be removed safely, easily, and without an operation. His plan was to cut off the line within a foot or two of the mouth of the patient, then to drill a hole through a rifle bullet, and drop it over the line down on the hook. In order to fix the bullet on the point of the hook, and maintain it firmly in that position, a reed was procured, the joints punched out, and then passed down over the line, and pressed firmly over the bullet. In this manner, the hook, bullet, and reed were all withdrawn at once, very easily, without any injury to the œsophagus or fauces."—Lancet, August 2, 1845.

This ingenious idea, as remarked in the journal from which we extract this case, is by no means original. Many years ago a similar case occurred in the Edinburgh Infirmary, which then suggested to Dr Gillespie the ingenious idea of passing a round-shaped body over the line, so as to entangle the point of the hook. In the case we al-

lude to, the hook was a double one used for catching pike. After many attempts to disentangle the hooks, and after various consultations as to the propriety of removing them by cutting into the œsophagus, Dr Gillespie proposed the above mentioned plan, and carried it into execution, as follows:—A twisted wire, about six inches long, which was attached to the double hook, lay in the boy's mouth. This was passed through a hole previously drilled in the side of the oval ivory extremity of a probang, which was about the size of a blackbird's egg. The probang was then passed down till the points of the hooks were caught on the ivory ball, and the whole was then easily removed.

Adhesion of the Eyelids to the Globe of the Eye.

M. Petrequin says he has succeeded in curing that most unmanageable deformity, adhesion of the eyelids to the globe of the eye, by the following method of operating:—He passes a needle, with a double ligature, through the adhesion; he then ties that portion of the ligature next to the eyelid loosely, and the portion next to the eyeball very firmly. The consequence is, that the latter ligature rapidly cuts its way through the adhesion and separates, while the former one remains for some days longer: the wound on the eyeball is thus allowed to cicatrize before the opposed surface of the eyelid is exposed by the separation of its ligature, and all danger of a relapse by re-union of the divided surfaces is thus prevented.—Traité d'Anatomie Medico-Chirurgicale Topographique. Par J. E. Petrequin.—(Pp. 97—9.)

Effects of Lunar Caustic on the Conjunctiva, and Treatment of Granular Eyelids.

(From a Clinical Lecture, by Mr Lawrence, in the London Medical Gazette, July 11, 1845.)

"In determining on the employment of lunar caustic in inflammation of the eye, you must bear in mind that the question is not like that of using an ordinary lotion, which can do neither much good nor harm. A single application will often excite active inflammation. I saw severe ophthalmia brought on by a small particle flying into the eye, as a person was scraping a stick of the caustic to a point. If the use of the nitrate of silver in the ten-grain ointment, or in strong solutions, be repeated and continued, it is capable of exciting a peculiar inflammation of the most obstinate kind, attended with change of structure in the membrane, and leading to other alterations injurious, or even fatal to vision. This kind of effect is so peculiar, that it almost deserves to be named from its exciting cause, lunar caustic ophthalmia. The conjunctiva becomes thickened and indurated; its papillæ undergo a kind of hypertrophy, and project on the surface of the membrane, which thus loses its smoothness and polish, becoming granulated. The secretion is augmented and altered in quality. The granulations are most numerous on the reflection of the membrane from the lids to the globe, and on the concavity of the upper lid. The friction of this rough surface on the cornea enlarges its vessels, so that they admit red blood, and tortuous vessels of considerable size are sometimes seen; it causes interstitial deposition and opacity, with a general loosening and thickening of texture, so that the mucous layer becomes assimilated to the conjunctiva scleroticæ. Deeper opacity and ulceration of the cornea are sometimes produced. The inflammation may be seen in a more or less active state. In the former, the membrane is bright red, and produces a viscid puriform discharge, which agglutinates the lids. There is a gritty feel in the eye, with pain from the friction of the rough lining of the lids, and increased suffering on exposure to light. Hence, the eye is kept closed, or only opened momentarily, and the patient is to all intents and purposes blind so long as that state lasts,

which it may do for months. In the chronic state, the vascular congestion is less active, and the membrane paler; the lids generally adhere in the morning; the eye is weak, and will not bear exertion; and vision is imperfect to a greater or less extent, from loss of transparency in the cornea. The latter change is sometimes partial, the upper two-thirds being opaque and vascular, while the lower third is clear. The conjunctival lining of the lower lid, although thickened, is hardly rough, while that of the upper may be granulated throughout. The mischief may not be confined to one eye: the opposite organ sometimes becomes affected, and suffers in the same way as that first diseased. When both eyes are involved, the patient is in a truly deplorable condition. He is blind for the time, and fears, from the obstinate nature of the malady, that sight will not be recovered; the spirits are depressed; a kind of despondency is induced, with fearful depression of the system.

"The affection we are now considering is not mere inflammation—not simply vascular disturbance; there is change of structure in the conjunctiva, thickening, induration, and roughening of the surface, by the prominences called granulations. To restore the membrane to its natural condition is perhaps not practicable; it is difficult even to improve it so far as to prevent continued irritation of the cornea. It may be rendered tolerably smooth; but it remains thickened and hardened, and presents an opaque white appearance, like that of a cicatrix, where it had been previously granulated. Moderate local depletion, with cold or tepid applications, is advisable when an active state of vascular disturbance is indicated by bright redness of the conjunctiva, with pain, intolerance of light, and discharge. Under other circumstances, scarification of the diseased membrane, excision of the more prominent granulations with scissors, and astringent applications are proper. Of the latter, solution of alum, the liquor aluminis compositus of the London Pharmacopœia, which will require dilution, especially at first, the undiluted liquor plumbi diacetatis, and the weaker solutions of lunar caustic, are the best. The sulphate of copper may sometimes be cautiously used in substance. If any of these applications bring on a relapse of inflammation, they must be discontinued until the disturbance is removed. The citrine, or red precipitate ointment, should be applied to the edges of the lids. Counter-irritation, by friction of tartar-emetic ointment on the back of the neck, is useful.

"Although the lunar caustic, when injudiciously applied, is capable of producing the serious mischief now described, it is not only a safe but valuable remedy under proper restrictions. The two-grain solution dropped into the eye two or three times in the twenty-four hours, will cut short catarrhal and even the milder forms of purulent ophthalmia."

MATERIA MEDICA AND DIETETICS.

Carrara Water.

"As journalists devoted to the cause of chemistry, we feel at all times great pleasure in observing a successful application of our favourite science to the every-day purposes of life—much as chemistry has benefited mankind, we know that this is as nothing to her unlimited resources; guided by such feelings, it is with no ordinary satisfaction that we hail the introduction of Carrara water to the notice of our numerous readers. Founded upon a careful consideration of principles purely scientific, and based on the strongest inductive reasoning, the invention of this invigorating and refreshing beverage is a real triumph to chemistry, with which chance or accident could have no connection, since the first part of the process employed in the formation of this water actually produces an effect the reverse of that which is ultimately obtained by merely continuing

the same operation, as must be at once obvious by considering the mode in which the Carrara water is manufactured; thus lime water, made with lime resulting from the decomposition of the purest Carrara marble, is subjected to the action of pure carbonic acid gas under great pressure; the whole of the lime is precipitated as a carbonate by the first portions of gas which pass into the water, but this carbonate is instantaneously converted into bicarbonate of lime, and redissolved by the remaining par of the carbonic acid, and a bright, transparent, colourless fluid is formed, on which Mr Maugham, its inventor, has bestowed the appellation of Carrara water, from the name of the marble with which it is made. As thus prepared, Carrara water is by far the most delicious effervescing drink with which we are acquainted, greatly surpassing soda water, and other beverages of that kind, in its power of retaining carbonic acid after it is drawn. We have drank it largely ourselves, and can strongly and unhesitatingly recommend it to our readers and the public at large; its medicinal virtues have been amply testified by Dr Basham and other eminent physicians and surgeons; and "there needs no ghost to come from the grave to tell us" that, ere long, it will be in common use from the Land's End to John O'Groat's. In the mean time, we heartily congratulate the talented inventor of the Carrara water, and wish him all that success which his genius and perseverance so richly merit."—(From the Chemist, August 1845.)

It appears that Dr Basham has published a paper on the uses of the Carrara water, of which the following account is given in the Medical Times, Saturday, August 2:—

"*The Bicarbonate of Lime in Dyspepsia.*—Dr Basham has published a paper on the medicinal uses of the bicarbonate of lime dissolved in an excess of carbonic acid, in some cases of indigestion. The particular preparation which Dr Basham uses, is the carbonate of lime, obtained from the Carrara marble, held in solution in water by means of an excess of carbonic acid. It is prepared in a manner similar to soda water, and is said to be both palatable and refreshing. The particular forms of indigestion in which this preparation of lime has been observed to be most serviceable are, the irritable gastric, follicular gastric dyspepsia, and a form most frequently met with in London, among particular cases, occasionally of chronic character, the symptoms unquestionably depending on a congested state of the mucous surface of the stomach, and the symptoms in the majority of cases agreeing in type with the inflammatory gastric dyspepsia, as described by the late Dr Todd of Brighton, but which Dr Basham calls congestive, or chronic congestive dyspepsia, as the case may be of recent or of long standing; heartburn, occasional gastrodynia, pain at the epigastrium, furred, brownish, clammy tongue, and thirst, being the most marked symptoms common in such cases. In many of these cases, the fur on the back of the tongue has a brownish-yellow hue, and there is a disagreeable alkaline or bitter taste in the mouth; and if a piece of reddened litmus be placed on the tongue, the secretions will be found strongly alkaline. There is great thirst, particularly on first rising in the morning, and frequently an accumulation of thick tenacious mucus about the fauces and pharynx, which is hawked up with some difficulty. There is seldom any great loss of appetite, except in the more chronic cases, nor do the bowels always exhibit any very marked irregularity. The urine, however, is either high-coloured and scanty, or more copious, and depositing minute orange-red grains of lithic acid. Such symptoms often depend merely on high living, or irregularity and imprudence at table; among the poor classes, on the intemperate use of fermented liquors. In more aggravated cases, patients will complain of a burning sensation, or even pain proceeding along the gullet to the stomach, chiefly excited on swallowing either fluids or solids, and followed by a hot and similar unpleasant irritation of the præcordia, and generally lasting from a few seconds to a minute or more after ingesta have been swallowed, constituting the true gastrodynia. The symptoms now mentioned are common to some forms of complicated indigestion, but they are common also to the

temporary derangement from which the stomach suffers after a succession of imprudent excesses at the table, and are unquestionably dependent on a congestion of the mucous membrane of the stomach and upper portion of the digestive organs. This state of things, if neglected, not unfrequently terminates either in chronic congestion, or inflammatory gastric dyspepsia. Carbonic acid dissolved in water acts as a sedative on the mucous membrane of the stomach; and from the large quantity condensed by the absorbing power of the lime, Dr B. explains its beneficial effects in these conditions of the stomach. In another class of cases, where uneasy sensations are referred to the stomach during the process of digestion, accompanied by nausea, and not unfrequently rejection of a portion of the previous meal, with attacks of water-brash, the stomach being empty, there is also a characteristic state of the mental functions, hypochondriasis, and depression of spirits. In two cases lately under treatment, and occurring in patients sedentarily employed, this Carrara water, taken frequently in quantities, not exceeding a large wine-glass for a dose, very speedily and surprisingly relieved the water-brash; and when dyspeptic patients lose any of their most distressing symptoms, on which perhaps they have been anxiously solicitous, the relief obtained gives them confidence to pursue the other and more important directions of regimen and diet, on which their ultimate cure mainly depends. These cases are illustrative of what has been termed, irritable gastric dyspepsia. It must not be inferred that this bicarbonate of lime is useful as a remedy in all stomachic affections. There are some forms of the disease in which it would be, indeed has been, as injurious as in others it has been beneficial and efficient. In all cases of dyspepsia marked by atony or debility of the stomach, great oppression after eating, drowsiness, and lethargy, cold clammy extremities, hands and feet being generally moist, with a cold exhalation, an aspect of anæmia, and general indications of a want of vigour and power in the assimilative processes, such an agent as the Carrara water would be most injudiciously employed. The least distention of the stomach is, in such cases, attended by sensations of distress and oppression, and any fluids containing carbonic acid generally bring on such sensations. Again, in those dyspeptic affections in which the duodenum is the principal seat of the disorder, such a remedy would be uncalled for, if not hurtful. Another advantage derived from the use of the mineral solution, which Dr Basham calls the Carrara water, is its employment as an adjunct to, and even as a vehicle for other remedies. In the thirst of fever, in the irritable condition of the stomach in the early stages of what is sometimes called gastric fever, taken in small quantities at a time, or even *ad libitum*, it has proved more grateful to the patient, more effective in relieving the intolerant thirst, and far easier of administration, than the common effervescing draughts. The sulphate of magnesia or soda, the tartrates of potass and soda, by being first dissolved in a small quantity of water, and this water then added, are deprived of much of their nausea and repugnant flavour. One great advantage this preparation possesses over all other artificially prepared carbonated waters, is the length of time it retains an excess of carbonic acid after the cork is withdrawn: the contents of a bottle may be taken in small quantities in intervals spread over some hours, and if the cork be merely replaced in the mouth, its effervescing briskness is retained to the last ounce. It never becomes nauseous; for if poured into a tumbler and freely exposed to the air, it does not lose its palatableness for many hours. To those who are fond of effervescing drinks, this water will prove a most agreeable substitute for soda water. It may be drunk at table with sherry, hock, Sauterne, or with small quantities of French brandy, and forms a very agreeable and wholesome beverage; with the wines it neutralizes their free acid, and renders them more wholesome. Dr Basham is at present engaged in experimenting with this water in cases of diabetes mellitus and the lithic acid diathesis."

Fraudulent Practice of Dealers in Leeches.—Letter from Magendie on the Subject.

It appears that some of the French dealers in leeches have for some years past practised a method of increasing their size and weight, by which their qualities as remedial agents are very much impaired. Out of many documents on this subject, contained in a comprehensive memoir on the commerce of leeches, published in a recent French journal,[1] we select for translation a letter from Magendie to M. J. Martin, an honest Parisian leech-dealer :—

"Sir,—By your letter of the 6th current, you ask me if leeches artificially augmented in size and weight should be received by you as commercially good and marketable, and if the medicinal employment of such leeches be attended with no inconvenience?

"I am the better able to answer your questions, as the fraud to which you refer has been known for some time in the Parisian Hospitals, in which it has sometimes given rise to a refusal to receive the leeches offered for delivery by the contractors.

"I give you the observations I have had occasion to make on the subject of this fraud, which appears now to be becoming common in the trade.

"The leech offered at our hospitals as unused contains $\frac{1}{5}$, $\frac{1}{4}$, and even $\frac{1}{2}$ of its weight of blood.

"This blood is derived from mammiferous animals, as is easily proved by the form of its globules, as seen under the microscope. This blood, by its retention in the intestine of the leech, undergoes a particular change ; it is of a reddish-brown colour, viscid, and somewhat syrupy. This blood making part of the leech, both in weight and volume, enhances the price of the animal, and in this consists the inducement to the fraud.

"Leeches fed in this manner are very inferior to genuine unfed leeches ; the size and other circumstances being alike, they draw two, three, and even four times less blood than the latter. The punctures which they make being less deep, discharge much less blood after they become detached. Thus, the employment of them misleads the practitioner as to the amount of blood taken from the patient.

"As to your inquiry, if the blood contained in these fraudulent leeches might not produce serious consequences and originate contagious diseases, I cannot offer any thing certain, but I think the mere suspicion of such effects by the natural horror which it inspires, should suffice for the rejection in medical practice of leeches fraudulently crammed with blood, the source of which is not known, still less acknowledged.

"My opinion then, sir, is, that it is quite right to refuse, as being neither commercially good nor marketable, leeches which contain a discoverable quantity of the blood of mammiferous animals, these leeches offering serious inconveniences in medical practice, and being in all respects very inferior to the unfed leech, which ought alone to be recognized as commercially good and marketable.—Accept, &c.

"Magendie,

"26th Feb. 1845." "Physician to the Hotel Dieu, &c."

New Caustic formed by a mixture of Saffron and Sulphuric Acid. By M. Velpeau.

After a number of experiments on various kinds of potential caustics, M. Velpeau has lately adopted one which seems to give very excellent results. It is prepared by concreting sulphuric acid into the consistence of a ductile paste by means of a sufficient quantity of *saffron*, which, without destroying its caustic qualities, prevents the acid from spreading beyond the limits to which it has been applied.

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[1] Chevalier Annales de Hygiene Publique, &c. Juillet 1845.

" This substance being carbonized by the acid, there remains a beautiful black paste, which resembles China ink or dry blacking. This paste is placed in an earthenware pot; the surgeon takes a portion of it on a spatula, and spreads it on the affected part, like ointment, a little hard; he then lays on a layer of it from two to four millimetrès in thickness, more or less; rounds its edges, and circumscribes its limits to the exact extent of the disease; he then leaves it thus exposed to the air till such time as it dries. A crust soon forms, which is to be covered with a compress and a bandage. The caustic which remains in the pot will not keep for any length of time, the sulphuric acid attracting readily the moisture from the air; but that which has been applied upon the flesh forms a hard crust, resounding like a piece of charcoal, perfectly dry, circumscribed in its limits, and of a depth equal to the thickness of the layer which was applied.

" This eschar began to separate between the eighth and tenth day, in a patient who had only been subjected to a slight application. In a patient affected with scirrhus, to whom more than a *hundred grammes* of the caustic ointment had been applied, it was satisfactorily seen that none of the phenomena of absorption occurred; and that, besides, the caustic had the effect of completely removing the disgusting smell which the cancer had hitherto had, and which annoyed both the patient and his neighbours. The cauterized tissues exhaled even an odour rather agreeable than fetid. Till new facts permit us to appreciate better the value of this new agent, we think it proper to direct attention to three important conditions which it presents, viz.:—

" 1. The exact circumscribing of its action to the limits traced by the ointment; 2. The quick throwing off of the slough; and 3. The absence of serious absorption."—Annales de Thérapeutique, in Journal de Pharmacie. Juillet 1845.

PATHOLOGY AND PRATICE OF PHYSIC.

Vapour of burning Nitre in Asthma.—This remedy was first recommended by Dr Frisi of Milan. A piece of paper soaked in a solution of nitrate of potass is dried, and then burned in the patient's apartment.

[We have several times given great relief to patients by this simple remedy; even in cases of asthma, depending on heart disease, it has given relief.]

Carbonate of Ammonia in Scarlatina.—The value of carbonate of ammonia in scarlet fever has been attested by several observers, and during the past year by Dr Picken of Dublin, (Med. Times, July 29, 1843), and Dr Ricken of Belgium; while at St Petersburgh, it is said to have been employed by the German physicians without any evident advantage. Mr H. Freke suggests that it may act by taking the place of urea, and thus supply the natural stimulus to the renal functions; and Messrs Herdeureich and Heirn have observed, that in cases of scarlatina an ammoniacal alkali is deposited on the skin, and hence offer another explanation of its efficacy. Whatever the theory, the amount of practical evidence preponderates in favour of the administration of ammonia in scarlet fever.—Dr Cowan's Retrospective Address.

Respiratory Murmur not obliterated in Pleurisy.—The existence and characters of bronchial respiration in pleuritic effusions have attracted considerable attention in France. That the sound of respiration is not obliterated in pleurisy has been maintained by M. Hirtz, Andral, Cruveilhier, and many others.

M. Monnéret has given his experience on this subject.—(Gazette Med. de Paris, Dec. 31, 1842).

The sound, he says, in most cases, resembles that of expiration as heard under the clavicles in different stages of pulmonary phthisis.

Usually, the inspiratory sound is scarcely appreciable, and the abnormal sound accompanies expiration only. When both inspiration and expiration are heard, the latter is always the most intense.

Though, in many cases, the "soufflé" of pleurisy differs from that of pneumonia, it presents various shades, and cannot be distinguished by its "timbré" alone. It is usually heard over the inferior angle of the scapula, and its lower third, or even as high as the spine of the scapula, and along its inner border. Wherever the tubular souffle of pleurisy is heard, aegophany (not bronchophony) is also present (?) and dulness on percussion extends as high as the spine of the scapula. Five cases are given corroborating the above statements, and in which the true symptoms and signs of pneumonia were absent, and the treatment such as would not have proved sufficient in pneumonia.

M. Netter also states, (Arch. Gen. de Med., Mar. 1843), that he has found bronchial respiration to be a frequent phenomenon in pleurisy, and points out the intimate connection between aegophany and the pleuritic souffle, the latter being as constant as the former. In every case in which aegophony was present, the bronchial murmur accompanied expiration, and was sometimes feeble, of short duration, and metallic in its character. The latter circumstance he considers important, as explaining the nature of aegophany.

He rejects Laeennec's explanation of this phenomenon, which he states he has met with when the fluid effused was considerable. He, in fact, believes it to be dependent on the bronchial murmur, and affirms that the former is the more trembling and more stuttering in its character, in proportion as the latter is stronger.

Dr Chambers of Colchester (Lancet, May 4, 1844), has found a gentle gurgling sound as if produced by the rolling or displacement of a fluid to be an invariable attendant of pleuritic effusion. It is more readily detected in the reclining posture.—Dr James Bennett's Report.

Removal of Seventeen Inches of the Small Intestines.—Recovery of the Patient.—Dr Brigham relates, in the American Journal of Medical Science, the case of an insane patient, who opened her abdomen with a pair of scissors, drew out seventeen inches of the small intestines, and cut them off. The cut ends were returned!! and the *external* wound sewed up. Strange to say, she recovered.

Nitrate of Potass and Benzoic Acid in Nocturnal Incontinence of Urine. By J. Delcour M.D. of Vervier.—To Dr Young of Chester we are indebted for our knowledge of the efficiency of nitre in incontinence of urine, and Dr Delcour has been equally successful with this remedy.

In two cases, where the nitre and strychnia failed, Dr D. was led to try the benzoic acid from its known action on the mucous membranes, and with very successful results. The medicine was given in doses of ten grains three times a-day.

Spontaneous Rupture of the Spleen.—Dr Potter, in the Western Lancet for January 1845, relates a case of this rare occurrence.

A man, 35 years of age, of good habits, who had enjoyed uninterrupted good health, with the exception of five or six paroxysms of intermittent fever about twelve months previously, was attacked with febrile symptoms, and then suddenly with severe pain in stomach and belly, accompanied with vomiting, and died in two hours.

The parenchymatous structure of the spleen was broken down, and converted into a grumous mass. The capsule exhibited a rupture about an inch and a half in length.

Removal of Spleen, and Recovery of Patient. By M. Berthet de Gray.—A middle-aged man received a wound in the side, through which the spleen protruded. As it became gangrenous, it was removed. The patient lived thirteen years after this, his digestion being usually good.—Science de l'Academie de Med., 9 Juillet 1844.

Treatment of Eczema and Psoriasis.—Professor Otto of Copenhagen has successfully used the tincture of cantharides in four cases of eczema, and in six of psoriasis. The dose on the first day was three drops, and on each succeeding day a drop was added, for the six or seven weeks during which the patients remained under treatment.—Gaz. Médicale.

Frequency of Cancer in the two Sexes, and at different Ages.—From observations extending to 1000 post-mortem examinations performed in Guy's Hospital, Mr T. Wilkinson King has deduced the following conclusions regarding the frequency of cancer :—1. Of all females who die about 44 years of age, nearly one-half have cancers; and, 2. Of males who die at that period, about one-eighth. 3. Cancers increase in frequency from youth up to the 44th year, and then decrease; and, 4. In males above 65, one-fifth of all who die have cancerous affections. Mr King gives the following table as furnishing a measure of the relative frequency of cancer in different parts of the body:—

Breast	21	Thigh	5
Ovary (fungoid ascitic, &c.)	18	Kidney	2
Uterus (the os chiefly)	15	Bladder	2
Head or Face	16	Penis	4
Chest	5	Testes	6
Stomach	10	Labia	1
Abdomen generally	17	Scrotum	1
Liver (mainly)	5		

London Med. Gaz. August.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Caesarian Section favourable both to Mother and Child.

The patient, æt. 35, had already borne four children without artificial aid. After her last delivery, she suffered for three years and a half from malacosteon; on the 20th of July, labour came on, and vaginal examination found the foetal head in the pelvis, and the transverse diameter of the outlet reduced to only $1\frac{1}{2}$ inches. Caesarian section was at once resolved on. An incision was made in the linea alba, extending from $1\frac{1}{2}$ inches above the umbilicus to the symphysis pubis. The incision made into the uterus also divided the placenta; a considerable quantity of blood was effused into the peritoneal sac. The feet of the foetus were with difficulty reached, as the intestines forcibly obtruded themselves, and they, as well as the cavity of the abdomen, were considerably soiled with escaped meconium. The peritoneum was then cleansed with sponges from the blood and meconium, the intestines replaced as quickly as possible, and the wound in the abdominal parietes closed with six stitches. Fifteen days after the operation, the child, a male, was alive and healthy, and the mother out of danger, having scarcely had a bad symptom.—*Casper's Wocheschr.* 1845, No. 15.

Gigantic Foetus. By Dr Flamm of Warschau.

The foetus was a still-born male; length twenty-two inches; the weight fourteen pounds and a half, and the placenta weighed two pounds.—*Oppenheim's Zeitschr. Bd.* 27. *Hft.* 3.

Singular Malformation—a Finger Growing from near the Anus. By Dr Rothe of Guhrau.

A healthy female child nine months old, was brought to Dr R., having on the right buttock, in the immediate neighbourhood of the anus, a congenital tumour, as large as a moderate-sized apple, elastic, and causing no uneasiness; from this grew a perfectly developed finger, consisting of three joints, and having a regularly formed nail; near this was a fistulous opening, into which a sound passed to the depth of an inch and a half. The finger could be distinctly felt to be a prolongation of the sacrum. The tumour was removed with scarce any hemorrhage, and in three weeks the wound was healed. On examination, the swelling was found to consist solely of fat.—*Hufcland's Jour. Bd.* 98. Stück 5, 1845.

Dr Lumpe on the Therapeutics of Puerperal Fever.

"*General blood-letting* holds the first place; still those who laud this mode of treatment are daily diminishing; it must be employed early, and a large quantity must be taken. Local bleeding is only to be employed where there is local pain. *Purgatives* were at one time much employed; they ought only to be used where there is no inflammatory condition of the mucous membrane of the intestines. *Emetics*, if early exhibited, are of great use. *Mercurials* are of the highest value, especially in the form of calomel and opium; they are recommended in all forms of puerperal fever, except the typhoid; if salivation sets in, recovery is certain. *Diaphoretics* (antimonial preparations) are of no utility. *Narcotics* are of great value; it is recommended in every case to give a dose of Dover's powder at the commencement, and to resort to bleeding only if it (the Dover's powder) prove ineffectual in relieving the pain. By most of the later writers on this subject, opium is recommended only to palliate violent diarrhœa, obstinate vomiting, and extreme tenderness of the abdomen. *Turpentine* has been found useful by some in the last stages of peritonitis. *Quinine* is affirmed by Hagge to be a specific in cases of puerperal fever, but benefit is only to be expected from it if it be employed within the first two or three days. *Injections into the uterus* have been recommended as a means of preventing local contagion, but their value is not sufficiently ascertained. The utility of *the binder*, as a prophylactic, it is difficult to see."—*Zeitschr der K. K. Gesellsch der Aertze zu Wien. Hft.* 11.

Hooping-cough treated with Nitrate of Silver. By Dr Berger of Berlin.

The *Journal für Kinderkrankheiten*, for October 1844, contains a good paper on pertussis, by Dr Berger. The only novelty it presents is the treatment of the disease with nitrate of silver. The disease he divides into two stages—the catarrhal, lasting from 8 to 14 days, and passing over into the convulsive; and it is in the latter that the nitrate is exhibited. Dr B. gives it in doses of from 1-16th to 1-12th of a grain three or four times a-day. It was given only to those children whose digestive organs were in a healthy condition, and in whom the disease was not complicated with any other affection. Dr B. relates three cases, in each of which, after the nitrate had been used for a few days, the violence of the cough was much diminished, and the disease quickly disappeared.

Hooping-cough treated with Liquor Ammoniæ.

M. Levrat Perroton has published four cases, in which he conceives that he has successfully treated hooping-cough, complicated with convulsions and cerebral congestion, with the following mixture :—

℞ Aq. distillat. Lactucæ	. . .	℥iv.
Aq. Flor. Aurant.	. . .	℥ij.
Syrup. Papaver.	. . .	℥j.
„ Belladonnæ	. . .	℥ij.
Liquoris Ammoniæ	. . .	gtt vj. M.

a table spoonful to be given every hour.—*Journal für Kinderkank, November* 1844.

Hypertrophy of the Trachea and Bronchi. By Professor Gintrac.

A child of eight years of age, of weakly and sickly constitution, had suffered from an early period from dyspnœa, more or less severe, accompanied at times with considerable pain in the breast, and other symptoms indicative of affection of the thoracic viscera. It was received into the hospital labouring under considerable difficulty of breathing, which, especially in the evening, threatened suffocation. Auscultation and percussion gave nothing abnormal, except a strong whistling in the bronchial tubes. On dissection, there were observed traces of pleuritis. On cutting into the trachea, its walls were found thicker and firmer than usual. This alteration was most remarkable in the lower part at the bifurcation, and also extended far into the bronchi ; in consequence of this, the diameter of the air tubes was considerably diminished. The lungs were also œdematous.—*Journal de Medecine de Montpellier.*

Treatment of Croup. By Valleix.

At the commencement, bleeding is almost always necessary. In 31 cases where emetics of ipecacuanha were given, 13 recovered. In 22 cases where emetics were sparingly, or not all given, one only recovered. Calomel, mercurial inunction, sulphuret of potass, polygala, alkalies, and local counter-irritants, Valleix considers only as adjuvants. He regards cauterizing of the *pharynx* with nitric acid, sulphuric acid, nitrate of mercury, alum, chlorates of lime, or potass, and especially with nitrate of silver, as a most energetic and efficient means of treatment. Valleix also directs cauterization along the spine, with potassa fusa.—*Bulletin de Therapeutique.*

Large Congenital Umbilical Hernia cured by Pressure.

Dr Thelu announces in the *Journal de Chirurgie*, that he cured by pressure only, with a binder and compresses, an umbilical hernia, the base of which measured 24 centimetres in circumference, the tumour measuring 29 centimetres across.

Dr Behrend on the English Practice of "Lancing of the Gums."

"In Germany, scarification of the gums, as a remedial agent in difficult dentition, is as little employed as it is in France. But in England this measure is resorted to with extreme frequency. As soon as the gum is tense, hot, and red, and the child in the act of getting its teeth, shows great irritation of the mouth, a surgeon is immediately sent for to lance the gums. He, without further inquiry, seizes a lancet-shaped knife, and makes cuts in the gum in all directions, and the more it bleeds the more he rejoices. During my residence in England and Ireland, I have seen this scarification of

the gums very frequently resorted to; but I cannot say that the results of the practice, so far as my observation goes, have been any thing extraordinary. The irritation and tension of the gums certainly was present in most of the cases; but I am well convinced that the same result would have been obtained by other weakening and derivative measures, and that too with much less danger to the child. I say with less danger, because, as I saw that in no instance was dentition accelerated or rendered less painful; so also I saw in two cases such weakness and feebleness induced by the hemorrhage consequent on the 'lancing,' that the children did not recover from it for four weeks, but laboured under all the signs of anæmia. In one case, I saw the scarifications run on to suppurating wounds and foul ulcers, to which it is true that mercury must have contributed much; the mercury is given in the form of *hydargyrum cum creta*, to all weakly and ill-nourished children, in regular English fashion, in enormous doses, without rhyme or reason (*ohne Fug und recht.*) And I have even heard some old practitioners confess that death has not seldom resulted from scarification of the gums, so trifling or insignificant soever the operation may appear."—*Journal für Kinderkrank, December* 1844.—[This paper by Dr Behrend, from which we have just quoted, is written as a sort of review, on a communication to the Lancet (May 1844), by Marshall Hall. It would occupy us two or three pages to comment on the absurdity of Dr B.'s statements. The last sentence we should regard as worse than absurd, did we not know Dr B. to be a highly respectable practitioner, and occupying a prominent station in Berlin.]

FORENSIC MEDICINE AND MEDICAL POLICE.

Medico-legal Report on the Body of a Child scratched out of the ground by a Shepherd's Dog.—The body was not far advanced in putrefaction, but considerably mutilated. There remained the head, the thorax, with the arms, the spine, as far as the first lumbar vertebra, the liver, the stomach, the pancreas, the spleen, the kidneys, the duodenum, the transverse colon, and a part of the small intestines. In spite of the mutilation, important and incontrovertible conclusions were deduced from the examination. 1st, The child was mature, fully developed, and viable, because the head was covered with long dark hair, the ears were cartilaginous, the fontanelles were properly formed, the finger-nails were hard and firm, the diameters of the shoulders, the sutures of the cranium, and all the bones of the body were conformable to those of children at the full time. 2dly, The child was born alive, and had respired completely. These facts were indicated by,—the arching of the thoracic parietes, the trifling elevation of the diaphragm, the pale colour of the lungs, their completely filling the thorax, their swimming under all circumstances, the partial closure of the foramen ovale, the bloodlessness of the whole body, and the presence of yellowish chyme, (coloured by bile), in the transverse colon. 3dly, The child had met with a violent death from injury of the skull, indicated by the presence and character of several fissures on either side of the head in the temporal and parietal bones, and by the bloody extravasation on the posterior surface of the head and neck. The author mentions, as a peculiar appearance, the transformation of the brain into a thick bloody mass; this could not be the effect of putrefaction alone, as it was not so far advanced, but it probably resulted from a violent concussion of the brain at the same moment that the injury was inflicted on the head, as if, in short, the body had been taken up by the feet and the head smashed upon a stone.—Henke's Zeitchr. für die Staats-Arzenei. Hft. 53, 1845.

Investigation into the mode of Death of Two Persons found dead in a House which had been set fire to.

As the house had been consumed during the night, search for the bodies of the in-

mates was first made among the ruins of the sleeping-chamber, but no trace of them being there discoverable, and further search being made, they were found near another part of the dwelling. The parties were a man and his wife, aged 60 years of age. The corpse of the man, though considerably destroyed by fire, still presented some parts uninjured, and thus the examiners were enabled to detect several fractures of the bones of the skull, with a quantity of effused dried blood beneath them, thus showing that these injuries had been inflicted during life. The viscera of the thorax and abdomen were bloodless and relaxed. Of the body of the female there was found only a carbonaceous mass, about an ell and a half in length, of which a part of the head alone remained uninjured by the fire. Precisely on the same place, as on the skull of the male, there was found a similar fracture; and under it, on almost the dry brain, there lay a mass of dried blood. From these appearances, it was concluded, 1*st*, That the death of the parties had not been the result of suffocation. 2*dly*, That injuries had been inflicted on the head during life sufficient to cause death. 3*dly*, From the violence of the injury done to the head, and the absence of all signs of suffocation, in the man at least, that death had resulted from the injury of the head, and not from the effects of fire. And, 4*thly*, That murder had been done, and had been sought to be concealed by setting fire to the house. This last was confirmed by the confession of an accomplice in the crime.—Henke Zeitschr. rür die Staats-Arzeneikunde, 1845, 33.

On the Psychical Condition and Responsibility of a Fire-Raiser. By Erhard.

The patient is aged 22, and member of a family, in every individual of which there is some abnormal condition of the mental faculties—one is silly, and another believes himself possessed by the devil; all are miserably superstitious and uneducated. The patient suffered, when a child, from scrofula and worms. At school, she exhibited a remarkable demeanour, kept herself apart from the others, with her eyes fixed on the ground. She was quite retired, silent, obstinate, and fretful; she worked little, disliked to go to church, and more particularly to go to confession. At her 17th year, she went to service as a nursery-maid, managed her duties tolerably, but during the first few days spoke none; afterwards, as she became more intimate, she frequently exclaimed, "if only there were not that silly confession—what is the use of that silly confession!" On account of these expressions, and because the child which she had under her care did not like her unamiable temper, she was discharged. Shortly thereafter, the symptoms of her disease first showed themselves, and these have advanced in an uninterrupted course until the present time; they commenced simultaneously with the warning symptoms of menstruation. Some months before her complaint broke out, she complained of pain in the abdomen, as if a snake were twining about her. She had also tickling in the feet, headach, ringing in the ears, and a heaviness of the limbs, and, at the same time, she became more and more violent and fretful. Her disease first broke out after her having caught a violent cold by wandering about barefooted during winter. She was seized with a loss of consciousness and convulsions, during which the neck became thick and hard, and the face livid and swollen. These attacks lasted a quarter of an hour, and occurred as often as ten times a-week. At first she spoke in articulate speech, and roared during the paroxysms; afterwards, the roaring continued, even although the paroxysms were not present, she frequently roared for half a day or half a night without intermission, and with such violence as to alarm the whole neighbourhood. In a about half a year this disappeared spontaneously. According to the mother's account, the menstruation of the patient was always sparing and irregular. During the intermissions, the patient was angry, irritable, destructively-inclined, fond of solitude, and indolent. At last she refused to work, to go to church, or confession. This despising of

all religious rites, confirmed her father and family in the belief that some trick of the evil one (*Spiel des Bösen*) was at the bottom of the mischief. Prayers and holy water were resorted to; and as the paroxysms appeared to be alleviated under their use, the family became more confirmed in their belief; but, as the priest of the place prudently refused to have any thing to do with the patient, and recommended them to try medical aid, a thoroughly organized system of devil-out-driving (*Teufelsaustreibung*) was formed in the family. This was steadily pursued until the fire-raising took place. The means employed, were scourging at first with sticks, then with cords and palm-twigs. The patient was daily beaten over the forehead, the face, the neck, and the hands, frequently until effusion of blood. As another means of purification, the patient was frequently smoked, being immersed in a foul stinking smoke, with her mouth forcibly kept open for its admission. This treatment continuing, the patient became more violent, until she shattered all the furniture, breaking some of the planks in the wall with her head. She then attempted several times to set fire to the house, and at last reduced it to ashes. On examining the physical condition of the patient, the gait was observed to be unsteady, the forehead low, the head small, compared with the size of the face, and the eyes dull and downcast. She passes her excretions involuntarily, sleeps but little, shrieking and howling during the night. Her answers are short and brief, her memory weak, her faculty of apprehension limited, and reflection contracted. It affords her great pleasure to converse about her crime. Considering the whole circumstances of the patient, her imperfect education, absurd treatment, her physical and mental condition, the reporters concluded, that before and during the commission of the crime she had not acted with free-will, but that the same had been done involuntarily, and was to be regarded only as the consequence of her peculiar mental condition, namely, stupidity and raving madness (*Stumpf und Wahnsinn*) with which she is affected.—Henke's Zeitschr. für die Staats-Arzenei, 1844. 33 No.

Part V.—MEDICAL MEMORANDA.

OBITUARY.

Dr Robert Graham, Professor of Botany in the University of Edinburgh, died near Stirling on the 7th August, aged 59. About a year ago, Dr G.'s health began to decline, and though the disease under which he laboured was of an obscure nature, it had for some time been evident that it was gradually tending to a fatal termination. We have not yet obtained an authentic account of the appearances on dissection; but we are informed that there was a tumour found compressing the thoracic duct.

Dr G. for several years was Professor of Botany in the University of Glasgow, before obtaining the Edinburgh Chair. He gave his First Course of Lectures at Edinburgh in the summer of 1820, in the Old Botanic Garden, Leith Walk. Dr Graham showed much zeal for the extension of botanical knowledge, as is proved by the Botanical Periodicals of the day; and all along ably and conscientiously discharged the duties of the Chair. In 1840 he was elected President of the Royal College of Physicians, and at the time when his illness commenced, he was President of the Medico-Chirurgical and Botanical Societies of Edinburgh. He was a man of popular manners, and much beloved.

STATISTICS OF INSANITY IN SCOTLAND.

A return has been published relating to lunatics in Scotland (moved for by Lord Ashley, M.P.) From this it appears that the gross total number of lunatics, parish paupers, and furious or fatuous persons confined in the various counties and stewartries of that country on the 1st of January 1845, amounted to 1694, of whom 785 males and 714 females (1499 in all), were immured within public lunatic asylums; and 195 (92 males and 103 females) in licensed madhouses. The number of lunatics privately confined, under the provisions of the Act 9 George IV., cap. 34, at the same period, amounted to 13. The total number of dangerous lunatics committed by the sheriffs of Scotland, under the provisions of the Act 21 and 25 Victoria, cap. 60, has amounted, since the passing of the Act, to 155; viz. 110 males and 45 females.

UNIVERSITY OF ST ANDREWS—GRADUATION OF PHYSICIANS.

The last examination of candidates for degrees in medicine for this year at the University of St Andrews, was held on the 5th instant. During the last twelve months 129 candidates have presented themselves, and of those 23, or about 1 out of every $5\frac{1}{2}$, were rejected. If to those rejected we add other 3 candidates who withdrew their names, after making a long journey to St Andrews with the view of being examined, it would render the rejections as high as 1 out of every 5. Of the 129 candidates, 93 were already in possession of diplomas from licensing medical boards in this country, and 36 had no diplomas, but had all the preliminary qualifications required by the University in their printed regulations. Of these 93 there were 8 rejected, and of the 36 there were 15 rejected. Of the 93 possessing diplomas 78 were members of the Royal College of Surgeons of London, Dublin, or Edinburgh. Four candidates were rejected for the second time, and 1 for the third time. We believe that no other licensing board in Scotland can show so large an average number of rejections.

UNIVERSITY OF EDINBURGH—GRADUATION OF PHYSICIANS.

On the 1st of August last, the following gentlemen, 79 in number, received the degree of Doctor in this University :—

OF SCOTLAND.

William Aitken—On the Influence of Vaccination on the Prevalence and Severity of Small-Pox.

James Anderson—On Scrofula.

Henry Arnot—On the Physiology and Special Pathology of Asphyxia.

Alexander Laing Bogle—On Diseases of Synovial Membrane.

James Braid—On Diseased Nutrition.

George Brewster—On Inguinal Hernia.

William Alex. Brydon—On Intermittent Fever.

Alex. Forrester Calder—On Typhus.

George Fenton Cameron—On Insanity.

Mathew Combe—On the Diagnosis and Treatment of Diseases of the Knee-joint.

John Robert Dickson—On Uterine Hemorrhage in connection with Pregnancy.

John Dunlop—On the Influence the Mind exercises over Disease.

James Ellison—On Bronchotomy.

Thomas Fraser—On Inflammation of Bone, and certain Pathological conditions which arise from various stages of the Process.

Wm. Tennant Gairdner—On Death.

James Donaldson Gillespie—On the Reproduction of Bone after Necrosis.

John Grant—On Hemorrhage, Accidental and Unavoidable.

James Adam Hunter—On Aneurism.

Lawrence Ramsay Hynd—On the Influence of Vaccination on the Prevalance of Small-Pox.

James Keith—On the Inflammation of the Cellular Tissue of the Pelvis.

Andrew Legat—On Hydrocele of the Tunica Vaginalis.

John Mackay—On the Principal Forms of Serous Effusion, and their causes.

David Mackintosh—Sibbens identical with the Exanthematic Group of Venereal Diseases.

James Innes Macintosh—On the Effects and Indications of Blood-letting in Inflammation in general.

Daniel Maclachlan—On the Croup.

William Main—On Tobacco.

George Augustus Mein—On Scarlatina.

Brinsley Nicholson—On the Coagulation of the Blood.

John Pirie—On Tubercle.

James Hunter Robertson—On the Induction of Premature Labour.

John Struthers—On the Physiology and Physiological Anatomy of the Muscles and Nerves of the Eyeballs, and on the Theory of their Derangement in Strabismus.

George Thomson—On the General Doctrines of Dropsy.

Robert Wilson—On Pulmonary Tubercle.

FROM BERWICK-UPON-TWEED.

David Fr. Sitwell Cahill—On Diabetes Mellitus.

FROM ENGLAND.

William Henry Addison—Observations on some few subjects connected with Midwifery.

Charles David Arnott—On Aneurism.

James Heaton Bennett—On Fever.

Robert Addison Byers—On the Saliva and Gastric Juice.

Henry Crookenden—On the Structure and Diseases of Bone.

Richard Domenichetti—On Funetional Diseases of the Liver.

Ray Charles Golding—On Chronic Diseases.

George Haworth—On Tobacco.

John Hutchings Jerrard—On Surgical Hemorrhage.

Alfred Sinclair Kingdon—On Delirium Tremens.

James Logan—On the Particular Symptoms occurring in Phthisis Pulmonalis.

Charles Martin—On Digestion.

Robert Thomas Martland—On Nutrition.

James Henry May—On Delirium Tremens.

Samuel Nicholson—On Delirium Tremens.

John Greenway Overton—On the Diseases of the Larynx and Trachea.

John Watson Pacey—On Gunshot Wounds.

George Hutchinson Ray—On Intermittent Fever.

Henry James Stokes—On Dropsy.

Thomas West—On Intermittent Fever.

Thomas Wright—On Voltaic Electricity and Electro-Magnetism, and their Application to the Cure of Disease.

FROM WALES.

John Roberts—On the Influence of Temperature on the Health of Man.

George Charles Stacpoole—On the Correct Method of examining Patients and observing Disease.

FROM IRELAND.

Alexander Tod Anderson—On Inguinal Hernia.

John Barclay—On Syphilis.

Thomas Crawford—The History, Causes, Pathology, and Treatment of Paralysis.
Richard Dill—On Dyspepsia.
Gerald Fitzgerald—On the Nervous System.
John Hutchinson Garner—Observations on Birds.
George Johnston—On Hypertrophy of the Heart.
George Hugo Kidd—On Vaccination, its Protective Power, and the Proofs of the necessity of Re-vaccination.
Robert Wallace—On the Symptoms, Pathology, and Treatment of Rheumatism.

FROM THE ISLE OF MAN.

John Robert Oliver—On Chlorosis.

FROM BERLIN.

Fred. Geo. Wm. Müllar—On the Signs of Pregnancy.

FROM CANADA.

James Stephen Hackett—On Asphyxia.
Hector Peltier—Des Retrecissmens de l'Urethre.

FROM NOVA SCOTIA.

James Allen—On the Principal Deformity of the Pelvis in relation to Parturition.
Daniel M'Neill Parker—On the Mechanism and Management of Parturition.

FROM BARBADOES.

George Frederick Bone—On Yellow Fever.
William Alleyne Nicholson—On the Particular Forms of Death, more particularly the Anatomical Signs of Syncope.

FROM BERMUDA.

Samuel Reeve Tucker—On the Cure of Aneurism.

FROM PRUSSIA.

Salomon Edward Casperson—De Galvanismo in Paralysi adhibendo.

FROM THE EAST INDIES.

Edward Barons Bowman—On Gangræna Senilis.
William Judson Van Someren—On the Causes of Difference in the Facility of Parturition in the different Races of Man.

The Annual Prizes of the Medical Faculty, being Gold Medals of equal value, given to the authors of the best Thesis among the Graduates of each year, were conferred upon—

Dr William Tennant Gairdner, of Edinburgh.
— George Hugh Kidd, of Newry, Ireland.
— David Mackintosh, of Inverness-shire.
— Brinsley Nicholson, of Inverness-shire.

Dr William J. Van Someren has obtained the Gold Medal in the Class of Medical Jurisprudence.

PROCEEDINGS OF MEDICO-CHIRURGICAL SOCIETY.

Wednesday, 7th May 1845.—Dr GAIRDNER, President, in the Chair.

(*Continued from p.* 192.)

"*Sulphate of Bebeerine in Intermittent Headach.*—The President stated that he had recently been very successful in treating a case of intermittent headach with the sulphate of bebeerine. The subject was a young and recently married lady. There were some reasons to suspect that she might be pregnant. The fits of pain were of daily recurrence, and came on nearly at the same time. The pain when at its greatest height was excruciating. The paroxysm was succeeded by an interval of total exemption from

pain. He proposed the quinine; but found that his patient had the greatest objection to it, on account of the disagreeable sensations in her head which she had experienced from its use on a previous occasion. He was unwilling to employ arsenic, on account of the suspicions of pregnancy, and he therefore ordered pills containing three grains of sulphate of bebeerine in each. Of these she took three, sometimes four, each day, in the intervals between the paroxysms, with the effect of immediately diminishing the pain, and of putting an end to the disease in about three or four days."

"*Congenital Hydrocephalus.*—Dr Omond detailed a case of congenital hydrocephalus, where the child's existence had been protracted to three years and six months,—gradual distention of the bones of the cranium taking place all the time. A cast of the head and shoulders, taken after death, was exhibited, measuring 31½ inches in circumference, passing round the frontal and occipital bones. In this child the digestive functions were in operation; there was imperfect hearing, with scarcely any other development of sensation or motion."

Wednesday, 4th June 1845.—Dr GAIRDNER, President, in the Chair.

"*Case of Sanguineous Effusion into the Chest, in connection with External Injury and Pulmonary Apoplexy.* By Dr PATERSON, Leith.—The subject of this case was a woman, aged about 37, the mother of a large family, a person who was quiet and regular in her habits. On the evening of the 26th January, she was beaten and kicked severely by her husband, and from that time she complained of a severe pain in the right side, just over the cartilages of the seventh and eighth ribs. On the morning of the 31st, she was suddenly seized with increased pain in that side, and symptoms of great depression of the powers of life. From this state she slightly rallied; but symptoms of effusion into the chest having made their appearance, and given rise to dyspnœa, an opening was made into the chest, at the end of ten days from her sudden attack. About a pound of pure blood was drawn off, which gave no relief, and she died calmly, 18 hours after the operation, 11 days after her sudden seizure, and 17 days after the infliction of the injuries.

"Post-mortem examination revealed no fracture of the ribs, no swelling, and no ecchymosis over the seat of the injury. The right side of the chest contained about 6 imperial pints of bloody fluid. The right lung was everywhere shrivelled, and compressed into the upper and posterior part of the chest: it contained at its lower part, and opposite the side of the injury, a mass of pulmonary apoplexy, in the centre of which was a soft coagulum, communicating with the pleural sac, through a small opening, with ragged edges, and of such a size as could not admit an object larger than a crow-quill. In the pleural sac there was much adventitious inflammatory tissue, mixed up with blood. The question arose:—Did the woman die from the injuries which she had received, or from pulmonary apoplexy unconnected with the injuries? Various reasons were given in favour of each view of the case. In consequence of its having been stated, that there had occurred cases in which precisely similar appearances had been described as unconnected with external injury, the husband escaped punishment."

ON THE ARTIFICIAL DISPLACEMENTS OF THE BONES OF THE FEET IN CHINESE FEMALES: WITH A SPECIMEN. By PROFESSOR SIMPSON.—[This Paper appeared in our Number for August.]

ON A TUMOUR OF THE TESTICLE, CONTAINING AN OSSEOUS MASS, AND COVERED WITH INTEGUMENTARY MEMBRANE AND HAIRS. By JOHN GOODSIR, Esq.—[This Paper appeared in our Number for June.]

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THE

NORTHERN JOURNAL OF MEDICINE.

No. XVIII.—OCTOBER 1845.

Part I.—ORIGINAL ARTICLES.

Cases of Injury of the Head. By Jonathan Toogood, M.D., Licentiate of the Royal College of Physicians, Fellow of the Royal College of Surgeons, Senior Medical Officer of the Bridgewater Infirmary.

Mr M. J., a very strong man, aged 32, was thrown from his horse on Thursday night, May 16, and received a violent blow on the left side of his head and shoulder. He was stunned by the fall, and lay on the road insensible for some time. He was removed to a house about two miles distant, where, after some time, he recovered his senses, and walked up stairs with a little assistance. No injury could be discovered on examining the head. He was bled to thirty ounces, took some active purgative, and was directed to be kept quiet. On the following evening I visited him in consultation with Mr Board, who saw him on the receipt of the accident. He was in a state of abstraction, but not insensible, was easily roused, and answered questions rationally; his head was fixed to the pillow; the pupils were natural, and contracted readily; there was great intolerance of light; the pulse was frequent, but natural, neither full nor hard; the respiration and skin natural; he was very irritable and restless, and complained of much pain in the head; the tongue was furred and loaded, and there was frequent sickness; he was deaf in the left ear, but heard perfectly in the right; there had been no discharge of blood from either. The head was carefully examined again, but no injury could be detected. He was bled freely, and the cathartic medicine repeated.

On the Sunday evening, I received the following report from his surgeon:—"The cathartic medicine acted powerfully, by which he was much relieved, and passed a quiet night. On Saturday, the pain in the head and morbid sensibility of the retina

had much abated; he got out of bed every time the medicine acted, without assistance; but when in the erect posture, required to have his head supported; and, it is worthy of remark, that every time he got up, a few drops of blood fell from his nose; he took neutral salts and other febrifuges, which acted properly, and strict antiphlogistic regimen was observed. The pulse was 90, and small; the intellect unimpaired, and he gave signs that his memory was strong as ever; conversed rationally, and with his accustomed cheerfulness. On Sunday, his friends were all convinced of his amendment; his head was still more relieved, and the bowels open. In the evening, however, his face became flushed, and the pulse fuller and harder. Thirty ounces of blood were taken from the arm, which sunk the pulse, and greatly relieved him. In compliance with his urgent solicitation, a blister was applied to the nape of the neck."

On Monday, I visited him again, at 9 A.M. He had passed a quiet night; got out of bed twice without assistance; was very tranquil, but had not been sensible at times. He complained not little of his head; the pupils were natural, and contracted very readily; pulse regular, but frequent; respiration and skin natural. He felt weak, and mentioned a tingling sensation and numbness of the left arm, which came on at three in the morning. He was perfectly sensible, and not only related all the circumstances of the accident, but referred to a former one which occurred some years before. On minutely examining the head, he shrunk on pressure being made on the temporal muscle of the right side; and on increasing the pressure, he immediately had a violent epileptic fit, from which he soon recovered, and became as sensible as before, and continued relating the history of his former accident, taking it up at the point he had left it on the occurrence of the fit. Another trial was made, by pressing very firmly on the same spot, which did not, however, produce a similar effect, although he shrunk from it as if it gave pain. At 11 o'clock he had another fit. At 12, he expressed himself as feeling much better, raised his head from the pillow and shook it, saying that he felt no pain, but only a weight on his forehead; he complained still of the numbness and tingling of the left arm and hand. At one, he had another severe fit, and as soon as he recovered from it, he was bled. Soon after this he had another, after which he lay motionless on his back, the fits succeeding each other at intervals of a quarter of an hour, until three o'clock, when he expired. The pupils contracted on exposure to light, and he gave tokens of sensibility ten minutes before his death.

On denuding the cranium, not the slightest injury could be discovered. The right temporal muscle was removed, but no fracture could be detected at the part on which pressure seemed to have produced the epileptic fit. The left temporal muscle was black, with extravasated blood, from the blow which seemed to have

been received on this part. The vessels of the dura mater were loaded with blood, and on removing it, the right hemisphere was found enveloped in coagulated blood. On removing the hair, two fractures were immediately visible—one on the right side, extending about two inches upwards and downwards, in a right line through the squamous suture—the other running through the centre of the mastoid process and petrous portion of the temporal bone, to the centre of the base of the skull. A piece of the petrous portion, about the size of a pea, was entirely detached, but not displaced so as to cause pressure.

William Govier, aged 44, was thrown from his horse on the night of November 16, 1826, and sustained a severe fracture of the skull. He walked with assistance to a cottage at some distance. Although insensible, he soon recovered his senses, and retained them. On a careful examination of the nature of the injury, it was found to be very extensive, the fracture running through the anterior superior angles of the parietal bones, and upper portion of the frontal bone, immediately over the longitudinal sinus. Several loose pieces of bone were driven into the brain to a considerable depth, so that it was a good deal lacerated. It was determined at once to proceed to an operation. Accordingly, an angular portion of bone was first removed with Hey's saw, with the intention of raising the depressed pieces, but this was found to be impracticable, until a larger portion was removed by a circular saw, which gave plenty of space for detaching the numerous broken pieces. One very large portion was driven down under the frontal bone, immediately over the longitudinal sinus, the removal of which was effected with much difficulty, and followed by profuse bleeding from the sinus. This, however, was completely checked by the introduction of a plug of lint. He was bled freely, and the usual antiphlogistic practice pursued. His recovery was perfect, although delayed by the supervention of an attack of acute rheumatism.

Isaac Bevan, aged 15, was knocked down by the vane of a windmill, which was rapidly revolving on a very windy day. The blow was so violent that it broke the wood-work of the frame, and drove the boy forwards to a considerable distance. Being in the neighbourhood at the time of the accident, I saw him immediately. There was an extensive laceration of the scalp, and fracture of the temporal and occipital bones. He was stunned, but not wholly insensible, and had vomited. He was removed to the Bridgewater Infirmary in a cart, a distance of ten miles, six or seven hours after the accident. On enlarging the wound, the injury was found to be so great, that I considered the case almost hopeless. The bones were broken into many pieces, some of which were completely detached and driven into the brain, por-

tions of which were discharging from the wound. I removed sixteen pieces, the largest of which was driven down to the base of the skull, and got up with great difficulty. He remained insensible after the operation, but on the following morning he was free from fever. Although he did not regain his speech or senses until the tenth day, he completely recovered in a short time, without any active treatment.

John Greenfield, aged 18, a strong healthy farm-servant, was brought to my house at six in the evening of Monday the 9th of September, having about two hours before received a kick in the head from a cart-horse, which knocked him down, but did not stun him, for he raised himself on his knees before a man who saw the accident from a short distance could come to his assistance, and was able to describe the manner in which the blow was given, and to tell his name and place of residence. There was a wound over the right eye, which led to a very considerable fracture of the frontal bone. He was quite sensible, complained only of slight pain in the head, and walked some distance to an inn, and was put to bed. He had some stupor, but not in any considerable degree; sickness, which was increased by pressure on the fracture; dilatation of the pupils, which contracted on the approach of a candle; the respiration was natural. As the symptoms were not urgent, a small quantity of blood was taken, and a purgative administered, which was thrown up four hours after, whilst examining the wound and removing some coagulated blood. The pulse was 60, and intermitted once in 15 or 20 beats. He was again bled, and directed to be kept quiet.

Tuesday.—He passed a tolerable night, but was frequently sick; stupor rather increased; pulse 60, but more oppressed; respiration rather laborious; on the whole, the symptoms are increased, but he got out of bed without assistance during the night to make water. At 12 o'clock, I divided the scalp right and left, in a semicircular direction, which enabled me to ascertain the nature and extent of the injury. The fracture began about the middle of the frontal bone, and ran across the frontal sinus towards the temporal bone, to the extent of nearly two inches. The principal depression was at the sinus, the edges of the bone, particularly towards the orbit, were very jagged, and irregularly broken. I found Mr Hey's saw extremely useful in removing the rough edges of the bone, which enabled me to raise several large detached pieces. Eighteen fragments were removed, including the whole frontal sinus. Having carefully removed a considerable quantity of coagulated blood from the dura mater, the scalp was laid down and covered with light dressing. The pulse rose immediately to 86, and became perfectly regular; and he felt so much relieved that he got out of bed, stood upright, and put on a clean shirt without any assistance. He was directed

to take ten grains of calomel, with an equal quantity of jalap, and afterwards a purgative mixture. At five o'clock his pulse was 65, and there was some stupor, which was relieved by the loss of 20 ounces of blood, when his pulse again rose to 86.

Wednesday morning, 9 o'clock.—Was very restless until three o'clock, after which he slept tolerably. Is perfectly sensible; pulse 82; breathing natural; complains of some pain in the head; has not been sick since the operation; no evacuation from the bowels. He was bled, and the calomel and jalap repeated. Eight o'clock P.M.—Has been freely purged, is hot, restless, and complains of slight pain in the head, but is quite sensible. Pulse 84, hard and full. He was bled to the extent of 12 ounces, and directed to take saline medicine, with tartarized antimony, and nitrate of potash.

Thursday, 8 A.M.—Has passed a good night, and is quite sensible—pulse 72. He was directed to keep quiet, and continue the same medicine; but his pulse being full and jarring at eight o'clock, he was bled to eight ounces. At ten, he became hot and very restless, vomited, and was delirious, constantly endeavouring to get out of bed. Ten ounces of blood were drawn, and some purgative medicine given, which quieted him, until two o'clock A.M., when all the bad symptoms returned, and were again relieved by a repetition of the bleeding and purgative.

Friday morning, 9 o'clock.—He is worse in every respect; appears to be sensible, and puts out his tongue when desired, but does not speak. Having always been relieved by the loss of blood, thirteen ounces were taken away. The pulse, which was 94 before the bleeding, rose to 120. A stimulating injection was given, which procured two copious stools, but appeared to make him worse—indeed, he seemed as if dying after the second. He continued very restless until eight o'clock, when he took forty drops of tincture of opium; and on visiting him at ten, and again at two in the morning, he was found more quiet, less hot, sensible, and able to answer questions.

Saturday morning, 6 o'clock.—Continues much in the same state as at the last visit, except that his water has passed twice involuntarily. At 12 o'clock, he complained of so much pain in the head, and was so hot, thirsty, and restless, that he was bled to eight ounces, which produced faintness, from which, however, he soon recovered. His pulse quickened very much after the bleeding, and at six o'clock he was in every respect worse; he is sensible, but does not speak. Forty drops of tincture of opium were given, and five grains of Dover's powder every three hours, which had the effect of procuring a good deal of sleep. From this time he regularly improved; and by pursuing the same plan, with careful attention to his bowels, he perfectly recovered.

This case occurred many years ago, before the attention of surgeons was directed to the effects of loss of blood on the system.

It is very evident that the symptoms, which alarmed me so much for the safety of my patient, were aggravated by my treatment; and that if I had not carried bleeding to such an extent, but had given opium and nourishment more freely at an earlier period, I should have spared my patient much suffering, and myself great anxiety. I consider this a case rescued at the eleventh hour, and attribute my patient's recovery entirely to a hint which I received from an old practitioner, who kindly visited him with me in the most critical stage of his illness, and remarked, that in his day, Bloomfield always directed Dover's powder in all cases of violent injury of the head, and concussion of the brain. In this case, I mistook exhaustion and irritation for inflammation—a common error with young and inexperienced practitioners. This is an important point in practice, requiring the nicest discrimination, on which a hasty or injudicious decision often leads to a fatal result.

Cases of Poisoning with Arsenic. By James M. Adams, Surgeon, Glasgow.

The subject of poisoning is never devoid of interest to either the medical or the lay public, but the fearful prevalence of poisoning with arsenic, as shown by the returns of the Registrar-General, as also by the frequent public trials and newspaper accounts of such occurrences, gives to this form of poisoning an interest of a more absorbing character than to most other poisons.

From the fatal facility with which arsenic can be procured and administered, there is no lack of opportunity for observing its effects. It is yet, however, to be regretted, that so many examples of conflicting medical evidence are witnessed in public courts. The occasional record in our periodic literature, of cases which even do not possess features of peculiar interest, are then, I conceive, of use, by refreshing the memory, or by awakening attention, and so causing medical men to be at least familiar with the more prominent effects of this deadly agent. It is with this view that I select from my case-book a few instances, which I dare say will find parallel in the observation of most practitioners of any experience.

Case—Jan. 3, 1840.—Mary R——, æt. 24, reported to be of good moral character, and of temperate habits. About six weeks ago, her father died, leaving her the principal support to an aged and infirm mother. Her brother, a young man of dissipated habits, had repeatedly ill used her; and this morning he had beaten her and threatened another beating. She was heard to remark that she would put that out of his power, for that "sooner than live in such misery, she would poison herself." No heed was paid to her threat, which was considered the hasty ex-

pression of the moment. She had, however, determined on self-destruction; for this evening, a few minutes before six o'clock P.M. she purchased 1d. worth (ʒvj) of arsenious acid, "for the purpuse," she said, "of destroying rats." She seemed in good spirits, and joked with the shopman, from whom she made the purchase. She then went to the house of a neighbour, where she showed the paper of arsenic, and again spoke of her determination to poison herself. A few minutes afterwards, *i.e. a quarter past six* P.M., she mixed the poison in a little water, and succeeded in swallowing the whole of it unobserved. In about 15 minutes she became sick, and vomited freely. She then went to her own house, where she became rapidly worse with occasional vomiting. She at last acknowledged having taken the poison, and medical assistance was sent for. My brother, Dr A. Adams, and myself attended. We found our patient in bed; her features were cadaverous, sharpened, and expressive of great anxiety; her eyes prominent, bright red, and sparkling; surface of body cold and clammy; pulse quick, fluttering, and very feeble. These symptoms were accompanied by great prostration of strength, and she complained only of a sense of extreme faintness. There was no swelling of the abdomen, and she did not complain of pain when pressure was made over it. No vomiting had occurred for half an hour previous to our arrival. It was at this time a quarter before 10 o'clock P.M. Two large doses of sulphate of zinc were administered, with an interval of 5 or 6 minutes between each dose, but without exciting vomiting. She was then caused to swallow frequent draughts of milk, with magnesia suspended in it. Severe but ineffectual attempts at vomiting now occurred. About this time, she passed a small quantity of urine with much pain and difficulty, and shortly afterwards she was seized with involuntary diarrhœa. A little before 11 o'clock, we applied the stomach-pump, which, up to that time, we were unable to procure. On introducing the œsophagus tube, vomiting was excited, by means of which, and by the continued action of the stomach-pump, considerable quantities of the contents of the stomach were withdrawn. Very soon after, she was seized with excruciating pain in the epigastrium, and she repeatedly exclaimed, that her "inside was burning." She called incessantly for cold drinks, which were freely administered. Her pulse shortly became imperceptible, and the heart's action feeble, and ascertained with difficulty. At a quarter past 11 o'clock convulsions came on, accompanied with delirium; the pupils became dilated, and she sank rapidly, dying at half past 11 P.M. A period of $5\frac{1}{4}$ hours occurred from the time she took the poison until her death.

Twelve hours after death, I made an examination of the body. It was plump and firm. Large livid discolorations were observed on the trunk and upper extremities. The alimentary canal, from the stomach to the sigmoid flexure of the colon, was much con-

tracted, and its serous surface was closely injected with bright arterial blood, giving it an inflamed appearance. The peritoneum *generally* had a peculiar, dry, and *waxy-like* aspect, very markedly different from its ordinary appearance. The stomach was filled with coagulated milk, having flakes of magnesia suspended. On removing its contents, the inner surface, especially towards the cardiac extremity, was found lined with a dark-red pulpy substance, composed apparently of extravasated blood, mixed with mucus. Several elevated patches, of a dark colour and fungoid appearance, were scattered over the inner surface, but were found principally towards the pylorus and in the duodenum. The greater portion of the inner surface of the stomach was corrugated into thick prominent rugæ, between which, and especially in the vicinity of the dark patches referred to, quantities of a yellowish powder were found closely adherent. The villous coat, together with the pulpy substance alluded to, was easily detached with the finger-nail, exposing scattered patches of extravasated blood; and the whole organ seemed thickened, and felt soft and gelatinous. Several parts of the intestines presented similar appearances upon a smaller scale. The bladder was firmly contracted, and its mucous lining streaked with red vessels. We were allowed to proceed no farther with the inspection.

The contents of the stomach, on applying the ordinary reagents were found to contain arsenic.

This case, I think, presents some interesting features. In the absence of a necroscopic examination, and from the mere detail of symptoms, I would have placed it under the class described by Dr Christison, where the patient is destroyed without any appreciable local lesion. But the *post-mortem* appearances make it evident that it belongs exclusively to neither the first nor second class of cases described by that writer. At first, the extreme exhaustion, faintness, fluttering action of the heart, and absence of epigastric tenderness, indicated that the poison was producing its fatal effects by its remote action, and independent of any local irritation or inflammation. But while the nervous prostration was most extreme, inflammatory symptoms supervened, the patient then becoming conscious of a burning sensation and desiring cold drinks. I can only attempt to account for the absence of epigastric tenderness at this stage, by supposing that the poison had narcotized, in a great measure, the general nervous system, rendering it incapable of evincing one of the most constant and characteristic symptoms of inflammatory lesion, viz. pain. A few cases, presenting the same anomaly have been recorded. It is also deserving of notice, that in the first stage of the symptoms, the powerful emetics employed had no effect in producing vomiting.

Case—Dec. 2, 1841.—I was requested this evening, by my

friend Mr S., a medical student, to inspect the body of a man who had died from taking arsenic. On inquiry, I learned that the subject of our examination, Peter M'Nab, aged 56 years, was a stone-mason, of intemperate habits, and a freethinker, and had frequently declared his disbelief of future punishments, &c. On the 23d of last month (November), he swallowed half an ounce of arsenious acid, which he had purchased on the usual pretext of poisoning rats. In about three-quarters of an hour thereafter, he became sick, and vomited freely. Profuse purging came on shortly after, and, together with the vomiting, affected him twice or thrice in the course of the same evening. For some days he kept within doors, but made no complaint. On the 26th of the month, he removed to another lodging, situated about a mile off, and walked the distance. On the 30th, he became suddenly and severely ill, and believing that the deadly effects of the poison had gone off, and that he was now enduring unnecessary suffering, he confessed having attempted his life in the manner narrated. Mr S., who lived in his immediate neighbourhood, was instantly applied to, and found him in the following condition :— He was quite collected, his breathing quick and anxious, his mouth dry and parched ; tongue dry and of a dark-brown colour ; pulse 65, and small. He had frequent dark watery stools. He complained of considerable epigastric tenderness, and had a constant desire for drinks, but could take no solid food.

Mr S. cupped him over the epigastrium, and administered mucilaginous drinks, from the effects of both of which the patient expressed himself as much relieved. In six hours afterwards, he became comatose—his extremities cold, and his pulse imperceptible. His pupils became contracted, accompanied with strabismus. His mouth became parched, his breathing laborious, and he was very restless. He sank rapidly, and died—an interval of nine days having elapsed from the time he took the poison.

Twenty hours after death, I examined the body in the presence of Mr S., and of my brother Dr A. Adams. It was firm and muscular, presenting discoloured patches, but not remarkably so. There was great emphysema of the lungs, particularly that of the right side, where there also existed some old adhesions of the pleura. The pericardium contained nearly five ounces of serum. The heart was enlarged, though not to a very marked degree. The stomach was dilated, and a slight but distinct contraction divided the pyloric from the cardiac extremity. The serous surface of stomach was congested with dark vessels, and the cardiac portion was quite black. A quantity of thick, brown, muddy-looking fluid was removed from the interior of the stomach, having flakes of coagulated mucus floating in it. At the cardiac extremity, and corresponding to the blackened portion already mentioned, the villous coat, in an extent of three or four inches, was also black, caused by extravasated blood lying beneath the membrane. The

duodenum had much the same appearance as the stomach. The mucous coat of the intestines was throughout very soft and pulpy, and peeled off readily with the finger-nail. The whole tract of the intestinal tube from the œsophagus downward was congested, and in several parts injected with bright-red vessels, both externally and internally. Considerable quantities of mucus were thrown out at different portions of intestine, but by far the greatest quantity was found in the rectum, which was also highly injected with red vessels. Yellowish particles, resembling fine sand, were found adherent to the mucous lining at various parts. The mucous membrane of the bladder was slightly streaked with red vessels.

Our inspection went no farther, as some relatives from the country were somewhat clamorously desiring our departure, so that they might remove the body.

This case differs in nowise from many other recorded examples of a lengthened interval ensuing from the taking of the poison until the subsequent death; and the common explanation seems to be equally available here. For as copious vomiting, together with purging, came on shortly after he had swallowed the poison, it is a fair inference that the greater portion of the deleterious ingredient had been then thrown off.

The two preceding cases are well-marked examples of the common forms of poisoning by arsenic. The case which follows shows a train of well-marked symptoms followed by recovery.

Case—March 15, 1843.—John Parker, æt. 42, by trade a silk-weaver, of intemperate habits and shattered constitution. Yesterday evening, at 8 o'clock P.M., he swallowed two drachms of arsenious acid, stirred up in water, stating to those near him that it was soda for the heartburn, and "as it would not mix with the water," he used a considerable quantity of the latter to rinse out the bowl, from which he swallowed the poison. Shortly after, he became sick and faint, and in *two* hours afterwards he was tormented with a burning thirst, and eagerly desired cold water, which, however, at the time, could not be procured for him. At 12 P.M., severe vomiting and purging came on, and continued with little interval for three hours. He was then seized with convulsive tremors, "so that the bed shook under him," and these were accompanied by sensations of cold and extreme faintness. As the morning advanced, he, under the impression that his end was approaching, confessed to his wife that he had taken poison. She immediately came for my assistance. When I saw him first, at 8 A.M., he was out of bed and sitting up. His countenance was pale and sallow, and bore a painful anxious expression. His pulse was 120 and feeble; pressure over the epigastrium gave pain. The surface of his body was cold and clammy. He complained only of sickness and inclination to vomit, with occasional tendency to

faint. He was very restless, and now and again paced across the apartment, "to shake off the faintness."

I gave him repeated draughts of lime-water, tepid water, with powdered charcoal, and carbonate of magnesia suspended, and of infusion of linseed. These produced copious vomiting, which I encouraged so long as I considered safe and necessary. At one P.M. his pulse was 96, and had increased in strength. He complained of tenderness across the abdomen, increased on pressure, and his respiration was short and gentle. Mucilaginous drinks were freely exhibited, and a large dose of the precipitated carbonate of iron, with a little aq. ammon. was also administered. At eight P.M., his pulse was 96, and the pain over the epigastrium had increased. A cantharides blister was applied over epigastrium.

March 16.—During the night and towards the morning, he has had several slight convulsions. His pupils are dilated, and the conjunctiva reddened, so as to appear inflamed. His pulse is 96, soft and feeble. There is no tenderness of abdomen, unless on pressure. Slight tormina and bowels constipated. Half an ounce of castor-oil given.

March 17.—Bowels have been opened. Was incoherent and slightly delirious yesterday evening, but during night had several hours of refreshing sleep. Tongue is furred, and red at tip. Pulse 90, and soft. Complains of pain above pubes.

March 18.—Complains of excessive debility, and occasionally experiences cramp of legs. For the first time, he expresses great remorse for his crime and its probable consequences.

March 20.—Has cough, with pain of throat, but no expectoration. Posterior part of mouth and pharynx is intensely red and seemingly excoriated; gums tender and swelled. A *vesicular* eruption has come out over greater part of right ear, and also of nose. Several of the vesicles have coalesced, forming large patches. They are all surrounded with an inflamed base. Complains of severe frontal headach. Abdomen is tympanitic, but there is no pain on pressure; bowels are constipated, and he feels as if they were "wrung together." The cramps of legs are occasionally recurring. To take inf. sennæ et mannæ.

March 23.—Pulse still quick; tongue covered with a white crust. Roof of mouth corrugated, and the folds of mucous membrane hard and white. Palate and pharynx still intensely red. Several of the vesicles on ear and face have become filled with pus. Experiences difficulty in swallowing—has frequent tendency to vomit. Suffers from pain in stomach shortly after taking food. Abdomen slightly tympanitic—slight tenderness over epigastrium on pressure. Bowels constipated. Complains greatly of the cramps of legs, which are increasing in frequency. Renewed blister; gave draught of senna and manna; and after bowels are opened, to have four powders, each containing two grains of calomel and half a grain of opium—one to be given every four hours.

Shortly after this date, he was so far recovered that I ceased to visit him. When sufficiently well to take out-door exercise, he found himself so much the object of observation and remark, that he removed from Glasgow altogether.

About six months afterwards, I accidentally met a member of his family, from whom I learned that he had lost flesh considerably; that his general health was far from being as good as formerly; and that he occasionally suffered from affections of the stomach.

Some points in the preceding narrative require illustration. I traced the druggist from whom the poison had been procured, and found the quantity to be as stated, *i. e.* ʒij, and also that the drug was genuine. It had been purchased under the usual pretext, viz. poisoning rats. One of his children saw him throw the paper, from which he had emptied the powder, among the cinders of the ash-pit. The paper was procured after a search, and I found particles of arsenious acid adherent. I regretted much that I was deprived of an opportunity of examining the vomited matter, which, together with the alvine evacuations, unfortunately were thrown away immediately after my first visit, the scanty furniture of the household requiring them to make use of the vessels which contained them.

About two hours before swallowing the poison, he took two cups of tea, a slice and a half of bread, and a piece of a herring, followed up an hour after with two glasses of whisky.

For several weeks previous to the attempt he made on his life, he had suffered much in mind from the profligate conduct of one of his daughters, and this had led him to engage farther in intemperate habits, in consequence of which he lost his employment. At same time, he was harassed for his rent; and under this combination of circumstances, he was "driven to the act." Among his fellow-workmen, he expressed atheistical opinions, and professed to believe neither in a heaven nor hell.

With regard to the treatment, little need be said. His shattered habit of body prevented me from employing depletory measures, which I otherwise would have had recourse to at several stages of the case. The dose of carb. Ferri. was given from my recollection of having seen it somewhere recommended in the absence of the hydrated sesquioxide, which I was unable to procure at the time.

Compound Dislocation of the Ankle Joint. By William Henderson, M.D., Corstorphine.

William Thomson, aged 12, on the evening of the 30th of May 1843, was riding at a rapid rate, when the pony stumbled and came down on a heap of mud. He tumbled over its head, and before

he could recover himself, the pony falling over him, its head struck his right ankle on the inner side. The consequence was a compound dislocation of the outer ankle—the foot was turned in, the sole being nearly on a line with the inner side of the tibia—the ligaments were ruptured—the joint was open—and the anterior tibial artery torn across. When seen about an hour after the accident, the blood was running from the anterior tibial in a a small stream; the skin was retracted over the outer malleolus. No attempt was made to replace the retracted skin, the foot was merely put straight and tightly bound to the limb to prevent farther loss of blood.

On the second day thereafter, the bandages were taken off and the skin brought down over the outer ankle and fixed to the foot with stitches. A tedious suppuration of five months followed, and for twelve months afterwards there were partial suppurations, with exfoliations of small pieces of bone from the outer ankle. The loose skin from the outer ankle ulcerated off, exposing it covered with luxuriant granulations. The foot had a great tendency to turn in; and from the raw state of the outer ankle immediately after the accident, counter pressure could not conveniently be applied. When he began to use the foot in walking, an iron splint, adapted to the sole and inner limb, was worn for several months, so as to give firmness to the joint. The external malleolus is considerably enlarged, and the tendo Achillis is a little shortened, which latter defect might be remedied; but notwithstanding all these blemishes or defects, if they might be so called, he has now a good useful joint, possessing some motion, and far superior to any artificial apparatus.

Corstorphine, August 1845.

Abstract of a Memoir on the Leech Commerce of France. By M. Chevalier.*

France has been for some time supplied with leeches for medical use from Hungary, Turkey, Wallachia, Russia, and Egypt. This branch of commerce is chiefly in the hands of large dealers, and, indeed, at the present time, it is carried on almost entirely by a single company at Strasbourg, where the animals are kept in large ponds for the supply of retailers. They are conveyed from their native marshes to the French frontiers overland, in ten

* In the Periscope of our last number, we gave a translation of a letter from Magendie to a Leech Dealer of Paris, taken from an ample and very instructive memoir by Chevalier, on the Leech Commerce of France, contained in the July number of the "Annales de Hygiene Publique." From a copy with which we have been kindly favoured, we give above an abstract of some of the most useful points of that memoir, made by a distinguished Professor for his own use.

or twelve days, by means of spring waggons, in which they are disposed in bags from 100 to 120 in number, and each weighing about eight pounds avoirdupois. They are watered occasionally on the way. But, contrary to what has been often alleged, they are not fed either before or during the journey; for in that case the mortality on the way is greatly increased. The supply has been falling off for some years—the annual importation into France prior to 1834 having been 44 millions, while now it is only $17\frac{1}{2}$ millions; and the price has risen in the same ratio as the importation has diminished, namely, from three-halfpence each to fivepence. The source of supply is therefore obviously becoming exhausted.

In French trade five denominations of leeches are distinguished, viz. great leeches, cow-leeches, middlings, little-middlings, and thread-leeches. The last quality consists of young ones gathered a great deal too soon, and comparatively unfit for use. The relative prices to the wholesale dealer are 200 shillings, 165, 180, 92, 54 shillings the thousand. The relative size may be judged of from the relative weight of a thousand of them; which varies from $6\frac{1}{3}$ to $6\frac{9}{10}$ avoirdupois pounds, for the great leeches; from $2\frac{1}{3}$ to $2\frac{3}{4}$ for the middlings; from $1\frac{38}{100}$ to $1\frac{43}{100}$ for the little-middlings; and about $\frac{88}{100}$ for the thread-leeches. Cow-leeches, an inferior sort, are the largest of all, for a thousand of them usually weigh about 20 pounds. At least two species of the leech occur in French commerce, the *Sanguisuga officinalis* and *S. medicinalis;* and M. Moquin-Tandon, who has studied their natural history attentively, finds that two other species, the *S. interrupta* and *S. obscura*, are also occasionally made use of in France.

The relative utility of the four principal qualities, deduced from the quantity of blood they draw, appears extremely different. In a careful trial made with ten leeches of each quality, which were selected for the purpose by one of the principal leech-dealers in Paris, it was found that each great leech, which weighed on an average 46 grains, drew 247 grains of blood; that each middling-leech, weighing $19\frac{1}{3}$ grains, drew 129 grains; that each little-middling of the weight of 11 grains, drew 51 grains; and that each thread-leech, which weighed only $7\frac{3}{4}$ grains, sucked no more than 19 grains. It is worthy of remark, that every one of these forty leeches fastened upon the skin at once, and without any preparatory measure whatever.

The principal cause of the tardy and imperfect action of leeches is, that they are partially gorged by the dealers, either expressly, or simply because they have been previously used. The practice of expressly gorging leeches prevails to a great extent in France. The reason is, that the lower qualities of them, when allowed to remain in blood till they are satiated, will, in this way, double their original weight, and thus pass with the inexperienced for

leeches of a higher quality, and much greater price. Leeches treated in this way are not always easily known. Though generally torpid, they are sometime active enough; and when squeezed in the hand, they contract themselves into a ball, which is therefore not an infallible character, as some suppose, of the leech being good. They are best known by the following characters:—When pressed between the finger and thumb, they do not flatten so easily or so completely as when fasting, and they present a reddish appearance: If squeezed between the fingers from the head to the tail, a tumour forms at the end, consisting of blood: If the leech be dusted over the forepart of its body with finely-powdered salt, and a little more be sprinkled on its two ends, when it elongates them in its efforts to escape, the blood will be emitted within thirty seconds. The last test will even detect the minutest traces of blood left in a leech that has been used and stripped, unless the operation of stripping has been performed with unusual care. A virgin-leech never emits any blood when touched with salt.

Many interesting practical deductions follow from these facts. The most important to the medical practitioner is, that *an experienced dealer can chuse from his store leeches which will, to a certainty, fasten upon the skin at once without any preparatory measure, and will suck on an average half an ounce of blood.* In ordinary cases, much annoyance is occasioned to the patient by the sluggishness with which they adhere; and the average quantity of blood drawn by suction does not exceed one drachm.

Part II.

SURVEY OF THE RECENT LITERATURE OF THE HISTORY AND TREATMENT OF DISEASES.

No. I.—*Bright's Disease of the Kidney.* By Alexander Wood, M.D., F.R.C.P., Lecturer on the Practice of Medicine.

(*Continued from page* 218.)

PART II.—PATHOLOGY OF THE DISEASE (*continued*).

IV. *Inferences as to the Pathology of the Disease deducible from the Facts ascertained.*

Of the real pathology of this disease we are unfortunately at present ignorant. There are, however, certain questions regarding

it which must be determined before any advance can be made in a knowledge of its intimate nature.

1. *Is albuminous urine necessarily dependent on the diseased state of the kidney?*

That the *persistent* presence of albumen in the urine, more especially when accompanied with dropsy, does, in most cases, warrant a strong suspicion of structural lesion of the kidney, will be at once admitted; but as many exceptional cases have been met with, the rule is by no means to be regarded as of universal application.

Chronologically, Dr Darwall was, I believe, the first to publish a case, where albuminous urine and dropsy co-existed, and seemed dependent on *organic* disease other than that of the kidney.—(Cyclo. Prac. Med., art. Dropsy.)

Two cases of a similar kind have been published by M. Forget.—(Gaz. Med., vol. v. p. 609.)

Dr Morrison has published a case, where, for five years, the urine was coagulable by heat and the mineral acids, and yet the patient died of aneurism of the ventral aorta, the kidneys being natural.—(Dub. Journ., No. xxxvii.) M. Toulmouche relates in the *Gazette Medicàle*, a case of phthisis, attended with ulceration of the intestines, where the kidneys were healthy, although the urine had been highly charged with albumen. Rose and Henry have observed the presence of albumen in the urine, with deficiency of urea in cases of chronic inflammation of the liver, with constant dyspepsia (Meckel's Archiv., ii. 642) as well as towards the termination of all diseases producing emaciation.—(Müller's Physiology by Baly, vol. i. p. 584.) But it is needless to multiply examples, for numerous instances are now published of granular disease of the kidneys, where the urine was not albuminous, and of persistent albuminous urine, without disease of the kidney.—(Brit. and For. Med. Rev., No. xxxix. p. 266; Edin. Med. and Surg. Journ., April 1844; Well's Report of Malta Hospital; Dublin Med. Journ., Jan. 1843. Oesterr. Med. Wochen., Nov. 26 and Dec. 3, 1842.)

Dr Graves, in his clinical medicine, always clear, sound, and practical, thus expresses himself on the subject. His remarks are founded on the case of a boy who died of scarlatinal dropsy, with chest affection, and in whom the kidneys were found perfectly sound:—

"The long-continued presence of albuminous urine, in a case where no such state of kidney existed, forms conclusive evidence that this state of urine is not necessarily the result of that renal degeneration to which it is referred by Dr Bright; the occurrence of one positive exception is sufficient to disprove such a conclusion, even though supported by a thousand cases, and, consequently, when albuminous urine, in chronic dropsy, is found to occur along with Bright's kidney, I consider this particular state of

urine and of kidney, as depending upon different causes, which often co-exist in chronic dropsy, and, consequently, I regard albuminous urine as a sign of Bright's kidney, but not as its result." —(P. 540.) Again, in lecturing on the case of a patient who had bronchitis and anasarca, and whose urine was highly albuminous, but lost all traces of it in two or three days, under the use of moderate doses of opium, he remarks :—

"Now, this case alone would be a sufficient refutation of the opinions of those who look upon albuminous urine as a pathognomic sign of disease of the kidneys, as described by Dr Bright, and who are in the habit of marking such cases in the hospital, as cases of 'Bright's kidney.' It appears rather strange, as in our case, that a man should have 'Bright's kidney' to-day, and not have it the next day.* We have had a great many instances of this kind, and in various cases which came under treatment in this hospital, I have shown that this state of the urine may depend on mere functional disease of the kidney. Indeed, nothing is more common than to meet albuminous urine in the dropsy which succeeds scarlatina, and yet most of the patients perfectly recover. I had lately an opportunity of examining the kidneys of a boy named William Young, admitted on the sixth day from the commencement of anasarca after scarlatina. This boy's urine had a specific gravity as high as 1027, and contained an enormous proportion of albumen. He died suddenly of convulsions, the fourth day after his admission. His kidneys were in every respect healthy."—(Ibid. p. 716.)

Having thus conclusively established the possibility of the occurrence of albuminous urine, without organic disease of kidney, it would appear to be of importance to inquire, in the next place,

2. *What are the conditions under which albumen is secreted with the urine, independently of organic kidney-disease?*

To render the solution of this question of any practical importance, we must exclude all those cases in which the urine is not impregnated with albumen during the process of secretion, but becomes so by subsequent admixture with healthy genito-urinary albuminous products, (as semen, menstrual fluid, prostatic secretion,) and that very doubtful class of cases where purulent or albuminous secretions have been supposed to have been absorbed, and subsequently excreted through the kidneys.

The remanent cases may be divided into two classes :—

1. Cases in which albuminuria has been produced by peculiar states of the kidneys, other than those usually considered to indicate Bright's disease, which may again be subdivided into

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* This is, perhaps, rather strongly put by Dr Graves, as even in the most aggravated cases of Bright's disease, the secretion of albumen in the urine is often temporarily suspended.

a. Functional disorders; and
b. Organic diseases.

2. Some peculiar modification of the circulatory fluid, produced either by disease, or by the effect of particular articles of diet, or by the suppression of some excretion.

With regard to the first class of cases, it may be remarked, that the occurrence of albumen in the urine in certain diseases of the kidney, other than Bright's disease, has been long known.

Cotungo, in his work already quoted, (De ischiade Nervosâ Commentarius, 1770, p. 31) announces the discovery of its presence in diabetic urine. The following analysis of diabetic urine, by M. Bouchardat, attests the same fact:—

Water, ...	835·35
Sugar, ...	134·42
Urea, ...	8·27
Albumen, ...	1·40
Mucus, ...	0·24
Lutate of ammonia, . . .	6·38
Extractive matter soluble in water,	6·38
,, insoluble in water, but soluble in alcohol, . . .	5·27
Salts, ...	8·69—(Bibliotheque de Med. Pratique;)

and their observations are confirmed by those of Thenard and Rayer. It is singular, however, that while the former author regards it as an evidence of approaching recovery in that disease, the latter looks upon it as a sure and immediate percursor of dropsy. It must be borne in mind also, that diabetic patients are very liable to intercurrent attacks of nephritis. In this disease (acute nephritis), we may assert, on the authority of M. Rayer, that the urine is often temporarily albuminous; and this is confirmed by three cases narrated by Martin-Solon. Direct or indirect excitement of the kidneys or urinary passages, seems also to be capable of inducing the temporary admixture of albumen with the urine. Dr Christison states that he has seen it produced when a cantharides blister has excited urinary irritation.

Turning now to the second class of cases, for which we are especially indebted to M. Martin-Solon, we are equally struck with their number and variety. In cases where the blood was attenuated by hemorrhagic diseases, as scurvy, purpura, &c., the presence of albumen in the urine had been noticed by Dr Blackhall; in these, however, it might be supposed that some co-existing affection of the kidney might have escaped attention, did we not find the fact confirmed by Rayer, who informs us that in purpura, acute rheumatism, and typhoid fever, a certain quantity of blood or albumen is mingled with the urine. This statement, in reference to albuminous urine, as far as anæmic diseases are concerned,

derives additional interest from recent observations of Dr G. O. Rees.—(Guy's Hosp. Reports, April 1843, and Med. Gaz., Aug. 16, 1844.) Dr Rees has directed attention to the extreme tenuity of the blood in Bright's disease, and shown how this condition constitutes the true cause of the deficient proportion of hematosine observed in the later periods.

Among the diseases which modify the state of the blood, so as to produce albuminuria, are ranked many febrile and inflammatory affections. This subject has received particular attention from M. Solon, who at one time regarded the appearance of albumen in the urine, in such circumstances, as a favourable critical sign. Farther experience, however, has induced him to abandon this opinion.—(See Br. and For. Med. Rev., vol. viii. p. 158.)

These cases he divides into two groups; in the first, the urine is coagulable by heat and nitric acid; in the second, it was coagulable by the addition of nitric acid, but unaffected by heat. Protracted ebullition, however, re-dissolved the precipitate which the acid produced.

The coagulability, in the first class, was clearly owing to the admixture of albumen; in the second, M. Donné ascertained, by microscopical investigation, that it depended on the presence of lithate of ammonia. The author of a very able review of the different writers on this subject, in the Br. and For. Med. Review, vol. viii., has condensed the cases of M. Solon, into a tabular form, which gives the results of his experience at one view.

Diseases.	Number of Cases.	Coagulability					
		Not produced by any re-agent.		Produced by Heat.		by Nitric Acid.	
		A.		B.		C.	
		Recovered.	Died.	Recovered.	Died.	Recovered.	Died.
Intermittent Fever . .	8	1	0	2	0	5	0
Febrile Exanthemate — Measles	7	2	0	1	0	4	0
Febrile Exanthemate — Variola	11	6	0	1	0	4	0
Febrile Exanthemate — Scarlatina	3	1	0	1	0	1	0
Febrile Exanthemate — Pemphigus	1	0	0	0	0	1	0
Typhoid Fever . . .	23	3	1	3	1	15	0
Bronchitis	1	0	0	0	0	1	0
Pleuropneumonia . .	24	2	0	2	0	17	3
	78	15	1	10	1	48	3

Hence it appears that the urine of $\frac{1}{11}$ of a mass of patients affected with acute diseases, may be expected to become albuminous at some period or other before their recovery.

Dr Lever, a contributor to this Journal, has made some interesting discoveries with regard to the occurrence of albuminuria during puerperal convulsions.

He found in all the cases of puerperal convulsions that occurred

in the Lying-in Charity, and in private practice, with one exception, the urine was albuminous. The convulsions, in the exceptional case, appeared to depend on inflammation of the membranes of the brain with effusion. Urine secreted during healthy labour was also examined, and found to be non-albuminous. Dr Lever is of opinion, that cases of convulsions, complicated with albuminous urine, are of two forms: in the one, the urine is *albuminous during pregnancy*, of which there are external evidences, as œdema of the face, eyelids, hands, &c. In such cases the convulsions will be more violent—will last for a long time after delivery, and the urine will long retain its albuminous properties. In the second variety, the urine becomes *albuminous during labour*. The albumen is less abundant, and speedily disappears after delivery. The fits are less violent, and seldom reappear after the labour has been completed; but if they do, it is in a milder form, unless complicated with lesion of the brain. Urea was sought for in vain in one of Dr L.'s cases.—(Med. Gaz., May 17, 1844, p. 216.)

With regard to the production of albuminuria, from the employment of certain culinary or medicinal articles, we have been somewhat at a loss whether or no they ought not to have been referred to the former head, as acting by the production of temporary irritation of the urinary organs.

Numerous and accurate experiments have sufficiently established the rapidity with which different substances swallowed can be detected in the urine, of which the most interesting are perhaps those of Wohler, (Journ. des Progrés des Sciences Medicales, t. i. p. 41., t. ii. p. 99), and Stehberger, (Journ. Complemen., t. xxv. p. 321). This is not of itself, however, sufficient to prove that these substances do actually render the urine albuminous by their direct action on the organs connected with its secretion, unless those to which allusion has already been made, which are known to have a directly irritating effect, as cantharides.

Dr Mateer records a case where coagulabilty of urine was produced by the use of infusion of gentian with carbonate of ammonia, (Ed. Med. and Surg. Journ., Jan. 1837). Dr Blackhall thinks the use of the alkalies, or their salts, "disposes the serum of the blood to pass off by the kidneys."—(On Dropsies, p. 81.) Dr Christison has found the same effect follow the free use of cheese, pastry, and other indigestible articles of diet.

The effect of mercury in inducing albuminous urine is still a subject of discussion. The first observations I have been able to find on this subject, are those of Dr Wells (Trans. of a Society, &c., vol. iii. p. 229), who thus expresses himself:—"Having found serum in the urine of three out of four patients, who were in a state of salivation, excited by mercury, for the cure of the venereal disease, I thought it unlikely that its presence was either accidental in all of them, or occasioned by that disorder, and therefore supposed that it might arise from the remedy which they

were employing. I examined, in consequence, the urine of six patients in the venereal wards of St Thomas' Hospital, before they began to use mercury, and found that it contained no serum in five, and not more in the sixth than the smallest quantity that can be detected by heat, or the nitrous acid. After they had been in a salivation upwards of a fortnight, I examined their urine a second time, and then found that the quantity of serum was so far increased in that, which formerly contained a very little, as to give a coagulum equal in bulk to one-fifth of the mixture; that there was a little serum in the urine of the two others; that there was as much of it in the urine of another as to form a coagulum, the height of which was two-thirds of that of the whole mixture; and that in the urine of the remaining two there was no serum." Dr Wells then goes on to observe, that it was probable that in four cases of chronic disease with albuminous urine, which he had recorded, the albumen was caused by the previous employment of mercury, and that in three of his dropsical patients, whose urine contained a large quantity of serum, mercury had been previously employed.

In Dr Blackhall's work on Dropsy, are nine cases of dropsy supposed by that author to have been induced by the employment of mercury; in every one of these the urine was coagulable by heat. So convinced does this author seem to be of the constancy of this connection, that he thinks it necessary to remark that it is not invariable, and to find a reason for its occasional absence. "There are, however, exceptions to this coagulable state of the urine, which are probably to be attributed to the mercury passing off rapidly by the bowels, and thus leaving the constitution weakened rather than inflamed."—(P. 104.)

Dr Christison has met with cases tending to prove the connection of albuminous urine with mercurial erythism; M. Martin-Solon has examined the urine of many patients under salivation for various diseases, and in none has he detected albumen; and, lastly, M. Rayer is of opinion that the urine does not contain albumen during a mercurial course, unless the patient be at the same time labouring under scurvy, purpura, or some intercurrent affection of the urinary organs.

The valuable investigations of M. Forcault have shown that albuminuria may be readily induced by suppression of the cutaneous secretion (Comptes Rendus, May 5, 1844), which he believes to act by producing an excess of lactic acid in the blood, which again reacts on the albumen.

In connection with this, we have an interesting series of cases by Mr Ross of Camberwell, showing the intimate connection which subsists between the suppressed action of the skin and the appearance of albumen in the urine.—(Lancet, Aug. 3, 1844.)

Lastly, Dr Meyer of Tubingen (Archiv. für Physiolog. Heilk, Jan. 1844) is of opinion that mere accumulation of blood in the

kidneys, whether from augmented arterial supply, or from venous stagnation, is, of itself, sufficient to produce the disease; and Mr Robinson has shown that compression of the renal vessels produced albuminuria.—(Medico-Chirurgical Transactions, vol. xxvi. p. 51.)

Having thus endeavoured to present a summary of the present state of our knowledge relative to the occurrence of albumen in the urine, let us attend for a little to the dropsy.

3. *In what manner is the occurrence of dropsy connected with Bright's disease of the kidney? How is that symptom produced?*

Andral, in his Hematologie, distinctly proposes this question, "Is it the disease of the kidneys which produces the dropsy directly, in the same way as it produces the disease of the heart or liver?" "It is very evident," he replies, "that the disease of the kidney only produces the dropsy indirectly, and by the modification of its texture, depriving the blood of its albumen. It is this diminution of albumen in the blood which is to be regarded as the direct cause of the dropsy. Whatever is the cause by which the albumen is diminished, it is the diminution of the albumen which causes the dropsy. It is not necessary, in order to account for this, that the globules, as well as the albumen, should be found diminished. In Bright's disease, there is, *at first*, a diminution merely in the albumen, the globules do not diminish for some time, and often not until after the dropsy has commenced." After making the somewhat startling statement, that as far as our knowledge at present extends, kidney-disease is the only one which notably deprives the blood of its albumen, he proceeds from some observations on the sheep, in which other diseases than those of the kidney produce that effect, to show, that dropsy is by no means invariably to be attributed to an increase in the water of the blood, but that it may equally arise from diminution of its albumen.

The writer of the able papers in the British and Foreign Medical Review, to which allusion has been more than once made already, conceives that two facts completely overturn the doctrine of Andral, which is held also by Sabatier, Christison, and Martin-Solon. These two facts are thus stated by Rayer:—"We know, for a certainty, on the one hand, that patients affected with albuminous nephritis, after scarlatina, rapidly become dropsical before any considerable quantity of albumen has been discharged with the urine; and, on the other, that individuals labouring under the endemic haematuria of tropical climates, void albumen for years, sometimes during their whole lifetime, without becoming dropsical."—(P. 608.)

In a science, such as Pathology, I do not feel sure that an argument of this kind is conclusive, however logical it may appear. For, firstly, we know that it often happens in disease, that the same apparent causes are not always followed by the same effects;

and it is quite in accordance with our knowledge of morbific agencies to believe, that although, in the cases in which it does occur, the dropsy may be attributable to the state of the blood, yet the same state of the blood may not *invariably* give rise to dropsy. It is to be presumed, that some one or other of the lesions, which, collectively with their symptoms, are named, "Bright's Disease," is the cause of the dropsy, and yet these lesions may concur in the production of an unequivocal case of the disease, while, nevertheless, the symptom of dropsy be absent; but are we on that account to conclude, that not one of these concurrent lesions can be the cause of the dropsy in those cases in which it does occur. Its absence, in many cases, is not hypothetical. Dr Bright himself (see his Gulstonian Lectures) states, that in 26 cases of albuminous urine, 15 only were dropsical; and numerous cases of this kind are recorded by the authors who have written on this subject.—(See *e. g.* Rayer, t. ii. p. 203.)

Accordingly, we find, secondly, that our author quotes from the same source a passage which incontestibly proves, that when the blood is altered in other diseases, in a similar way to that in which it is in Bright's, dropsical effusions do occur. The passage is as follows:—

"M. Rayer states that he has found that the albumen and globules of the blood pass occasionally into the urine in cases of scurvy, purpura, and hemorrhagic fevers, while the fibrine diminishes in the vessels, *and the fluid portion becomes infiltrated into the cellular tissue*, or exhaled on the surface of the mucous membranes."—(Br. and For. Med. Rev., vol. viii. p. 138.)

There can at least be no doubt of the effect of an impoverished state of the blood in inducing dropsy. Innumerable examples of this, both where the change has been sudden, as in cases of violent hemorrhage, or gradual, as in cachectic diseases, will occur to every practitioner. Dr Gaspard relates (Jour. de Physiol. Exper.), that in a country devastated by famine, where grass was for a considerable time the only article of sustenance that could be procured, many of the inhabitants *became anæmic and dropsical.* The same symptom was observed in the anæmic patients in the coal-mine in Auzain (Dict. de Med., tom. ii., art. Anémie, by Chomel), on which disease Andral remarks:—

"In this unusual form of disease, the circumstances attendant on its development, the symptoms which accompanied its progress, the morbid appearances observed on dissection, and finally, the method of treatment found most successful, all conspire to prove that *some defect in the important process of hæmatosis was the immediate and proximate cause of the disorder, and of the whole train of morbid phenomena which accompanied it.*—(Pathol. Anat. of Andral, by Townsend and West, vol. i. p. 105.)

But independently of this altogether, we know that there are certain poisons, as, for example, those of various reptiles, which

do produce such a change on the blood, as to cause both general and partial dropsy. It is not certainly proved, but there is nothing in analogy to oppose, and very much to favour the idea, that similar changes in the blood, leading to similar results, may be effected by the agency of poisons generated within the body, as in disease; and it must be borne in mind, that although cellular effusions are a common symptom in such cases, yet they are not invariably present. There is at least one substance of a noxious character that is not, as usual, separated from the blood in Bright's disease; it is true, we have no evidence to prove that this substance has any effect in producing dropsy, but this at least we do no know, that in cases where there is complete suppression of urine, the system is often relieved of its poisonous effects by other emunctories taking upon them the office of the kidneys.

This vicarious duty is commonly performed either by the skin or bowels; sometimes a matter having the characteristic smell of urine is discharged by vomiting.—See, among cases of a similar kind, one by Dr Halliday Douglas (Cormack's Journal, vol. i.), and one case which occurred to Platerus, is quoted by Sennertus, where the secretion of the kidneys was supplanted by a very copious flow of serous fluid from the ear, (Sennerti Medicina Practica, lib. iii. cap. 10.)

We have already shown that urea is found in the dropsical effusion of this disease, and often in large quantity. Marchand has several times detected it (Müller's Archiv. 1837, p. 440); and in one case, for which we are indebted to Dr Corrigan, so great was the amount, "that Professor Kane, to whom the fluid was sent for analysis, could scarcely believe that it was not urine." —(Dublin Journal, vol. xxi. p. 143.)

But it were idle farther to pursue such merely conjectural speculations.

To such arguments as have been already quoted on the other side of the question, we might reply by a question, Why did not dropsy appear in *all* Dr Gaspard's anæmic cases—the blood was equally altered in all? Or, why were some of the colliers of Auzain affected with this symptom, while others escaped? Or, how does it happen that dropsy follows light floodings in some women, while others, who have suffered severely from the same cause, escape the like effect? Or, why will the loss of twelve ounces of blood produce syncope in one healthy individual, while the loss of double that quantity will fail to produce the same effect on another?

Dr Bright is himself inclined to support an opposite view as to the manner in which the dropsy is produced.

"I am inclined," he says, in his Gulstonian Lectures, "to suppose that the anasarca is an immediate consequence of the derangement of the kidney."

Passing, now, to the changes in the kidneys themselves, we

find many questions of great pathological importance still unsettled. The first to which I shall direct attention is,

4. *Are the various morbid appearances found in the kidneys, the effect of separate and distinct diseases; or are they to be regarded as mere stages of the same affection?*

In a former number, the varieties of these morbid appearances, as classed by Rayer, under six distinct heads, were enumerated (Northern Journal, No. XVI. p. 143); and it is impossible to examine these without being struck by the force of the following remarks of Professor Christison:—

"Of these varieties some, or even all, have been considered mere stages of the same morbid affection. The latter view is exceedingly doubtful. For not merely does the disease, thus supposed to be one and the same in nature, present a very great diversity of anatomical characters—the kidney being sometimes much enlarged, sometimes excessively shrivelled; at one time little firmer than recent brain; at another, harder than the hardest tubercular liver; in some cases, composed of a smooth homogeneous mass; in others, finely granulated like herring roe; and in others, coarsely tuberculated, so as to present somewhat the appearance of being thickly studded with peas; but likewise the several opposite characters here enumerated may occur in different cases, where the amount of suppression of the solids of the urine during life, and the extent of disorganization of the healthy structure of the kidneys, which are the best measures of the stage or progress of the disorder, seem entirely the same. It is highly probable, then, that the various forms mentioned by authors do not exactly belong to the same morbid formation."—(Page 2.)

Equally decided, however, are the partisans of the opposite opinion. Rayer himself states his conviction in strong terms, and rests satisfied with doing so; but his zealous admirer, M. Littré, pushes a little farther, and attempts to *prove* the unity of the disease amidst the several varieties of form. After describing, nearly in the words of Rayer, the first variety (*Vide antea*, page 143), he proceeds as follows:—"Let us pause a moment and consider the characters of this description, glancing at the same time at the plate given by Rayer. We have enlargement of the kidneys often to a considerable extent. We have also the evident signs of hyperæmia, vascular engorgement, with its concomitant redness. Besides, during life, at the commencement of the disease, the patient complained of pain and tenderness in the loins (?); the antiphlogistic regimen was of decided benefit, and the blood drawn was buffy. Who, after considering all this, but will be disposed to agree with M. Rayer in his opinion, that this disease is evidently of an inflammatory character."—(Expérience, tom. i. p. 60.)

M. Littré next proceeds to show that the other forms, however apparently unlike that which he regards as the primitive one,

have nevertheless intermediate gradations, which serve to connect them. Alluding to those forms where the kidneys are found in a condition very opposite to that of inflammatory congestion, namely anæmia, he contends that the second form of Rayer serves to connect these together, because, in it, a remarkable mixture of hyperæmia and anæmia is discoverable. M. Littré is of opinion, that having once determined the link between the two extreme forms, there is no farther difficulty in showing the intimate connection which subsists among the whole.

Dr Corrigan, again, believes that under the name of Bright's disease are comprehended two distinct diseases; one consisting of a state of the kidney, in which there is interstitial deposition of lymph through its tissue, by which the organ becomes larger than natural, smooth on its exterior surface, and of a pale-yellow colour, so as to resemble the large yellow liver in many points—a state in which the kidney remains, and has no tendency to degenerate into cirrhosis or contraction.

There is also a state of the kidney, termed "Bright's kidney," in which the organ is smaller than natural, of a granular appearance, and brownish-yellow colour, and in which the cortical tissue is of very little depth. But it appeared to him that the yellow enlarged kidney, which he had just described, was very different from Bright's kidney; for in the latter there is always contraction of the cellular matrix, and a consequent diminution in the size of the organ.—(Dublin Journal, vol. xxi. p. 142.)

A question of this kind cannot, of course, be decided without a knowledge of the intimate nature of those changes which the structure of the kidneys has undergone. So that we have now to inquire—

5. *What is the nature of those changes which produce in the kidneys the altered appearance which has been described?*

This is a question on which, of all others, we should expect information from those who have peculiarly devoted themselves to the microscopic investigation of diseased structure; and two of the most distinguished of these, Valentin and Gluge, have accordingly attempted its solution. As usual, however, when we come to compare the reports of different histologists, we find the utmost want of agreement in the issue of their researches. Valentin is of opinion that the granulations are the result of interstitial exhalation, and not a degeneration. He reports that the uriniferous ducts, and the substance separating them, are perfectly normal, and that the renal tissue possesses its healthy characters. The yellow colour appears to result from a quantity of yellow matter filling the ducts of the cortical, and the tubuli of the tubular substance.—(Br. and For. Med. Rev., No. xx.) Gluge, again, in order to ascertain whether the granular appearance was owing to the presence of a foreign substance, examined with the microscope a drop of fluid from the cortical substance, and found

it to contain a large quantity of albumen, a large quantity of the globules termed by Gluge "inflammatory globules," and a few globules of pus. A thin segment of the cortical substance, examined with the microscope, showed these globules deposited in immense numbers between the urinary ducts; they were likewise found in the medullary substance, but in much smaller quantity. Gluge, therefore, concludes that the degeneration of the kidney, in Bright's disease, consists of inflammation of the cortical substance of the kidney, which extends, though in a comparatively slight degree, to the tubular substance.—(Wochenschrift für die gesammte Heilkunde, 1837, No. 39.)

I confess that the more closely the various phenomena of this disease are examined, the more does its inflammatory nature appear evident; still it is different from the disease we term nephritis, which is regarded as a *simple* inflammation of the kidney.

6. *Is Bright's disease of a specific nature?*

It will at once be admitted, that ordinary nephritis is attended with dropsy only in exceptional cases, whereas the granular disease is accompanied with dropsy in the great majority of instances —the former affection gives rise to symptoms peculiar to itself, and referrible to the organ affected—the latter are made up more of the secondary affections, and have seldom any direct symptoms; in short, there is an obvious and natural distinction between the two diseases, so that if both are inflammations, they are not both inflammations of the same kind. But the nature, symptoms, course, and treatment of the former affection, are all those of an ordinary inflammation; while those of Bright's disease are altogether of a peculiar kind. I trust the advances of pathology will soon render the employment of such words as "specific" unnecessary; but if we must veil our present ignorance under the employment of terms of this nature, there is perhaps no disease better entitled to the name "specific" than that now under consideration.

It is very evident that the time has not yet come for framing a correct theory of this disease, and yet our ignorance is not so great as altogether to preclude the attempt.

We find, to use the words of Andral, "a disease, which, while it adds to the normal ingredients of the urine a certain quantity of albumen, diminishes more sensibly than any other the proportion of that element in the blood."—(Hematologie.) Add to this the presence of urea in the blood, and we have a starting point from which to pursue our subsequent investigations.

For it is evident that such alterations in the circulating fluid cannot take place, unless from some defect either in the preparation or depuration of the blood. The possibility of one or other of these causes being of itself adequate for the production of the alleged effects, would go far to explain the existence of albumen in the urine, in many of these cases in which the kidney was found to be perfectly sound.

I have already entered so fully into detail with respect to those cases, other than Bright's disease, in which albumen has been detected in the urine, that it seems unnecessary to recur to them. It may be well, at the same time, to remark, that, exclusive of those cases which depend on lesions of the genito-urinary apparatus, the others are all connected with diseases admitted to be capable of producing an abnormal state of the blood. The better to illustrate this, I have reserved until now an interesting table, given in the British and Foreign Medical Review, which exhibits at one view the various causes of albuminuria.

ALBUMINURIA may be caused by

- A. *An abnormal condition of the blood, dependent on*
  - Scurvy,
  - Purpura,
  - Hemorrhagic eruptive fevers,
  - Absorption of pus?
  - ——— albuminous or dropsical effusions?
- B. *Lesions of genito-urinary apparatus.*
  - *a.* Functional.
    - Essential hæmaturia,
    - Diabetes,
    - Secretory excitement of urinary organs and passages, produced by ..... Articles of food. Medicinal agents.
    - Active renal hyperæmia.
  - *b.* Organic.
    - 1. Which cause the foreign admixture during the act of secretion.
      - Acute and chronic simple nephritis,
      - Pyelitis,
      - Bright's disease.
    - 2. Which cause impregnation subsequently to the act of secretion.
      - Blood, thrown out in cases of
        - Contusions, wounds,
        - Calculous pyelitis,
        - Cancer of kidney,
        - Fungous tumours,
        - Acute cystitis.
      - Tubercle,
      - Encyphaloid,
      - Strumous matter,
      - Pus ... e.g. in cases of prostatic abscess,
      - Muco-pus, in catarrhal inflammation, of mucous membrane of urinary passages, especially of the bladder.
- C. *Accidental admixture of healthy genito-urinary albuminous products.*
  - Semen,
  - Prostatic secretion,
  - Catamenial fluid.
- D. *Doubtful cause.*
  - Acute febrile affections,
  - Hysteria?
  - Scarlatina,
    - Primary fever,
    - Succeeding anasarca,
  - Gout?
  - Chronic diseases independent of renal lesion,
  - Chylous urine.

The section A in this table comprehends those diseases which act in the way supposed in the first of our causes, viz. by producing some defect in the preparation of the blood. The recorders of such cases have very generally rested satisfied with noticing the presence of albumen in the urine, without inquiring into the presence or absence of urea in the blood; but a deficiency of urea in the urine has been noticed by some.—(Poggendorf's Annal., xv. 529; Berzelius's Chemie Anim., p. 348.)

But we are more immediately concerned with those diseases that belonged to our second class of causes, where those organs, the peculiar function of which it is to separate the decomposed and effete animal matters from the system, are rendered incapable of performing their allotted task. It seems essential to the health of all animals that such an excretion should take place. The convoluted cæcal tubes of insects formerly supposed to secrete bile, have been discovered by the more recent researches of Chevreul and Andouin, to contain uric acid.—(Strauss-Duerckheim's Consid. Gen. sur l'Anat. des Anim. Artic. iv. 251.)

Physiology has not yet discovered for us the source of urea, or from what organ it enters the circulation; until this is ascertained many links in our chain of proof must remain unsupplied. Equally at a loss are we as to the relations which subsist between albumen and urea, or why the presence of the one should cause the absence of the other. But it is sufficient for our purpose to know, that *in many cases* it is so.

The very interesting investigations of Mr Bowman into the "Structure and Use of the Malphigian bodies of the Kidney" (Philosph. Trans. 1842), have pointed out that it is by the capillary tufts of the Malphigian bodies that the albumen passes out in disease. We have reason to believe that it is in them that the first morbid alteration commences, and thus their function being seriously interfered with, the albumen escapes. We must, however, guard against the error of some authors, who believe that such escape is the result of a simple transudation permitted by the morbid state of the organ. That the passage of albumen into the urine is not the result of any mere mechanical process is obvious; for, 1st, If it were so, why is it that the albumen alone, of all the elements of the blood, is found so to pass into the urine—the red globules being only occasionally and temporarily present? and, 2d, If such an escape took place, how is it that the serum of the blood is even more abundant in this disease than in the state of health?

Supposing the views of Mr Bowman to be correct, and that it is on the disease of the Malphigian tufts that the presence of albumen in the urine depends, it will explain the curious fact noticed by Dr Christison, and before alluded to, that the amount of albuminous secretion does not keep pace with the progressive disor-

ganization of the kidney, for it depends not on the state of the *whole* organ, but of one particular part of its structure.

Nor is it every disease of the Malphigian bodies that can produce this effect, for in simple nephritis, we often find the glands of Malphigi strongly injected, just as in the first stage of Bright's disease.

We are still in ignorance, then, as to the precise connection between the renal disease and the albuminous impregnation.

The paper of Dr Rees before alluded to (Guy's Hosp. Reports, 2d Ser. vol. i.), throws much light on some of the obscure points in the pathology of this disease. I shall, therefore, conclude this branch of the subject with an analysis of it.

Dr Rees begins by referring to his former experiments as to the real nature of the blood corpuscles, (Guy's Hosp. Rep., No. 13), as proving that these corpuscles were closed sacs, containing a fluid within them, details some experiments which prove that the sacs are colourless, the fluid being red. It is next shown that these sacs possess, in common with other animal structures, the property of admitting the passage of fluids in accordance with the law of endosmose. The author then details certain experiments leading to the conclusion, that the more important changes of respiration occur in the colouring matter of the corpuscles, so that it is evident that a healthy condition of its envelope is essential to the maintenance of life. But in order to allow the chyle to produce its effect on the circulating fluid, it is essential that a due relation be maintained between the specific gravities of each; that of the chyle being in health always lower than that of blood, and containing in solution, the iron, the addition of which to the enclosed fluid of the corpuscle is essential.

In Bright's disease, we remark the following prominent features:—1. The excessive quantity of water in the blood. 2. The existence in the blood of one of the ingredients of the urine. 3. The existence of the same ingredient in the milk, and also in the fluid effused into various serous cavities. 4. The absence or deficiency in the urine of one or more of the natural ingredients of the excretion. 5. The general watery condition of the urine. 6. The existence of albumen in the urine.

The diseased conditions of the blood are probably the cause of the secondary symptoms, and the blood may be impoverished by a congested state of the kidneys, giving rise to the separation of its albumen with the urine. The cause of the great diminution of colouring matter in patients affected with this disease, is evidently due to the aqueous condition of the blood, which prevents the necessary endosmotic relations between the chyle holding iron in solution, and the colouring matter contained in its membranous capsules. For the blood becoming deprived of its albuminous ingredients, a deterioration in the specific gravity of the contents of the corpuscle follows, owing to the liquor sanguinis becoming

lighter, and endosmosing that structure; this is soon succeeded by a lessening of the number of red corpuscles.

In conclusion, as regards the urine, Dr Rees is of opinion, that the deficiency of urea, and the occasional deficiency or absence of lithic acid, are, in all probability, dependent on the derangement of the kidney alone; its watery condition, again, and the presence of albumen, he regards as in some measure dependent on the state of the blood.

(*To be continued.*)

Part IV.—REVIEWS.

Pulmonary Consumption successfully treated with Naphtha, with Cases from other Medical Men, in support of that Treatment; and an Appendix showing the Utility of Puncturing Tuberculous Cavities, as an Adjuvant in the Cure of Phthisis. Second Edition. Revised and enlarged. By John Hastings, M.D. London, 1845. Pp. 260.

It is not our attention to undertake any thing like a critical examination of this work. Its ostensible object is to introduce the employment of naphtha in the treatment of phthisis, and we cannot see why this imposed on the author the necessity of presenting a regular treatise on the disease. A few pages in one of the journals might have contained all that is novel in this goodly octavo.

The first edition was, the author informs us, favourably received; but we suspect that this was due more to the subject of the work than to its character; for as long as honest physicians confess that they have no remedy which can cure consumption, so long will the zealous enthusiast, equally with the interested empiric, obtain a hearing. The misfortune in such cases is, that the very nature of the disease affords ample room for self-deception to the one class, and imposition to the other. It has been calculated by the late Dr Young, Dr Woolcombe, and others, from the best data which the bills of mortality afford, that in Great Britain and Ireland, consumption causes one-fourth part of the deaths that occur from disease. How many then must there be deeply interested in the discovery of some antidote for this wide-spread poison; how many eager to catch at any prospect of a cure; how many already sealed with the fatal malady willing to submit to any treatment to avert their anticipated doom? Again and again will it happen, that one after another of these victims will grasp at the promised recovery which ignorance or cupidity proclaims, appear temporarily relieved, and eventually sink and die; and

some there may be who even seem to come off victorious in the struggle with this fell destroyer. Do we therefore admit that consumption is ever cured? No, certainly, not by any human agency; and yet there is no fact in medicine better established than this, that in certain cases, and under certain circumstances, it undergoes a spontaneous cure.

In a recent paper by Dr Bennett on this subject,* we are surprised to find it stated that the cicatrices in the lungs, which denote the spontaneous obliteration of a vomica, "have been considered as occurring very seldom." "Laennec," continues Dr Bennett, "records only six cases, Andral eight, and various writers have published isolated cases as worthy of remark, from their rarity." Now, so far are the observations of Dr Bennett, with regard to the frequency of these cicatrices, entitled to the claim of novelty, and so far is his account of the previous ignorance of pathologists in reference to this subject correct, that we find Laennec speaking thus decidedly. "On the other hand, from considering the *great number* of the phthisical and other subjects, in whom cicatrices are found in the summit of the lungs, I think it is more than probable that hardly any person is carried off by a first attack of phthisis."†

But admitting to the fullest extent the possibility of such spontaneous cure, and the frequency of its occurrence, it is of importance to inquire how far we are entitled to build upon it our hopes of successfully *treating* the disease. We may concede at the outset, that there is nothing malignant in the nature of tubercle itself. No one ever died from the mere deposition of tubercle in the lungs. Beyond the mechanical impediment to respiration which it occasions, its presence there is, did it produce no ulterior effects, wholly unattended with danger. Whence, then, the fatality of the disease? or why is it that we look upon its appearance with dread? Paradoxical as the statement may appear, it is on account of its very curability, or rather of those processes which nature institutes in order to accomplish a cure; for it is not by the tubercle that the patient is killed, but it is by the ulcerative process which nature has established for its removal, which destroying the structure of the lungs, produces death.

So much do some modern authors seem carried away with the desire of being considered consumption curers, and at the same time of establishing their claims to this character on pathological grounds, that it may be necessary to remind our readers, that in all cases where these cicatrices are found, there are certain concurrent circumstances by which that termination has been brought about, and over which medicine has *as yet* little,

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* Edin. Med. and Surg. Journ., April 1845, p. 406.

† Forbes' Translation, 2d Edition, p. 358.

if any control. For, first, it is essential that the number of tubercles, the elimination of which has occasioned the cavity subsequently cicatrised, be small. Second, that the farther deposition of tubercles shall be arrested; for it were of little consequence were one vomica only to be healed, while others were forming eventually to destroy the patient. And these two conditions are actually dependent upon one and the same thing—both in fact implying that there is no great tendency in the constitution to the development of tubercle. Here, then, we would pause to ask the question, Have those who at the present day inundate our literature with novel modes of treating consumption, in so far as they rest their claims on its occasional spontaneous cure, advanced the treatment of the disease in the very slightest degree? Unhesitatingly, we answer, No. The pistol bullet, which by its presence in the flesh, excites suppuration, is conveyed to the surface, has a way opened for it through the integuments, and subsequently escapes; and what would we say of the sagacious surgeon, who, wrapped in all the panoply of arrogant self-conceit, should daily report the progress of such a recovery, and annoying the patient the while by the exhibition of sarsaparilla, liquor potassæ, cod-liver oil, or naphtha, should lay the flattering unction to his soul, that by one or all of these vaunted remedies he had effected the cure?

Do we then despair of ever being able to cure consumption? Undoubtedly not; but if the discovery is to be made, another track must be followed than that which such inquiries indicate. When we shall see the scalpel of the anatomist no longer pointing in triumph to a cicatrised cavity as proof of the powers of his healing art, but when this shall have given place to such discoveries as shall show us how the morbid state of the system on which the secretion of tubercle depends, may be prevented; or how, when it has commenced, it may be suspended or controlled; then, and not till then, we shall hope that the rational treatment of this disease is in the way of being discovered. What expectation can one really conversant with pathology entertain by following the other track? The tubercular matter may excite inflammation, a solution of continuity may follow, and its expulsion may be effected; the further progress of the ulceration may be arrested; nay, the walls of the cavity in which the tubercle was contained may unite in a firm cicatrix, but the same cause which originally produced the tubercle, may produce it again—the same process which removed it even excites its formation; so that, to use the words of Andral, "it may be indefinitely recreated simultaneously with the pus destined to produce its elimination."

Holding these views on pathology, it cannot be expected that we should receive with any thing like favour, a work such as that of Dr Hastings. There are many reasons why a medical man, jealous of his professional reputation, would hesitate about put-

ting his name to such a production. It is well known that consumption is a disease, "which," to use the language of Dr Latham, "often accomplishes its course by parts and parcels." It is not always its character to proceed progressively from bad to worse; it is subject to many temporary suspensions, and occasionally to entire arrests on its progress. There are few practitioners who have not witnessed marvellous instances of apparent recovery, where all the symptoms, physical as well rational, of phthisis displayed themselves; marvellous, however, only because they had forgotten that such was the natural course of certain varieties of the disease. It is because such cases frequently occur, and afford so ready a means of imposition, that the honest practitioner is inclined to look suspiciously on their publication. It is plain that neither naphtha nor any one of those remedies, which at different times have enjoyed a temporary celebrity for the cure of this disease, can attain the reputation claimed for them, till they fulfil those indications which we have shown to be essential for the radical cure of phthisis. Even if the cases to which we are so liberally treated, prove all for which they were published, we still hold them valueless, because deficient in this essential requisite; and it is thus, that each remedy mounts in turn to the summit of the wheel of fortune, only to follow its predecessors in their fall. Sir Charles Scudamore may vaunt his iodine and conium inhalation, and desert it for the hydropathic system, as fickle fancy changes. Dr Hocken, like St John Long, may cure all the world beside of consumption, and fall a victim to it himself;* while his partner, Dr Hastings, still maintains the delusion, and distributes his medicinal naphtha to the credulous public. But every well-informed medical man is aware that the like improvements, and the like cures, would, in all probability, have occurred among the same number of cases, unsubjected to any treatment whatever. The very fact of the number of cases in which post-mortem examination reveals cicatrised cavities, in cases where consumption was never suspected during life, *and in which no medical treatment was directed to the lungs*, throws great doubt, of course, on these other cases where cicatrisation took place after, but probably not in consequence of treatment.

But it is time that we should turn from these general views to a more particular consideration of the work before us. We shall first quote the *a priori* reasoning by which Dr Hastings was led to the brilliant discovery which promises to immortalize his name. We feel assured that, whether the depth of the reasoning, or the

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* "Died of phthisis, on the 12th August, at Chasewater, Cornwall, Dr Edward Octavius Hocken, one of the physicians to the Blenheim Street Infirmary and Dispensary. Dr Hocken, although cut off at a very early age, had made himself well known to the profession, by his numerous writings, among which was 'A Practical Inquiry into the value of Medicinal Naphtha in Tubercular Phthisis.' London: Highley. 1844."

felicity of expression be considered, they show abundant proof of the present advanced state of medical science, and ought to encourage Dr Hastings in the further search after discoveries which, in his hands, become, to quote his own expression, "curious and interesting facts."

"The reasons which induced me to deviate from that line of medical practice, which has so universally and for so long a time been in vogue, for that now submitted to the profession, was the fatal termination of all cases, whatever was the treatment adopted, during an experience of twenty years; I was led to the conclusion, from a careful survey of the chemical analysis of tubercle by Thenard,* that it was defective, inasmuch as the composition of the animal matter, which it will be observed, amounted to ninety-eight parts out of a hundred, had not been investigated. From the greasy nature of tubercle in its crude state, there did not exist the slightest doubt in my mind that carbon entered largely into its formation, and that its composition had a striking resemblance to fatty matter; this opinion was further strengthened by the discovery of those spherical bodies, which strikingly resemble the smallest oil globules found in milk; further investigation may prove that the last change effected in tubercles, before being expelled from the lungs, is a return to that normal structure from whence they derive their existence, which will not only be a curious but highly interesting fact.

"From these opinions, I determined to employ those compound agents rich in carbon and hydrogen in the treatment of phthisis, which had not been previously used in medicine; not with the idea that they would make up the deficiency in fat which the system had sustained in the progress of the disease, but that they would be productive of a change in the blood powerful enough to destroy the morbid condition which generated tubercle."—P. 149, 150.

The perusal of this most interesting speculation may possibly leave the reader under the impression that nothing farther is required in proof of the efficacy of naphtha; but the mind of our author is of that high order, which proceeds from speculation to experiment; and the following delicate operations were resorted to for the purpose of still further strengthening his case:—

"1st, A little naphtha having been put into a bent tube, resembling the capital U, some expectorated matter was poured upon it, which had been determined with the microscope to be rich in globules of tubercle. Gentle heat was then applied, and the naphtha driven off, when the super-imposed secretion presented a mere shapeless mass of animal matter, the globules having entirely disappeared.

"2d, Some tuberculous secretion, highly charged with globules of tubercle, was placed under the field of the microscope, and a drop of naphtha added, when an immediate disappearance of the globules ensued, leaving behind a mass of the same character as on the former case. The frequent repetition of this experiment invariably led to the same result.

"3d, Some tuberculous secretion of the lungs was put into a portion of the intestine of a child, and placed over a wide mouthed bottle which contained a small quantity of naphtha, between which and the intestine a clear space of three inches remained. A

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* Animal matter ..... 98·15
Muriate of soda .....
Phosphate of lime ..... } 1·85
Carbonate of lime .....
Oxide of iron, a trace .....

spirit lamp was then placed under the bottle, and a very gentle heat applied, until slight ebullition took place, which continued for an hour. The contents, when removed from the intestine and examined with the microscope, presented the same appearance as described in the previous experiments."—P. 156, 157.

So clear, so ingeniously conceived, so delicately executed are these experiments, that the vilest caviller must be silent. Dr H. has discovered in the sputa of phthisis, a number of spherical bodies resembling the smallest oil globules found in milk. These may be tubercle, "returning to their normal structure" (!); but treat them with naphtha and gentle heat, and lo! they become a mere shapeless mass of animal matter. True, all this took place in "a bent tube, resembling the capital U;" but let a human body take the place of the bent tube, and the result will, *of course*, be the same; indeed, this is sufficiently proved by the elegant experiment, in which the intestine full of tubercle was stewed for an hour in the wide-mouthed bottle. Has Dr Hastings ever subjected his globules to the action of ether or nitric acid, or aqua-potassæ? If so, let him tell us how they were affected by these re-agents.

Having thus, in accordance with the most enlightened system of discovery, fixed on a remedy for the disease, the next thing is to decide, what is the proper variety of that remedy to be employed? And we cannot but think that great injustice has been done to our author, by not sufficiently attending to the purity of the drug.

"Although I mentioned, in the first edition of this book, several tests for the recognition of medicinal naphtha, cases are constantly occurring in which oily, milky, and coal tar naphtha, are administered, and most prejudicial results ensue. Without further inquiry, I have been unjustly made responsible for these flagrant acts of carelessness, from which conclusions have been drawn prejudicial to the character of the treatment. Hence practitioners cannot be too strongly impressed with the paramount necessity of taking especial care that a spurious agent is not employed for a medicinal one. There are, I am aware, several products of coal tar in the market, so prepared that all the oily matter is removed, which produced the turbid and milky appearance when mixed with water—noticed in the former edition; consequently this test, which was so much relied on then, is now greatly lessened in value. Nevertheless this description of naphtha is readily known from the medicinal preparation, by the pungency of its taste, and its disagreeable and more powerful odour."—P. 109.

Further on we are informed—

"It was my good fortune to commence my experiments with that kind of naphtha called pyro-acetic spirit, being quite unaware, at the time, that there was more than one kind; and the knowledge that I had been in this particular the 'mere sport of circumstances,' grew out of an occasional change in the druggist, and the favourable or unfavourable symptoms which followed the one or other supply.* By experiment, I soon

"* I have since learned that the naphtha I originally prescribed was put aside by the druggist, as a useless article, in consequence of its failing to dissolve gums, for which purpose it had been purchased."

formed a criterion by which I could identify the kind of naphtha I had found to be successful. My test was its colourless and transparent character, and agreeable etherial alcoholic odour; its specific gravity, which was 0·823 to 0·824; its increase of temperature consequent upon mixture with water; its preservation of appearance on the addition of nitric acid; and its taste being warm, without the least sensation of burning. 'Dr Ure has recently suggested an easy method of effecting this object, which is founded on the following facts. If nitric acid of specific gravity 1·45 be added to pyroxylic spirit, the mixture assumes a red colour, but no effervescence takes place. If the same acid be added to pyro-acetic spirit, there will be no change of colour, but an effervescence will slowly be formed, accompanied with an elevation of temperature, and copious evolution of gas, resembling in appearance the action resulting from the mixture of alcohol with nitric acid, but with an acetic smell, instead of an etherious one. Pyro-acetic spirit may also be generally distinguished from pyroxylic spirit by its causing no appearance of milkiness on mixing with water, in the state in which it is met with in commerce.'" *—P. 153, 154.

Dr Hastings was induced to try naphtha from the composition of tubercle, leading him to believe that an agent rich in carbon and hydrogen, would produce a cure. We would here ask, Were the injurious specimens of naphtha not rich in carbon and hydrogen?

But it is not every case of phthisis which will be benefited by the remedy. Equally important, then, must it be to decide, what are the kinds of cases in which it is likely to be beneficial? The following is our author's description of them; and we cannot help thinking, that he must have been peculiarly fortunate, if he met with a sufficient number of this mild character to enable him satisfactorily to test the virtues of his remedy:—"From these observations, it will readily be seen that the less phthisis is complicated with other affections, the more suitable it is for this treatment; where the pulse is at the ordinary standard, or thereabouts, where the hectic is slight, laryngeal and peritoneal disease absent, the functions of the stomach and bowels not much impaired, the constitutional disturbance inconsiderable, and the physical signs denoting only a slight deposit of tubercles in one lung, the prognosis is favourable, and a speedy recovery may be anticipated."—P. 118. We must be particularly careful not to prescribe it in cases complicated with dyspepsia; for, "when complicated with dyspepsia, little or no benefit will accrue from its use until that affection is removed."—P. 126.

But to show the value of this sort of evidence, we find another recommender of naphtha, Dr Bennett, telling us "the dyspeptic symptoms frequently continue throughout the disease, they often become uncontrollable, and the extreme irritability of the mucous membranes is evinced by vomiting, diarrhœa, bronchorrhœa, and laryngitis. These symptoms with the dyspepsia are frequently to be alleviated by naphtha, when all ordinary means have failed.

* Pharmaceutical Journal, vol. iii. p. 35.

The boasted good effects of this remedy are, I think, attributable to its great power of allaying the irritability of the stomach, and thus enabling the patient to take nourishment." *

Being thus prepared to test the efficacy of his remedy, all that Dr Hastings now required was "a fair field and no favour."—Nor was this wanting; but he shall himself tell the story.

"An opportunity soon presented itself: a physician to one of the metropolitan institutions, alike remarkable for his benevolence, liberality, and intelligence, permitted the naphtha treatment to be tested in the hospital to which he was attached; the group of cases treated amounted to about a dozen, and furnished specimens of the disease in all its stages; severe headach, with only one or two exceptions, followed its exhibition, which was often so excessive, that it was obliged to be abandoned after a few doses only had been taken; in one or two cases, besides the headach, some of the phthisical symptoms, such as cough, expectoration, and difficulty of breathing, were augmented. In a patient who was labouring under the disease in its first stage, although the naphtha was withheld once or twice, in consequence of excitement and headach, it was eventually borne, and the patient improved considerably under its use, but was lost sight of, through his leaving the hospital; he promised to continue an out-patient,—which he failed to do,—in order that the progress of the disease might have been watched.

"In another case, having excavations in the upper part of both lungs, in which no marked untoward symptom followed its use, the cough and expectoration considerably diminished, whilst the appetite increased and the patient gained flesh; his pulse was always considerably accelerated—a very rare symptom in cases in which improvement is effected."—P. 128, 129.

Such was the result of the *public* trial, and Dr Hasting's, admitting the failure, seeks to explain it away as follows:—"To what, then, are we to attribute these untoward effects. Is it to want of exercise, or to confinement; or does it arise from a deterioration the air undergoes in the wards of hospitals, through the unhealthy exhalations which are constantly exuding from the bodies of other patients with whom the consumptive are compelled to live? Probably it is owing to all these causes, otherwise it might reasonably be expected, that the well regulated system of nourishing diet, cleanliness, and orderly habits, enforced in these institutions, would ensure that success to the medical treatment unattainable elsewhere."—P. 130. But the corroborative cases of Dr Bennett were cured under similar circumstances! Public trials with specific medicines are, however, usually less successful than private ones;—why, we shall not attempt to explain. The effect of the naphtha was however very different, when, instead of being tried on the inmates of an hospital, it was administered to Mr Seabrook, steward to her Royal Highness the Duchess of Kent. This fortunate gentleman, after having been under the care of Mr Merriman, apothecary to the household of the Duchess of Kent; Mr Brown, apothecary to the Queen; Dr Chambers; Sir Alexander Downie; and, in short, "more than a dozen principally

* Ed. Med. Surg. Journ., April 1845, p. 413.

well known and eminent men," who all pronounced his lungs tuberculous, " was," as he informs Dr Hastings, " on my way to Brighton by railway, fortunate enough to see, *in a newspaper*, a review of your treatise on the Treatment of Consumption by Naphtha."—P. 134. To make a long story short, the worthy steward, like many of those fortunate purchasers of Holloway's or Parr's life pills, whose names flourish in newspaper advertisements, took his bottle, lost his disease, " and has very liberally given me the following statement for any use I might wish to make of it." We trust Dr Hastings will feel grateful to us for the prominence we have given to this truly wonderful and most astonishing cure. But in order the more completely to assist him in the object of his publication, we shall extend our quotation to the following hints, which seem scarcely addressed to the profession :—

" All persons naturally wish to prolong life, no matter how serious is the disease under which they labour, so long as the mental powers are not affected. This applies particularly to phthisis ; the erroneous conclusions patients suffering from this affection arrive at has often been adverted to ; many present themselves in the greatest confidence, believing that there is but little the matter with them, when their lungs are half destroyed by tuberculous excavations. In some instances, so late is the application made for advice, that the most remote prospect of success is cut off. But the other day, a young lady died only a few hours after I had seen her, and in another instance a clergyman died early in the morning, before his medical attendant, who I had met in consultation the previous evening, could forward him a dose of medicine.

" Repeatedly have patients within a day or two of their dissolution sought my advice, and, although scarcely able to utter a sentence, have generally managed to inquire, not without great effort, *whether their lungs were affected !* "—P. 143, 144.

Let it be further observed, that his work is dated from No. 14, Albemarle Street.

The book characteristically concludes with innumerable cases, narrated both by the author and by other medical men, in proof of the efficacy of the naphtha treatment. It is not necessary to doubt the truth of these histories, in order to account for the supposed effect of the drug. The same sort of evidence has again and again been adduced in favour of many other remedies now forgotten. In appearance the most imposing, it is in reality the weakest of all arguments. We do not deny that naphtha may produce beneficial effects in the treatment of phthisis. It is at least a duty to try it ; but we have seen too many instances of failure in the most boasted remedies to have much confidence in its success. In those cases where we have ourselves witnessed its administration, we cannot say that it produced any striking effects ; but we have thought it right to acquaint our readers with the kind of drug proper to be used, and the nature of those cases in which its use promises, according to its advocates, to be beneficial. Multiplied experience will at last assign it its proper place, and probably add it to those various means, which, as Louis well observes, " have of late risen into notice, as possessed of the great-

est power of effectually influencing the course of phthisis, or even effecting its cure; but, as we have seen, the best founded hopes in appearance have, one after another, vanished before scrutiny." For as yet, respecting the treatment of consumption, we must, all along, with Sir James Clark, "admit the humiliating truth, that there is no reason to believe the physicians of the present day more successful than their predecessors were ten, nay, twenty centuries ago." *

We cannot conclude this notice of one of a class of books which tend to retard the progress of medicine, without repeating the confident expectation, that the time will at length arrive when we may hope successfully to combat diseases hitherto regarded as incurable. Meanwhile, it would be well, could we direct the attention of any who may have a wish to enrol their names among the pretended curers of consumption, to the following just and honourable remarks of Dr Cowan, the able translator of the first edition of Louis on Phthisis.†

"It would not have been difficult to have minutely detailed a multitude of precise and definite regulations for the treatment of phthisis, and perhaps to have impressed the minds of some with a favourable idea of our superior curative acumen; but we have studiously endeavoured to avoid the inducements which empirical reputation in medicine holds out, convinced that there are few obstacles more fatal to the progress of science and improvement, than the preposterous pretensions which quackery so unblushingly propagates, at the expense of all honourable feeling, and to the detriment of the health of a too easily deluded population.

"Notwithstanding all that has been written and done upon the subject of consumption, we are still totally unacquainted with any thing like a satisfactory method of cure, and it is only when the upright spirit of inquiry, which has characterised our author's (Louis) researches, shall have equally pervaded the minds of those who are continuing the investigation, that any decided increase to our present knowledge, or rather the removal of our present ignorance, can be expected. To be strictly honest in medicine, requires unusual probity and devotion; our efforts must not be undertaken with the eager hope of discovery, but with the conviction, that at best we can only furnish our item to the now accumulating mass of accurate observation, from which medicine, as a science, shall hereafter be eliminated."

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* On the Influence of Climate, p. 303.

† Why does Dr Walshe, who has so well executed the task assigned him by the Sydenham Society, of translating *the second* edition of Louis, never allude to this excellent translation of the first edition?

*** We are compelled, by want of room, to postpone several reviews prepared for this number.

PART V.—PERISCOPE.

METEOROLOGY.

METEOROLOGY is a subject which bears very closely on Medicine. It is perhaps less studied in the Medical Profession than it deserves to be. It is not merely a study of speculative interest, as bearing on the possible explanation of the mysterious effects exercised over the prevalence of diseases by those agencies which have been termed Atmospheric and Epidemic Influences, Epidemic Constitution of the Year, and the like; it is also a study of practical use. For nothing else but the study of Meteorology can give the proper interest to the nicer varieties of climate, among those places to which invalids from this country are sent—a kind of knowledge far more difficult of attainment than is commonly believed—and in the application of which errors cannot but be sometimes committed, even by those who have had the best opportunities and have taken the greatest pains to make themselves acquainted with the subject.

These remarks have been suggested to us by a Work which has recently appeared, entitled "A Complete Course of Meteorology, by L. F. Kaemtz, Professor of Physics in the University of Halle," a translation of which, by Mr C. V. Walker, is before us. A work of this kind, namely, a Manual of Meteorological Facts, is not well adapted for a review in our pages; but we propose to extract a few passages, such as may probably possess some interest for our readers.

"*Causes of Atmospheric Electricity.*—After having discovered that storm-clouds were highly charged with electricity, it was perceived that rain was almost always electric, and that there was electricity in the air, even during the calmest weather; and the question of its origin presented itself. Friction was then the only known productive cause of electricity; it was thought that that of the atmosphere proceeded from the friction of masses of air against one another. Notwithstanding the objections of several philosophers, I do not think that this cause is completely null: when we shake in the air a piece of silk, it is electrised; why then should it not be the same with two masses of air? If the temperature, moisture, &c. of the two masses are the same, there will be no production of electricity, in the same way that there will be none if we rub two perfectly similar rods of resin together. But, as soon as one of them becomes warmer than the other, the cooler becomes positive, the warmer negative: a law verified for all bodies of the same nature when rubbed against one another. Thus, then, the upper masses of air would be positive, the lower ones negative.

"Chemical actions, which are constantly taking place in the atmosphere are infinitely more powerful; we shall place evaporation in the first rank. Volta first showed that evaporation produced electricity; de Saussure confirmed this opinion. But M. Pouillet has described the details and conditions of the phenomenon. Pure and simple evaporation does not produce any electricity, provided there be no chemical decomposition: if distilled water evaporates on platinum plates, there is no production of electricity; but if we add portions, however small they be, of salts, acids, &c., then there is a production of electricity as soon as the vapour of water is evaporated from the bodies to which it was united. The vapour is positively electrised, the vessel negatively; now, as the earth incessantly emits vapours, and the water in nature always contains foreign substances in solution, the vapours rise charged with positive electricity, whilst the earth preserves negative electricity.

"Combustion is another productive cause of electricity. When coal is burning, a current of carbonic acid escapes positively electrised, whilst the coal remains negative. The atmosphere, therefore, contains all the electricity that results from combustions made on the surface of the earth. Indeed, when plants spring up, the carbonic acid they exhale carries off the positive electricity, whilst the vessels through which the gas escapes remain charged with negative fluid; the same thing probably takes place during the life of the plant, from whence results a great proportion of the positive electricity which vegetation pours into the atmosphere."

"*Electricity during Serene Weather.*—When the sky is clear and without clouds, a sensitive instrument placed in an open place almost always indicates positive electricity; it only becomes negative in the case where there are distant storms. But this positive electricity varies in intensity; passing clouds, puffs of wind, modify it in a few seconds. The causes of these changes have not been as yet sufficiently studied. If we always observe at stated hours, we find in our countries the existence of a curve, the elements of which de Saussure and Schubler have endeavoured to determine.

"At sunrise the atmospheric electricity is feeble; it continues to increase as the sun rises and the vapours are collecting in the lower regions of the atmosphere. This increasing period lasts in summer till 6 or 7 o'clock in the morning; in the spring and autumn, till 8 or 9; and in winter, till 10 or 12 o'clock in the day. By degrees the tension attains its *maximum;* during this time the lower regions are filled with vapours, the humidity of the air increases, and the hygrometric tension is stronger than in the morning; in the cold season there is often fog. Generally electricity decreases immediately after attaining its *maximum*, at first rapidly, then more slowly. The visible vapours of the lower strata disappear, the fogs disperse, the atmosphere becomes clear, and distant objects seem to approach the spectator. Towards 2 o'clock in the afternoon, the atmospheric electricity is very feeble, and scarcely stronger than at sunrise. It continues to diminish till about two hours before sunset; in summer, till 4, 5, or 6 o'clock in the evening; in winter, till 5 o'clock. Its *minimum* lasts longer than its *maximum*. As soon as the sun approaches the horizon it again begins to advance, increases sensibly at the moment of sunset, goes on increasing during twilight, and attains a second *maximum* an hour and a half or two hours after sunset. Then vapours form in the lower regions of the air, damp increases, and the night-dew falls. This second *maximum* usually equals that of the morning, but it continues a shorter time, and the electricity decreases slowly till the next morning."

"*Electricity of Dew and Fogs.*—When the vapour of water is precipitated into the atmosphere, a greater or less quantity of positive electricity becomes free. However, whether the augmentation of electric tension is due to the damp air permitting the more distant particles to act on the electrometer, or whether the electricity becomes free through the precipitation of vapours in the same manner as latent heat, is difficult to decide. Indeed, electricity is very strong when the dew is deposited; if this is abundant, then the *maximum* of the diurnal period takes place towards evening. The signs of electricity are also very marked during fog; all observers have acknowledged it, and de Saussure affirms that he never saw a fog without a notable development of electricity. In general, it is positive and stronger in winter than in summer, according to Schubler's observations. The electricity is stronger as the fogs are thicker; they rarely give signs of negative electricity: yet these phenomena are too little known for me to be able to enter into further details.

"The received opinion, on the increase of electricity during the formation of fogs, deserves to be submitted to new experiments. We must not forget that but few experiments on atmospheric electricity exist. For whole months, meteorologists do not observe the instruments. If a storm arises, or rather, if the straws of the electrometer

diverge strongly, then they look at them and note their indications. But we cannot conclude from these indications whether the divergence was strong or weak relatively to the mean divergence. From my own observations at Halle, I should be tempted to believe that, during a fog, the electricity is weaker than in clear and damp weather. On the Alps, I have always found, under these circumstances, a strong positive electricity; but as soon as clouds approached, its intensity diminished, and it was almost null when I was surrounded by clouds: at Halle, the same remarks. It is for experiment to decide if these are exceptional facts, resulting from the fact that electricity easily flows into the earth because the air is damp, or if it is the normal and usual state.

"*Electricity during Rain.*—When rain or snow falls from the upper regions of the atmosphere, there is, at the same time, a production of a quantity of electricity, more or less strong: it is only during mild and continued rains that we observe no traces of it: in this case the electricity is sometimes positive, sometimes negative. According to Schubler's observations, there are, in South Germany, 100 positive for 155 negative rains: according to those of Hemmer, at Mannheim, 100 positive for 108 negative: in the two series, the latter are the more common. The direction of the wind is not without influence over these differences. If we designate by 100 the number of positive rains with each wind, we find the following numbers for the number of negative rains with the same winds:—

"NUMBER OF NEGATIVE RAINS FOR EACH WIND, THAT OF POSITIVE RAINS BEING EQUAL TO 100.

	SCHUBLER.	HEMMER.
N.	91	52
N.E.	109	75
E.	166	95
S.E.	175	95
S.	260	101
S.W.	232	117
W.	145	106
N.W.	128	67

"With the north winds the number of positive rains is, therefore, relatively greater than with the south winds; the difference of the two numbers obtained by Schubler and Hemmer are due to local circumstances and climacteric conditions, which are not the same. To sum up: their observations prove that, during the course of one year, most of the rains are positive, whilst they are negative in another. Thus the annual results may be very different from the general mean.

"What is the origin of this negative electricity? Schubler, Tralles, Volta, and others, explain the phenomenon by the evaporation of drops of water: when they traverse dry air, they partially change into vapours, which carry away the positive electricity, whilst the drop remains in the negative state. This hypothesis is confirmed by the fact of observation, that in the neighbourhood of cascades, where a great many drops are thrown into the air, we always find traces of negative electricity, more or less marked. Several experiments made by Belli render this hypothesis improbable. If we insulate an artificial fountain, such as Hero's fountain, and place it, in fine weather, in an open place, where the atmospheric electricity is strong, the drops will be negative and the vase positive: if the experiment be renewed in dry weather, on points where there are no signs of atmospheric electricity, there will be no electricity either on the vase or the drops, although the evaporation is the same: it is not then to evaporation,

but to induction, as Belli very well remarked, that the electricity is due. When the fountain rises towards a clear sky positively electrised, it acts by induction; the fountain is positively electrised below, and negatively above; but, as soon as the air is without electricity, the action by induction no longer exists, and there is no trace of electricity. It is the same with a cascade: it is negatively electrised above, positively below; the vitreous electricity flows into the earth, the other remains united to the liquid drops.

"Thus, then, although evaporation may develope negative electricity in the drops which fall, the action by induction is much more energetic: clouds have often a strong positive electricity, whilst that of the earth is negative. If there are two strata of clouds in the sky, and the rain falls principally from the lower, both are positively electrised; but the electric state of the lower is modified by that of the earth: it becomes positive in its lower surface, and negative in its upper; the rain is then positive. Soon, not only does the lower face of the cloud become neutral, but also the earth; thus, at the end of a certain time, not the slightest indication of electricity is found until, when under the influence of the upper cloud, the lower one becomes charged with a great quantity of free negative electricity. The drops which fall will then be negative: but, if a breeze condenses anew the vapour of water in the cloud, then we find once more that the drops of water are positively electrised.

"Every time I have been able to follow this phenomenon, I was assured of the action of the upper cloud upon the lower. In other cases, the cloud acts on the drops of rain themselves, and changes their electric state. This being well understood, the influence of the winds over the electric state of the rain is easily deduced.

"From what we have previously seen, the origin of rain from north and south winds is very different. If, in a clear sky, the temperature rises for several days, the barometer begins to sink, a few *cirri* form in the high regions, at the same time that the south wind becomes predominant; the *cirri* extend, the sky becomes whitish, and positive electricity increases in its lower strata. The barometer continuing to fall, *cumuli* are formed in the lower parts, and the rain begins. At the moment when they are produced, the *cumulus* and the rain are both positively electrised. Soon negative electricity accumulates at the upper part of the *cumulus*, and the rain itself finishes by becoming negative; but as, by the north winds, there is often but one stratum of clouds, this action by induction no longer occurs, and the rain is more frequently positive. In winter, the snow falls generally from a single stratum; it is also almost always positive."

SURGERY.

Penetrating Wounds of the Abdomen.

No cases do we find more frequently related in medical periodicals than those of recovery from all kinds of wounds of the abdomen; and it appears that the danger of peritonitis, occurring from such injuries in persons enjoying robust health, and of regular habits, is over-estimated.

In the last number of this Journal, a case is extracted from the American Journal of Medical Science, where a speedy recovery followed in an insane patient, who opened her abdomen with a pair of scissors, drew out seventeen inches of the small intestines, and cut them off.

A boy, of fourteen years of age, fell from a height of four feet, and an iron spindle a foot long, and of the thickness of a writing quill, entered the abdomen three-fourths of an inch to the right of the umbilicus, which, penetrating the cavities of the abdomen and

pelvis, made its exit at the fold of the left hip, about two and a half inches from the anus. The instrument was shortly afterwards withdrawn: he suffered very slight pain, and recovered without a bad symptom. He was dismissed from the hospital twenty days afterwards in perfect health.—Annales de la Societé de Médécine d'Anvers. 1845.

Sometime ago we were called to see a girl who had been gored by a bull, where there was a lacerated wound about eight inches in length in the iliac region, from which a large portion of intestine and lacerated omentum protruded. In this case, which was complicated by other serious injuries of different parts of the body, the patient recovered without a bad symptom.

In the Philadelphia Medical Examiner, Dr H. P. Worthington relates the case of a labourer in an iron mine, robust, healthy, and of steady habits, who was crushed by a heavy fall of earth, where a portion of the intestines and mesentery, comprising about fifteen inches of the colon, and thirty of the small bowels protruded from a wound in the right groin, and a small fold of intestine protruded from a smaller wound a little below the umbilicus; the intestines were reduced, the wounds closed by sutures, and the patient made a rapid recovery.

In none of those cases was blood-letting employed, nor severe antiphlogistic treatment observed; and Dr Worthington, in speaking of the treatment of his case, remarks:—"A determination of what is the rule, and what the exception in such cases, would tend to impart a most useful confidence in this most important department of surgery. I presume there are many other young surgeons, who, with myself, have had melancholy cause to deplore their early acquired dread of this bugbear peritonitis, and have found, when too late, that they have opened their heavy battery of antiphlogistics against an imaginary foe."

Treatment of Strangulated Hernia by Opium.

The administration of opium in strangulated hernia, has been recommended by various surgeons. In a late number of the Provincial Medical and Surgical Journal, Mr Rowland relates a case where he succeeded in reducing a strangulated inguinal hernia by the action of this medicine.

The hernial protrusion was the size of a pullet's egg, tensely elastic, not very sensitive, and quite irreducible. After two doses of 40 minims each, of tincture of opium, he was free from sickness, had less pain and anxiety, and the hernia less tense. Eighteen hours after the administration of the first dose, he was well, having taken 240 minims of the tincture without narcotism being produced.

The dangers of this practice have been already pointed out. The sedative action of the opium is naturally accompanied by alleviation of the patient's sufferings; and the dragging pain of the abdomen, the vomiting and other urgent symptoms abate, and lull both patient and surgeon into the belief that the disease is being subdued, while the strangulation may remain, and the destructive process of mortification may supervene insidiously and imperceptibly. We do not speak from experience of the remedy, as it is one which we should be unwilling to employ. If used, however, we think that the state of tension of the tumour is then the only point by which we can be guided in our practice. Should the tension continue after the action of the remedy, we should not be deterred from operating by any alleviation of the pain, or intermission of the other symptoms, as it is evident, under these circumstances, that the apparent improvement is obtained by the sedative and anodyne action of the drug, and not from the protruded portion of intestine being relieved from strangulation.

Account of Syphilitic Diseases treated in the Westmoreland Lock Hospital.

Dr Egan gives a detailed account of the syphilitic affections which have been treated by him in the above hospital since April 1843. The following is a summary of the cases :—

Number of cases which have been treated,		252
Viz.—Those unattended by induration, or any considerable degree of excavation,	219	
Excavated ulcers, with indurated base and margin,	25	
Phagedænic or sloughing ulcers,	8	

The constitutional symptoms, some very trifling, following the cases of the *first* class, were :—

Increased vascularity of throat, accompanied generally with enlarged tonsils and enlargement of the glands of the neck,	31
Papular eruptions,	30
Pains resembling rheumatism,	10
Iritis,	8
Pustular eruptions,	2

In three of the cases of iritis, a papular eruption was present, and in one a combination of papular and pustular eruptions.

Of the primary sores, 80 put on the appearance of simple excoriations or abrasions of the mucous membrane, 20 of which were followed by secondary symptoms of a mild description, viz.—

Pains,	4
Increased vascularity of throat,	7
Papular eruption,	8
Iritis,	1

In 16 of the *first* class mercury was used, which was followed in 3 cases by a papular eruption and severe pains in the joints. The local application employed was black-wash. The primary sores, when seen at any early period, were also freely touched with the solid nitrate of silver; and buboes were not found to be more common, after the application of the escharotic, than where this treatment was not adopted.

Of the *second* class, or those ulcers (25 in number) which were characterized by an indurated base and margin, and generally by a central excavation (Hunterian chancre), were—

Followed by secondary symptoms,		5
viz.—Pains and excavated ulcer of tonsil,	3	
Scaly eruption,	2	

This class was treated by mercury, continued till ptyalism was induced, the sores being touched at first with nitrate of silver.

The *third* class of primary ulcer includes those, which, at their commencement, presented the characters of phagedænic or sloughing sores. They were 8 in number, of which the results of 2 only are given. These were followed by rupia, tubercular eruptions, sloughing of the throat, and nodes. The treatment was antiphlogistic, with the administration of sedatives, and decoction of sarsaparilla, with dilute nitric acid. The surface of the sores was touched with strong nitric acid, or the acid nitrate of mercury, which was followed by the application of cataplasms.

The following is Dr Egan's résumé of his clinical observations :—

" 1*st*, I have observed the simple superficial ulcer, unattended with indurated margin or base, give rise to a papular eruption, pains resembling rheumatism, increased vas-

cularity of the throat, generally accompanied with enlarged tonsils. In this form I have never witnessed the occurrence of rupia, nodes, or ulceration of the back of the pharynx: in this class, which were, for the most part, treated without mercury, constitutional symptoms occurred far more frequently, but were of a milder description than in those where the opposite plan of treatment was adopted. When topical applications fail, mercury is resorted to for the purpose of accomplishing a cure.

" 2*dly*, That strong presumptive evidence has been afforded, that the matter of gonorrhœa, in its incipient stage, is capable of producing a mild form of secondary symptoms; but not having been able to substantiate this opinion by the process of inoculation, I cannot, as far as my experience goes, lay it down as an ascertained fact.

" 3*dly*, That the excavated ulcer, with indurated margins and base, commonly described as the Hunterian chancre, has, in my limited number of cases, been succeeded by a scaly eruption and excavated ulcers of the tonsils; and that, in those cases alone, mercury deserves the name of a specific.

" 4*thly*, That the phagedænic ulcer, when it has existed *ab initio*, does not owe its characters to any peculiarity of constitution, but to a specific virus, as is evinced in the dissimilarity and inveteracy of the secondary and tertiary symptoms; and that, in such cases, mercury is decidedly injurious. And, *lastly*, that all the secondary forms of syphilis, with the exception of iritis, are curable without the aid of mercury; the cure, however, is much more protracted, but relapses far less frequent."—Dublin Jour. of Medical Science. May 1845.

Modus Operandi of Copaiba in Gonorrhœa.

The following case, related by P. Oates, Esq., is a striking proof of the mode of action of copaiba in gonorrhœa:—

" When a lad, this patient had tied a piece of string round the middle of the penis, and so tightly, that from the sudden and great swelling produced, the urethra and corpus spongiosum were both nearly divided, and an opening into the canal was left at this point, through which the whole of the urine was voided in micturition from this time. The appearance of the penis, when not erect, was as if broken: the anterior portion hanging down almost at right angles with the posterior. The gonorrhœa was violent, with a profuse discharge from the meatus urinarius, as well as from the false opening or fistula, if one may so term it, showing that a great extent of the urethra was the seat of the inflammation. After a few days of palliative treatment, by diuretics and diluents, during which the discharge remained *in statu quo*, M. Ricord ordered for him the balsam of copaiba, under the use of which, the portion of the urethra posterior to the fistula, viz.—so much of the canal as was traversed by the urine, got completely well, while from the anterior portion the discharge was as profuse as ever. The indication was here clear; the copaiba was continued, and a syringe given to the man, with which he was directed to inject his urine into the meatus urinarius after each micturition, and in a few days the cure was complete. This case shows very clearly the modus operandi of the balsam of copaiba in gonorrhœa to be, by impregnating the urine with its principles, and being so applied to the inflamed membrane, and not by being in any other way determined to the part. This is further shown in similar affections in the female, where the urethra is more implicated than the vagina: it also points out the use of injections of copaiba in gonorrhœa; and, although they have been tried with partial success, it is by no means a general way of using the remedy. If, however, a formula could be found, in which it could be so combined and modified, as when eliminated with the urine, all the advantages of the medicine might probably be secured. There is no doubt copaiba is the most powerful resource we possess in gonorrhœa, and

where it does not succeed, it is generally from its nauseating the stomach to such an extent as to be inadmissible, or otherwise deranging the system; and, could it be used in an appropriate form as an injection, the patient might be spared the disgust and unpleasantness consequent on a course of this nauseous drug."—London Medical Gazette. Aug. 22, 1845.

MATERIA MEDICA.

Preparation of Ox-gall for Medical Use.

Much attention has been drawn lately to the medicinal effects of Ox-gall. The following directions, given by Dr Lane, deserve to be attended to:—

"*Inspissated and Desiccated Ox-gall.*—Dr Hunter Lane says, with a view to preparing ox-gall for internal administration, care should be taken in selecting perfectly healthy gall-bladders of young oxen. Persons in the habit of collecting this recent gall for pharmaceutical purposes, find, on comparing the bladders, a striking difference in their contents, not merely as affected by the period of year, nature of the animal's food, and the beast's age, but in oxen killed at the same season, after being similarly fed, and of a corresponding age. The frequent occurrence of morbid admixtures with the gall, varying from thickened mucus to purulent deposits and calculous formations, render proper discrimination imperative; otherwise, after carefully preparing a quantity of recent gall, disappointment will succeed the process, because negligence may have mixed up with the fluid the abnormal product of a diseased liver, which, on evaporation, converts the whole into a disagreeable putrid mass, totally unfit for use, and quite different from the character of the somewhat aromatic animal mass which results from the evaporation of normal ox-gall. Healthy fresh ox-gall is a transparent fluid, of a bright, dark, grass-green colour; of a viscid, tenacious, equal consistence, of a strongly animal with slightly aromatic odour, and bitter alkaline taste. Bile of this description, taken from about a dozen bladders, should be poured into a deep earthenware vessel, and allowed to rest for about 24 hours; the supernatant fluid should be then poured into a shallow dish, such as an ordinary meat dish, and set into an oven, the temperature not exceeding 100 F., until the whole be reduced to the consistence of a pharmacopœial extract. Thus it is *inspissated* ox-gall, and easily made into pills. After employing it in this state for some time, experience showed the inconvenience which its highly deliquescent property entailed. For, kept ever so carefully, it soon became too moist to use—a difficulty which evaporating it in mixture with magnesia did not satisfactorily remove, while it so augmented the bulk of the substance as to disqualify it for employment in a pillular form. When rolled into pills, and buried in magnesia or powdered liquorice-root, or enveloped in silver or gold leaf, and put into well-corked phials, it still absorbed moisture, and they soon conglomerated into one mass. To obviate this troublesome difficulty and serious objection, as it proved, to the more extensive use of this invaluable remedial agent, Dr Lane suggests that, instead of the gall being merely *inspissated*, it should be *desiccated*. For this purpose, it needs only to be allowed to remain at the same temperature, until there remains a dry, bright-green, friable, pulverulent, slightly aromatic mass; in which state the substance loses none of its medicinal virtues, its deliquescent character is nearly lost, it can be easily preserved in closely-stoppered bottles, and is with facility made into pills, particularly with any spirituous fluid, or essential oil, and will mix well with various salts that are otherwise not readily made into pills, while it is, where desirable, with facility mixed with other materials into powders."—Medical Times, Aug. 23, from the Lancet.

Use of Ipecacuanha in large Doses.

"Mr Higginbottom has employed ipecacuanha, in emetic doses, in several cases of great exhaustion, in cholera, uterine hemorrhage, bronchitis, suspended animation, and sinking during the puerperal state, with advantage. In the cases of cholera, he follows up its use by blue pill and opium, and a rhubarb and sulphate of potash draught. The case of uterine hemorrhage was, apparently, very severe; the full emesis produced by the ipecacuanha arrested the hemorrhage, which, on subsequent occasions, was prevented by the exhibition of secale cornutum. He objects to diffusible stimuli in such cases, as he believes they increase the arterial circulation, and, consequently the hemorrhage. In bronchitis, Mr Higginbottom has found an emetic dose of ipecacuanha a very valuable remedy in that stage of bronchitis where a sudden, low, or sinking state has come on, with oppression at the chest, and the expectoration difficult, endangering suffocation."—Medical Times, Saturday, August 23, 1845.

Peculiar Effect of Indigo.

"About ten years ago, indigo was used, and strongly recommended in different forms of spasms and convulsions, and especially in epilepsy. The observations then made were very favourable to its use. The author also frequently administered it, but could not confirm the favourable reports by his own experience. He could never effect a complete cure by it; recovery seemed to have ensued in several cases, but the convulsions unexpectedly returned. The author found the nitrate of silver much more useful in epilepsy. He, however, only communicates in this article a peculiar phenomenon which he observed from the use of indigo. A delicate, but healthy female, with a tender skin, suffered for a long time from clonic spasms of the chest, which seemed to indicate the employment of indigo. The spasms, originally caused by a violent cold, had lasted for several years, and seemed to proceed from disturbance of the digestive organs. Two drachms of indigo were ordered, with two ounces of some aromatic powder, and the doses so arranged that she took about half a drachm per diem. But in this dose the remedy caused great uneasiness, nausea, vomiting, and diarrhœa. The dose was reduced to ten grains a-day when no sickness ensued, but diarrhœa was frequent. In this small dose the remedy was taken for a fortnight, without any peculiar symptoms. On the fifteenth and sixteenth days, however, fever appeared, with heat, thirst, anorexia, and shortly after, inflammatory swelling of the joints, exactly like acute rheumatism. The indigo was continued, and the inflammatory swellings of the shoulder, elbow, wrist, knee, and knuckles were removed by appropriate remedies in about a fortnight. The patient and the author ascribing the occurrence of acute rheumatism to accidental circumstances, the indigo was recommenced after a short interval. In five days, the rheumatism again appeared with its former violence, and now the patient stoutly asserted that these attacks were produced by indigo. This time the swelling and pains of the joints were more obstinate, and resisted treatment longer than before. Numerous blisters were required before complete recovery was effected. As long as the articular swellings lasted, (which were carefully treated, and without repressing remedies), no spasms appeared. Still doubtful whether indigo was the real cause, the author resolved on administering it a third time. He ordered it in pills to be covered with gold paper, so as to conceal the contents (the patient having previously declared her determination not to take any more indigo). The pills had only been administered eight days when the rheumatism re-appeared, and the patient at once accused the author of having administered indigo against her will. The spasmodic disease continued unabated. The stools were blue during the use of the remedy, but the urine and perspiration were normal. The patient could never take the large dose generally recommended. This was perhaps occasioned by some difference in quality of the indigo. That used in

the above case was the best kind, viz. Guatimala-indigo. The other kinds are impregnated with foreign vegetable substances, and perhaps also with lime, sand, and starch, by which means larger doses may possibly be taken.—*Dr Berger of Brandenburg, in Pr. Vereins Zeitung.*) The above interesting case furnishes matter for deep consideration. Credible authors assure us of the excellent effects of indigo in epilepsy; the no less credible Dr Berger narrates to us a case where indigo most decidedly produced rheumatism. Now, the question arises, does this phenomenon disagree with the assertions of the utility of indigo? I say, positively not. I have never tried indigo in epilepsy, but the above case induces me to expect great advantage from its employment in such forms of spasm as are originated by certain digestive derangements, of course in combination with stomachic remedies. My reason is this: indigo was, in the above case, shown to attack the primary cause of the particular clonic spasms mentioned, by producing a disorder (swelling and pain of the joints) frequently proceeding from the same source. The patient being predisposed to rheumatism, the remedy diverted the effect of the morbid cause into some other organs. But in cases where no rheumatic predisposition appears, indigo may be expected to get rid of the morbid cause by the usual purifying channels, and then probably its colour would also be communicated to the urine and perspiration, as asserted by the advocates of the remedy."—Note by Dr Sutro.

Cotton as a Dressing to Blisters.

"Prof. Seidlitz employs carded cotton as a dressing to blisters in order to produce their rapid cicatrization. He first evacuates the serum, and then covers the part with a layer of cotton, which he allows to remain until the cure is accomplished."—Journ. de Med. et de Chirurg., Aug. 1844, from Petersburger Journal Fuer Natur und Heilkunde.

Mode of preparing the Valerianate of Zinc. By M. Devay.

"The fresh roots of valerian are distilled, when the valerianic acid comes over along with the essential oil. This oil is separated, and the distilled water has its acid saturated by carbonate of potash. Solution of caustic potash is also agitated with the essential oil, and both fluids are mixed together. The valerianate of potash not being volatile, allows the most of the water to be driven off, as well as that portion of the volatile oil which has not united with the alkali. When the valerianate of potash is sufficiently concentrated, it is introduced into a small retort, and a sufficient quantity of dilute sulphuric added to unite with the potash. Heat is then carefully applied, and the volatile valerianic acid distils over in a pure state, partly dissolved in a small quantity of water, partly as an oily hydrate. It is then mixed with carbonate of zinc, and the union aided by heat. It is then filtered, and as the fluid cools the crystals of the valerianate of zinc are deposited. The mother liquor is to be evaporated till all the salt is obtained."—(Gaz. Med. de Paris, June 29, 1844.)

Croton Oil Plaster.

"M. Bouchardat recommends the following method of preparing croton oil plaster. Melt eighty parts of gum diachylon plaster at a very gentle fire, and, when it is semiliquid, mix with it twenty parts of croton oil. The plaster which results is to be spread thickly on muslin. It will produce considerable irritation of the skin, and may be employed in all cases where revulsives are required. It does not cause such severe pain as many other counter-irritants; and it may be applied over an extensive surface, so that a derivative action may be established proportional to the irritation which is to be combated,—an indispensable condition in the employment of these heroic remedies. M. Bouchardat is fully of opinion that the croton oil plaster will be found available in

the treatment of many chronic diseases, both of the respiratory apparatus, and of the abdominal viscera."—(Annuaire de Thérapeutique, 1844.)

Lithontriptic action of the Gastric Juice.

" M. Millot has stated that the gastric juice, even when diluted with an equal portion of distilled water, possesses the property of disintegrating vesical calculi, so as to render them capable of being crushed by the slightest effort or pressure of the finger, by effecting the solution of the cement of organic matter which unites the layers of the calculus. M. Leroy d'Etiolles observes, that a similar idea was put forth by Sennebier in his translation of Spallanzani's work, when treating of digestion; he has ascertained that this liquid has no action on the calculi of oxalate of lime, scarcely any on those of uric acid, and very slight on those of phosphate of lime, magnesia, and ammonia. He has not observed any effects worthy of notice except upon the alternating calculi.

" These effects are thus explained by M. Bouchardat:—The organic matter which cements the calculi of oxalate of lime and uric acid is generally mucus, which is not modified by gastric juice. The alternating calculi, on the contrary, having almost all been deposited in a diseased bladder, an albuminous substance is combined with the mucus, and this is attacked by the gastric juice, so that the layers of the alternating calculi separate with facility. Setting aside, therefore, the great difficulty that would be experienced in obtaining sufficient quantities of gastric juice, the effects to be expected from it are limited and equivocal. But M. Bouchardat adds, he is convinced that the question of lithontriptics, although at present but little advanced, is yet capable of a fortunate solution, and he hopes in a future Annuaire to return to this subject." —Bouchardat, Annuaire de Thérapeutique, 1844.

[The late Professor Dorsey, of the University of Pennsylvania, in his inaugural thesis, published in 1802, relates several experiments instituted with the view of determining the solvent power of the gastric juice on calculi in the bladder. He was led to believe that this power was so feeble that the stone progressed almost as fast as the solution, and that its use would not supersede the necessity for an operation.]—American Journal of Medical Sciences, Jan. 1845.

Mode of preparing some Narcotic Extracts in small quantities. By M. SCHEIDEMANDEL.

" Dry the herb, as, for instance, *hyoscyamus*, in a stove, at a moderate heat, and then powder. Put about four ounces of the coarse powder into a glass funnel, loosely stopped at the lower end with cotton; place over the powder a piece of white filtering paper, and upon the paper a layer of well washed sand, previously purified by muriatic acid. Pour alcohol, of 30 per cent., gradually into the funnel till the powder is partly moistened. Then cease, and, in half an hour, you will see that the liquid has slowly penetrated the whole mass, and the alcoholic solution will fall in the form of dark green drops into the vessel, over which the funnel is placed. When the dropping ceases, begin again instilling small quantities of alcohol, about half an ounce every quarter of an hour, and proceed as above till you have used eighteen ounces. Cover over the solution with a glass plate for the night, and begin next morning by infusing pure water, continuing till the liquid, which passes off, is no longer green, but brown; that is to say, till the alcoholic solution has become exhausted, and nothing but a watery extract remains. As soon as you perceive this change, substitute a new vessel for the one containing the alcoholic extract. Continue during the day with the watery infusion, till the dripping fluid commences to be transparent; then pass through a small quantity more of spirit, and cover it over for the night. The alcoholic extract is now to be filtered and distilled in Gundermann's small steam apparatus, until a few ounces only of alcohol remain. Then put

the beautifully green and thickish alcoholic extract, which results, into a porcelain dish, together with the watery extract, reduced to the consistence of syrup, and evaporate the whole at a gentle heat by the spirit lamp. Thus, an extract will be obtained, perfectly soluble in water, of a beautifully green colour, and certainly unsurpassed in efficacy by any extract prepared by other methods. The same process may be adopted in the preparation of *extr. belladonn, digital, conii, &c.* From four ounces of coarsely powdered hyoscyamus I obtained one ounce and six drachms of extracts."—Medical Times, Oct. 12, 1844, from Buchner's Repertorium.

On a New Method of making Medicated Tinctures.

" Dr H. Burton describes in the Lond. Med. Gaz. (Aug. 30, 1844), a method of making medicated tinctures, which seems to have advantages, not only over the old process, but also over the more recent French one of percolation. In the ordinary process of making tinctures, maceration and filtration are both necessary, which cause both loss of time and a waste of spirit. By Dr Burton's process, maceration and filtration are simultaneously conducted; the solid being loosely packed in a bag, which is suspended just under the surface of the solvent, so that all parts of it are immersed, and a space left between its lowermost end and the bottom of the macerating vessel. In this process no shaking or stirring is requisite :—' as soon as the spirit begins to act on the solid, a coloured tincture will be seen to gravitate through the colourless and lighter spirit by which it is surrounded. In proportion to the rapidity with which the heavier tincture gravitates, a corresponding bulk of lighter spirit ascends, and is carried or forced into contact with the solid suspended at its surface. Thus, in a short time, a descending and ascending current will be established throughout the fluid, and will continue to move as long as the solid contains any soluble extract, or until the solvent has become saturated, and incapable of dissolving an additional quantity.'

" One of the best illustrations of this process, the author observes, is afforded by the phenomena which may be observed during the making of tincture of kino, with the proportion of ingredients directed in the London Pharmacopœia; a brief description of which will serve as an explanation of this new application of a principle long familiar to scientific chemists.

" Take, for example, 126 grains of kino, in small fragments or coarse powder, and inclose them loosely in a calico bag, large enough to contain as much again, and secure the mouth of it with a fine string. Next choose a glass bottle, stoppered, with a wide mouth capable of holding four fluid ounces of spirit, and pour into it three fluid ounces of spiritus rectificatus, having a specific gravity of 0·838 at 60 deg. Then suspend the bag of kino by its string, attached to the neck of the bottle, just below the surface of the spirit, and close the bottle.

" The bottle should be left at rest, and almost as soon as the kino is immersed, its dissolution commences; in proof of which a bright red stream of tincture begins to descend, and for a short time remains at the bottom of the bottle, distinct from the colourless spirit above and around it; but in the course of a few hours the red stratum will have increased in thickness, and eventually ascended to the upper surface.

" The tincture of kino thus produced will be perfectly clear, and its physical properties at the end of three or four days will correspond precisely with a tincture made with kino of the same quality, and spirit of equal density, mixed in the same proportions, and macerated together in a bottle for the space of fourteen days, according to the old method.

" ' Fine flannel or calico,' Dr B. says, ' will answer the purpose of a filtering bag very well; and in this the dry solids should be loosely packed, so as to allow space

enough for their expansion on being immersed in the spirit, and for the circulation of the latter through them.'

"The same plan may be followed in making infusions; but the macerating bag should be open as the coffee-biggin, and the boiling water poured on the solids to be infused in a vessel having a spout through which the infusion may be found when cold."

Caroub of Judea in Asthmatic Affections.

"The caroub is an accidental production like the gall-nut, resulting from the puncture of the pistacia terebinthus by an insect named aphis pistacia. It forms a species of capsule, the parietes of which are about the thickness of the head of poppies. It has an aromatic odour, and a resinous taste. It has been used for the last thirty years by the physicians of Vienna in the treatment of asthma, catarrh, bronchorrhœa, &c., and was first introduced into use by Dr Wertheim. Dr Hoffmann, in a pamphlet lately addressed to the French Academy of Sciences, states that he has found it principally beneficial in the treatment of patients of a nervous and lymphatic constitution, and in the early stage of the disease. M. Martin-Solon, in his report to the Academy on the above-named paper, states, that the article is similar to the resinous and balsamic medicines in general use, and thinks that it may be usefully substituted for them, owing to its agreeable flavour. He says that the best way to use it is in fumigations, dry or moist."

PATHOLOGY AND PRACTICE OF PHYSIC.

Acute Rheumatism rapidly ending in Apoplexy.—A clergyman, ætat. 59, usually healthy, was taken ill, after having suffered from chills for a few weeks, on the 27th February 1842, with symptoms of rheumatic fever, and painful swelling of several joints. He did not seek medical aid till the 1st of March; he was then ordered a decoction of taraxacum, with Glauber's salts, nitre, tartar emetic, and syrup of manna, without relieving the pain or swelling. The bowels at first were only opened once, but became relaxed after a repetition of the medicine. The pains now diminished, and on the 4th the patient felt still more relieved, and was merry; but during the following night delirium supervened, and the next morning he could not speak distinctly. He only became conscious for a short time, and was able to stammer a few words. The pulse was very rapid, and peculiarly tremulous, the skin hot and dry. Notwithstanding leeches to the head, mustard poultices to legs and arms, and arnica given internally, he died at 7 P.M. Rheumatic metastasis is rarer, and more rapidly fatal, when it attacks the head, than when the heart or pericardium is affected.—(Dr Camerer of Langenau, in Würtemb. Correspond. bl.)

On the Frequency of Alkaline Urine in Healthy Persons.—It was formerly assumed that recent urine displays an acid reaction, unless it has lost its acidity by the previous internal use of alkalies. On this account alkaline urine was unhealthy. But Wöhler showed, that not only after the use of neutral salts with vegetable acids, but even after (vegetable) acid salts, the urine was frequently alkalinescent. He assumes that these latter salts are transformed into carbonates within the body, and are brought into the urine as such, rendering it alkaline, and causing also the precipitation of the phosphates, which are only soluble in an excess of acid. Besides, he observed, that after taking abundance of fruit, particularly sweet fruits, such as cherries or strawberries, the urine became often alkaline. Wöhler concluded from the above, that salts with vegetable acids and fruit are particularly to be recommended in the uric acid diathesis. Practice

has confirmed the truth of this recommendation. The author found that, even after taking from one to two tablespoonfuls of apple-juice, the urine became alkaline within half an hour to an hour and a half. The effervescence of alkaline urine, observed by Wöhler, after taking great quantities of fruit, has been remarked by the author after the above small quantity of apple-juice, but more decidedly after about twelve baked plums. As precautions for the experiments, the bladder ought to be emptied before eating the fruit, and only little water should be taken in order that the alkaline reaction may appear prominently. Fruit exerts, of course, the same influence on the urine during illness as in a natural state, so that turbid urine must sometimes be rather ascribed to diet than to abnormal causes. The above facts must influence considerably the diagnosis of several diseases, as—1. *Simple chronic nephritis*, its chief and sometimes only symptom is maintained to be : less acid, or alkaline urine, with a sediment of phosphates (particularly phosphate of lime and triple phosphate.) 2. In *spinal diseases* the alkaline urine might also be occasioned by fruit, at least the author found no alkalinity in caries of the vertebræ, and whenever alkaline urine is met with in spinal diseases, it may be occasioned by a secondary disorder of the urinary mucous membrane, or by decomposition of the urine during the period it remains in the paralysed bladder. If vesical disease combines with the spinal, the urine is found alkaline. 3. *Morbus Brightii.*—The property of alkaline urine to become turbid, when heated, may easily give it the appearance of containing albumen, particularly since the precipitate of the phosphates floats at first in the form of little clouds in the vessel, like coagula of albumen. They can easily be distinguished from albumen by their solubility in acids (particularly nitric acid), by their being deposited long before boiling takes place, and by their much more rapid precipitation than coagulated albumen, consequent on their greater density.—(Dr Krukenberg of Braunschweig, in Henle's u. Pfeufer's Zeitschr.)

Unusual Phenomena observed during an Epileptic Fit.—Mr Tripe records the case of a female, twenty-two years of age, of plethoric habit, subject to epilepsy for years, and formerly accustomed to drink freely, to whom he was summoned while she was labouring under a very severe attack of epileptiform convulsions, which were ever and anon succeeded by coma. Venesection was practised, but very little blood was obtained. The temporal artery was then opened, from which flowed, with a per saltum motion, a stream of arterial-coloured blood, but in a short time another fit supervened, when some unexpected phenomena presented themselves. On the first occurrence of the convulsions, the stream issued more forcibly from the orifice, but gradually became altered both in colour and motion, the arterial tint slowly changing to a dark venous, and the leaping motion to a continuous stream, so that the blood appeared as if flowing from a vein, and with increased rapidity. This lasted during the height of the paroxysm (about one minute and a half), after which it subsided with the convulsive movements. The pulse during the comatose state was weak and fluttering, but when the struggling commenced it rose in force and fulness ; and as they increased, it gradually became imperceptible ; and as they diminished, so it returned to the state first described. The action of the heart, at first irregular, unequal, and laboured, became more powerful when the convulsions first occurred, but lessened as they increased, though it still continued whilst the blood was flowing in a continuous stream from the temporal artery. The respiratory movements also ceased during the greater part of the paroxysm (about two minutes and a half), the chest being fixed, the diaphragm motionless, and the glottis closed. During the flow of the blood, which lasted nearly twenty minutes, three fits occurred, each of which was attended by similar phenomena. The patient recovered.—Medical Times, August 30.

Case of Ulcerated Stomach, causing Death by being suddenly detached from its adhesion to the Peritoneal Lining of the Abdomen. By WILLIAM COLLYNS, Esq., Surgeon, Kenton.

(Read at the Annual Meeting of the South-Western District Branch of the Provincial Medical and Surgical Association.

I was requested by a friend to open the body of a female relative, who had died suddenly under circumstances which he could not satisfactorily account for, and I extract from my case-book the following particulars which he gave me, and the result of the autopsy:—

"E. W., aged 21, a very fine young woman, inclined to be corpulent, with a florid complexion, robust, and of active habits, had occasionally complained of rather acute pain in the left hypochondrium, after taking a full meal, but as it never lasted an hour at a time, and as her digestion was good, nothing was prescribed for her but some aperient pills. Being corpulent, she was accustomed to have her stays laced very tight, and used to wear also a broad band round her waist, which was always made excessively tight, and it was thought the pressure might have occasioned the pain. One morning, after having used great exertion, dancing all night at a ball, she ate a hearty breakfast, and quickly after walked out with some young friends. Suddenly she was seized with very severe pain in her left side, from which she said there was something tearing away; she shrieked violently, became faint, and fell down in the street; she was immediately removed to the house of her relative, which she had just left, efficient medical aid was instantly obtained, but after suffering intense agony for three hours, she expired.

"Twelve hours after death I opened the abdominal cavity, there did not appear to be any omentum, but merely a ragged sort of fringe along the greater curvature of the stomach; there was no appearance of inflammation on the outer coat of the stomach or intestines; but on that portion of the lesser curvature of the stomach anteriorly, which in the erect position of the body would have been in contact with the abdominal parietes on the left side, there was a considerable deposit of coagulable lymph, and a perforation through the coats of the stomach from internal ulceration; there being also a corresponding deposit of lymph on the membranous lining of the abdominal cavity, to which it was apparent the stomach had adhered; and it was opposite this spot she had always complained of pain. The stomach was very large, and contained a good deal of undigested food, but the fluid parts had escaped into the cavity of the abdomen. All the other abdominal viscera were perfectly sound.

"The stomach was produced for inspection."—Provincial Med. Journ. Aug. 27.

A Case of Tetanus successfully treated. By WILLIAM GILLARD, Esq., Surgeon, Totness.

(Read at the Annual Meeting of the South-Western District Branch of the Provincial Medical and Surgical Association.

"December 28, 1838. R. L——, aged 20 years, a healthy young man, received the whole charge of a gun in the front of the right thigh, about midway between the hip and the knee. I saw him within an hour of the accident; the wound was nearly circular, about two inches in diameter, with some shot, portions of wadding and his cloth trousers protruding from it, but so firm that I did not consider it prudent to remove them by force, the bone being uninjured. I ordered him to bed, to be kept quiet, and have a cold lotion constantly applied.

" 29th. Had a comfortable night; pulse 90; tongue white. Repeat the lotion. An aperient draught to be taken immediately, and Dover's powder at night.

" 30th. Did not visit him, but heard he was going on well.

" 31st. Found him very quiet; pulse 84; wound looking well, and free from pain. The lotion to be repeated. Ten grains of compound ipecacuanha powder at bed-time, and the aperient draught in the morning.

" January 1, 1839. Had a good night; bowels relieved; some shot and pieces of wadding coming away, and altogether going on so well, that I did not visit him again until the—

" 5th. When he was very comfortable; pulse 76; no medicine required. He was ordered a poultice of bread and water to the wound, and to omit the lotion.

" 10th. Quite easy, and wound going on well.

" 18th. I was called to him in the afternoon, the messenger saying he had locked-jaw. He had trismus, and opisthotonos to a great extent; pulse 80, tense and thrilling. I bled him without regard to quantity, until syncope was produced, and ordered him five grains of calomel and half a grain of tartarised antimony every four hours, with one ounce of aperient mixture; the poultice to be discontinued, and the cold lotion applied as before.

" 19th.—*Mane.*—Had a restless night; pulse 80; bowels moved during the night; spasm continues. Bled him as before; repeat the medicine, and an enema, with two ounces of spirits of turpentine, and one ounce of castor-oil, was ordered.

" *Vespere.*—Altogether a little relieved, and pulse softer.

" 20th. *Mane.*—Had some sleep; bowels freely opened; pulse 80; but more compressible. Half a grain of tartarised antimony, and six grains of camphor, with one ounce of aperient mixture every four hours.

" *Vespere.*—Pulse harder; spasms returned; bled him as before.

" 21st. *Mane.*—Restless night; spasms continue; pulse 80; wound looking well. Lotion continued; bleeding repeated; and aperient mixture every four hours, with three grains of calomel, half a grain of tartarised antimony, and four grains of powdered scammony.

" *Vespere.*—Quieter and more comfortable; bowels moved.

" 22d. *Mane.*—Night restless, with occasional spasms; pulse 80; bowels acted on repeatedly during the night. Bled as before.

" *Vespere.*—He was altogether relieved; pulse 96; soft and compressible; skin moist, having been from the 18th dry and hot; free from spasms, and inclined to sleep. I now ordered him one grain of opium, and three grains of camphor in a pill every three hours, with a simple saline draught, in a state of effervescence; and as he continued to improve, I followed the same plan of treatment to the 29th, with very slight occasional alteration, and now and then an aperient draught. The cold lotion was used to the 29th; on the 27th, the last shot, and a large piece of the trousers, came away; on the 31st I applied a bandage.

" February 8th. I ceased my attendance, as he was quite well. He has never since felt the slightest inconvenience."—Provincial Med. Journal, Aug. 27.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

We have received an excellent " Memoir on the Human Female Ovary, with reference to Corpora Lutea, both True and False," by Dr F. Renaud, which was published in the August number of the Monthly Journal of Medical Science. We extract from it

some interesting passages, from which our readers will be able to judge of the merits of the whole.

"Very few ovaria found after death in women of the child-bearing period, fail to develope within their substance appearances referrible to vascular excitation; *e. g.* yellow bodies, with or without coagula, abortive of true conceptive corpora lutea; or yellow bodies, more diminutive in size, lined internally by a very thin black membrane; or jet black bodies, triangular or oval in shape, placed near to, and close up to the surface, with or without corresponding cicatrices; or more solid black bodies, resembling short corns, occasionally found nearer the centre of the ovary, and without any connection with its periphery."—P. 3.

"False corpora lutea appear always of a sulphur or chrome-yellow colour on first being secreted, depending upon the presence of an oil of a bright-yellow tint. As degeneration advances, the brightness of the yellow matter fades into a paler hue. The colour of true corpora lutea is more variable, ranging from yellow-ochre to reddish-brown."—P. 4.

"When the yellow secretion of the spurious corpus luteum is placed under the microscope, immediately after the cessation of the catamenia, it is seen to be made up of cells, inclosing 1, 2, 3, or more nuclei, which are of a bright and clear colour, surrounded by granules or molecular particles. The cell walls are so very tender and delicate, that on the slightest pressure, the nuclei escape on all sides, and meeting with each other, quickly coalesce, a large and shapeless mass of oil resulting. The moment these nuclei come in contact with each other, so soon do they amalgamate, an act which goes far to prove them to be fatty matter. Boiled in ether, the nuclei disappear, and the oil granules become shrivelled and empty. In shape, the cells are irregularly rounded, oblong, or oval. In most of them, the nuclei can be detected, whilst in others they either do not exist, or are obscured by the aggregation of the granules surrounding them.* This demonstration puts a period to speculations as to the yellow matter being altered blood, or intumescence of the vascular membrane of the Graafian follicle. Furthermore, as the body is distinctly formed of cells, it follows that it is a substance *sui generis*—a consequence of some action or actions excited in the ovary in order to its production. To investigate the mode of production of these cells, it appears most consonant with the physiology of generation to consider the changes wrought in the ovum, prior to the advent of those actions which first cause the corpus luteum to be developed. The yolk globule is originally produced from granular matters secreted by the vascular ovisac. In some instances, as in the umbilical vesicle of the embryo lizard, the most accustomed eye can detect little or no difference between it and the cells of false yellow bodies. If a fully developed ovum be placed in the field of a good miscroscope, the granular matter is found to be mixed up with cells, perhaps more regular in form, and much smaller, yet not essentially differing from either of the foregoing. If, then, these appearances be traceable in the unruptured follicle, it seems to follow, that, as the entire follicle is comparable to a compound cell, the fluids within it must directly or indirectly emanate from actions taking place on the inner surface of the cell wall, *i. e.* the vascular membrane of the Graafian follicle. Hence, it appears a legitimate conclusion, that the yellow matter of the false corpus luteum has its origin here also."—P. 5, 6.

"* Much similarity of form and constituent principles will be observable between these cells, and the exudation corpuscle, characteristic of inflammation:—for some good illustrations of which, *vide* 'Inflammation of Nervous Centres,' by Dr John Hughes Bennett, in the Edinburgh Med. and Surg. Journ., for 1843."

"Independently of these yellow bodies, there are dark spots in the ovaries, which in most cases partake of a true inky blackness. This dense colour entitles it to rank as a variety of spurious melanosis, distinct from the true melanosis, inasmuch as it has neither a tendency to cause irritation, ulceration, or disorganization of surrounding tissues. The ovaries being granular bodies, and far removed from the centre of circulation, yet periodically, under the influence of physiological excitement, are liable to have in their proper sacs or follicles, an increase of vascularity, which is essentially capillary."—P. 9.

"The black matter in the ovaries so much resemble the same, in other parts of the body, when not malignant, that it seems difficult to separate the appearances of the one from the other; whilst, if viewed conjointly or separately under the microscope, the size of the cells, the aggregation of the granular contents, the small nuclei, &c., render any diagnostic difference difficult, if not impossible, of detection. The black pigmentary matter within the ovaries is a cellular growth. If it be viewed some length of time subsequent to secretion, it may appear difficult of detection—the exact appearances of the individual cells having undergone so much alteration, as to give them something of the appearance of a structureless mass, following the ramifications of blood-vessels. When recent, the case is markedly different, where the cells are too clearly defined, to leave any question as to their nature. They are rounded or oval, having plump walls, which are distended with a dark, oily, and granular matter, having here and there larger spherules or nuclei, which are indefinite in numbers. As they grow older, the shapes of the cells have a tendency to become more and more triangular, so much so, as in many cases to be distinctly pointed at the apex. According to the duration of these cells, so is their increase of consistency, and by so much is the diminution in the size of the globular nucleus or nuclei determinable. They all follow out a definite direction, being arranged in semicircular or linear strata—a course not pursued by the proper secretion either of true or false corpora lutea. This appearance is as distinctly discernible in the small bodies of like nature found in the ovaries of cows—the most striking difference being, that, whereas in the human ovary, the colour is black, in the ovary of the cow it is of a dull brick-red. Not only are the cells in many instances triangulated, but the whole black body partakes of the same shape, especially when near the surface of the ovary.

"So far as my observation extends, this black secretion lies within, and between the cell-walls of the ovule, and, as a general rule, does not exceed tissue-paper in thickness. The minute anatomy of this black matter differs so remarkably from any ordinary appearances of blood, that it is clearly indicative of some fresh arrangement of molecular particles, consequent on local vascular excitement, progressing to a certain extent, yet in the end abortive."—P. 9, 10.

"In only one instance, have I discovered this black pigmentary matter in the oviducts. It occurred in a woman who died of chronic disease, nine months and nine days subsequent to conception. It was found near to the pavilions, had a striated appearance, and, when microscopically examined, exhibited the usual appearance of granular cells, which, on pressure, exuded a considerable portion of dark-coloured oil. It yet remains to be observed, that this melanotic matter may be secreted in the ovaries, independently of any external signs of menstruation, it being found where the catamenia can be distinctly traced as absent."—P. 11.

Case of Placenta Prævia. By T. M. Greenhow, Esq., F.R.C.S., Newcastle-upon-Tyne.

"The subject of placenta prævia has recently claimed so large a share of attention, that practical facts connected with it cannot be entirely without interest.

" The profession is certainly greatly indebted to Dr Simpson, of Edinburgh, for the diligence with which he has collected the record of cases in which the placenta has preceded the birth of the infant. The table he has constructed must go far to establish the value of the new practical rule in midwifery,—which teaches, not only the safety, but the urgent necessity, in many cases, of detaching and delivering the placenta when the life of the patient can only be preserved by immediately checking the flooding which places it in such imminent hazard. The accompanying case is not the only one in which I have found the complete separation of the placenta from its vascular connection with the uterus entirely successful in accomplishing this purpose, and in which the labour has afterwards rapidly proceeded to a happy conclusion ; but it is somewhat remarkable from the recurrence of the same preternatural circumstances in successive confinements.

" Mrs L., aged 44, married at 18, has had thirteen children, all, except the first, born at seven months ; three only are living. Except the first, nearly all were preternatural presentations, many of them placental, when profuse hemorrhage took place, demanding immediate delivery by turning.

" In February 1844, the placenta was found considerably separated, the breech presenting behind it, the discharge excessive, and the patient much exhausted. By introducing the finger into the os uteri, and making a circular movement, the placenta was altogether detached from its connection with the uterus, and withdrawn ; the hips of the foetus soon followed, and delivery was rapidly completed. No further hemorrhage took place, and the patient recovered well, with the exception of an attack of phlegmasia dolens, which yielded to appropriate treatment.

" On the 13th of May 1845, when in the sixth month of pregnancy, hemorrhage to some extent took place, attended with shivering and sickness ; a recurrence of the same symptoms at uncertain intervals, until the completion of the seventh month, with, on one or two occasions, great discharge of florid blood.

" July 1st, labour pains came on, with much hemorrhage ; the placenta was found separated to a considerable extent, and protruding at the os externum. The finger was introduced, as on the former occasion, and the connection of the placenta with the uterus completely destroyed, when all hazard of further discharge was effectually prevented. The head was found at the brim of the pelvis, accompanied, by a hand of the foetus. Uterine action ceased for a while, but soon returned with considerable power ; at first the hand showed a tendency to advance and the head to recede, but by carefully pressing the hand back during the pain, the head soon descended so as to occupy the cavity of the pelvis. It was, however, accompanied by the hand, which could not be entirely pushed back, although, by the efforts made to prevent its advance, the shoulder was probably prevented from occupying the brim of the pelvis instead of the head.

" The pains increased in force, and in about an hour after my arrival the delivery was completed. The ovum came away entire, except that the membranes had been lacerated at one side, and the liquor amnii discharged. The preparation shows the placenta in advance of the head ; the arm retains the position it occupied during birth, by the head of the foetus ; the funis is twisted round the chest and neck, and the lower extremities remain enveloped in the membranes.

" July 3d, patient going on well ; no inordinate discharge followed delivery.

" 29th, Recovered well ; in her ordinary health."—Prov. Med. Sur. Jour., Sept. 10.

Newcastle-on-Tyne, Aug. 29, 1845.

FORENSIC MEDICINE AND MEDICAL POLICE.

Remarks by Orfila on the Mode recommended by M. Persoz for identifying Stains of Blood.

Some few years ago, M. Persoz announced to the Faculty of Sciences at Strasbourg, that "hypochlorous acid immediately destroys all spots, excepting those formed by rust or blood; these last become of a blackish-brown on contact with the acid; it is of the more importance to use the hypochlorous acid, since it often happens that spots of blood on textures lose their property of being soluble in water, and cannot therefore be detected by that mode." We will not quote the very long series of experiments performed by Orfila to investigate this point, but merely his conclusions. He concludes, from his experiments, 1st, That of all the means proposed, up to the present day, for the identifying of stains of blood, that of treating the spot with water, and acting upon the solution, is incontestibly the best; and that in almost every case, stains of blood, even of very old standing, upon clean cloth, or greasy cloth, or upon iron, will yield to water a sufficient quantity of colouring matter to permit of its identity being established. 2dly, Most spots of blood, thin or thick, new or old, on cloth or on steel, entirely, or almost entirely, disappear, on being permitted to remain a short time in contact with the hypochlorous acid; and if any of them do not disappear, far from becoming of a reddish-brown, they acquire a greyish tint. 3dly, There are other stains which are changed in a manner similar to those of blood by the action of hypochlorous acid. 4thly, Hypochlorous acid is quite useless as a means of distinguishing between thick spots of blood and spots of rust. 5thly, Stains of blood caused by the imbibition of that fluid from some other substance offer less resistance to the action of the acid than stains produced by the blood having fallen upon the substance directly from the wound."—Annales d'Hygiene, Juillet 1845.

PART V.—MEDICAL MEMORANDA.

PROCEEDINGS OF MEDICO-CHIRURGICAL SOCIETY.

Wednesday, 4th June 1845.—Dr GAIRDNER, President, in the Chair.

(*Continued from p.* 256.)

Case of Separation of a Portion of Intestine. By WILLIAM HILL, Esq., Portobello. —(This communication is to appear in the Monthly Journal of Medical Science.)

Modification of Chest Callipers. By Dr SPITTAL.—"Dr Spittal exhibited two pairs of brass callipers, similar to those described by Drs Walshe and Stokes, for ascertaining the diameter of the thorax. The one had a fixed, the other a moveable spring for the purpose of keeping the blades, with their flat disks or button-like extremities, applied to the chest; and both had a graduated scale below the attached extremity of the blades. Dr S. called the attention of the Society to a modification which he had found advantageous in using the instrument, viz., *enlargement of the disks*, which should not be less than from two-thirds to one inch or more in diameter, and rendering these *moveable* in the direction of the motion of the limbs of the instrument. By this arrangement, the extremities of the callipers always adapt their flat surfaces to the thorax; whereas, when the disks are fixed, their edges, in certain measurements, are presented to the chest, and sinking into the soft parts, render the observation less accurate; a like

objection of course applying to disks of small size. The amount of the movements of elevation and depression of any part of the thorax during respiration, is very easily ascertained by this modification, the moveable extremities of the instrument following the motion of the chest, the exact range of which is shown by the corresponding movements of the index over the graduated scale."

Wednesday, 8th July 1845.—Dr GAIRDNER, President, in the Chair.

Carbonaceous Infiltration into the Pulmonary Tissues of Coal-Miners. By Dr MAKELLAR.—" Reference was made, in particular, to the East Lothian coal-miners. The carbonaceous disease described, was stated to be caused by the inhalation of substances floating in the atmosphere of the coal-pit, such as the products of the combustion of gunpowder, the smoke from the miner's lamp, and the other foreign matters with which the air of the mines is heavily charged, in consequence of their defective ventilation. In the mines in which gunpowder is used, the disease is most severe in its character, and most rapid in destroying the pulmonary tissue. The carbon in some cases is expectorated in considerable quantity for some time previous to death: in others, it is retained, and accumulates to a great extent in the lungs.

" As the disease advances, the action of the heart becomes feeble; and the appearance of the blood indicates a carbonaceous admixture. The carbonaceous deposit seems to supersede or supplant the formation of other morbid bodies in the substance of the lungs—such as tubercle; for in individuals belonging to families in which there exists an undoubted phthisical diathesis, tubercle is never found on dissection.

" The morbid appearances seen in the pulmonary structure, as results of inhaled carbon, may be divided into classes, corresponding to three stages of the malady. In the *first*, there is general irritation of the mucous lining of the air-passages; the carbon is absorbed into the interlobular cellular substance, and granular system, thereby materially impeding the necessary change upon the blood. In the *second*, the irritative process, the result of this foreign matter in the lungs has proceeded so far as to produce a variety of small cysts containing fluid and semi-fluid carbon,* following the course of the bronchial ramifications. In the *third*, the ulcerative process has advanced to such an extent, as to destroy extensively the cellular tissue, and produce excavation of one or more lobes.

" The general results from carbonaceous infiltration, besides disorganization of the pulmonary structure, are extensive venous congestion, and effusion into the serous cavities. Attenuation and dilatation of the heart, and usually enlargement and softening of the liver and spleen.

" Professor Christison called attention to the new and important fact, of the carbonaceous matter being found in the circulating mass. He attached great importance to Dr Makellar's researches.

" Professor Allen Thomson remarked, that the presence of this carbonaceous matter in the blood, by no means proved that it was formed in, or from the blood.

" Dr Hughes Bennett said, that the antagonism of this carbonaceous disease to tubercle, was a fact of great interest and importance, especially in connection with two other recent observations; viz., 1st, That the depositions of carbon in the lungs of old people (which French pathologists describe), are not found associated with tubercle; and, 2d, That under the supposed cicatrices of pulmonary tubercular cavities, a layer of carbonaceous matter is commonly found."

[Dr Makellar's paper called forth some interesting observations from the President, Professor Simpson, and others.]

" * By this is meant carbon in a solid and fluid state."

Cases of Congenital Fissure in the Neck. By Professor Allen Thomson.—" Dr Allen Thomson read a notice of three cases of congenital fissure in the side of the neck, of the same nature as those described by Dr Aschersohn of Berlin, in his Inaugural Dissertation, published in 1832.

" Dr Thomson began his communication with an account of the general results of Aschersohn's observations on eleven cases, and an explanation of the manner in which that author, and after him, embryologists in general, have referred the congenital fissures in question, to the abnormal patency of one or more of the branchial clefts discovered in the vertebrated embryo by Rathk, in 1825.

" Dr Thomson then detailed the history of the three cases which had come to his knowledge in Edinburgh. Of these cases, one had been observed by himself, five years ago, along with Professor Syme and Dr Thomas Fairbairn ; a second was now under treatment for the affection by Dr Gairdner, President of the Society ; and a third had been casually noticed by Dr James Duncan.

" The first of these cases now referred to is that of a young man of seventeen, now residing in Edinburgh, presenting a marked example of the fissure on the right side of the neck. The external aperture of the fissure is situated in the skin covering the anterior border of the sterno-mastoid muscle, and about midway between the jaw and clavicle. A common surgeon's probe may be passed about half an inch into the fissure ; but a thinner probe runs, without more than the slightest possible force being applied, to the distance of nearly two inches, in a direction upwards below the skin, platysma myoides, and fascia, towards the pharynx or great cornu of the hyoid bone.

" Four years ago, when the case was first carefully observed, the probe was passed very easily to the depth of two and a half inches in the same direction. Upon one occasion, when the probe was passed the length now stated, the young man thought he felt matter pass into the throat ; and upon all occasions, when the probe is passed to a considerable depth, a tickling cough follows—circumstances which, as in some of Aschersohn's cases, lead to the view, that the fissure is connected with the pharynx. It may also be mentioned, that on pinching up the skin near the external aperture with the fingers, a cord-like prolongation is felt in the direction in which the probe passes ; and that when the lad swallows, the skin immediately surrounding the external aperture is drawn up and slightly puckered.

" The external aperture is frequently closed by a scale or scab ; but at other times, a glairy fluid exudes from it, and a long gelatinous thread may occasionally be pressed out of the fissure.

" The existence of the aperture was noticed by the parents of this lad a few weeks after his birth, and in the interval of four years between the separate observations made by Dr Thomson, no material change in its appearance had taken place.

" The subject of Dr Gairdner's observation was a man twenty-six years of age, in whom the external aperture occupied the place which, according to Aschersohn's results, appears to be its most common seat, viz. the space between the sternal and the clavicular attachments of the sterno-mastoid muscle, and about half an inch above the clavicle. In most other respects, the appearances were the same as in the case previously noticed. The probe had not been passed farther than an inch and a half in an upward direction. With a view to the eradication of this malformation, Dr Gairdner, upon the 25th of May last, laid open the sinus by dividing the skin, platysma, and fascia in front of it, and has since adopted the usual measures for healing the opening from the bottom. The wound was not entirely closed at the time when the case was communicated to the Society ; but it was so much so, as to lead to the confident hope of the operation being ultimately attended with complete success.

" In neither of the preceding cases, did hereditary tendency to the occurrence of

the imperfection appear; for none of the relations had been known to be similarly affected.

" Dr Duncan's case, observed a few years ago, was in some respects similar to the preceding. It appeared chiefly interesting, as being the only case hitherto observed, in which, when the fissure was confined to one side of the neck, it had its seat on the left side. In three of Aschersohn's cases, both sides of the neck were affected; in the remaining eight, as in the two other cases described in the present communication, the fissure was situated on the right side; but in Dr Duncan's case, as before stated, it was on the left.

" The author made this communication to the Society, in the hope that additional information might be obtained with regard to the peculiar lateral cervical sinuses described, by the collection of cases observed by other members of the Society, whose attention had been thus directed to an imperfection which might otherwise have passed unnoticed by them."

Valedictory Address by the President.—Dr Gardiner then addressed the Society nearly as follows :—" Gentlemen,—We have now brought to a conclusion the 24th Session of this Society; and, before taking leave of you for the season, I think myself entitled, and, indeed, called upon, to congratulate you on the realization of those anticipations of continued zeal, interest, and success on the part of our Society, which I ventured to indulge at the beginning of the session. I am entitled to do so, not only on the strength of my own appreciation of the value of the matter which has passed in review before us, but also on the still stronger ground, that I have observed many indications of your coincidence in the judgment which I have formed; a coincidence unequivocally manifested, by the regularity and fulness of your attendance, so creditable alike to your own professional zeal, and to the efforts of those to whom we have been indebted for so much useful and valuable information.

" We derive, gentlemen, many advantages from the mere fact of being associated together for a common object. We are thus brought to know each other better, to become acquainted with each other's habits of thinking, and peculiar fields of research, of experience, and of experiment; and hence to know to what quarter we can turn for sympathy, for information, and for assistance, in any particular investigation in which we may happen to be engaged. We have just had an example of what I mean. The case I had the honour to lay before you this evening would have been of little value, had I been in an isolated position. Struck with its peculiarity, I mentioned it to some of my fellow members here. I immediately heard of two other similar cases. I suspected its connection with development, and went, as a matter of course, to Dr Allen Thomson, who put Aschersohn's cases into my hands, and who has this evening presented our Society with an interesting digest of the whole subject, as instructive, I presume, to most of my fellow members, as it certainly has been to me. We had another instance equally in point. You must all remember the melancholy interest with which we listened to Dr Hunter's details, given at our first meeting, of the fatal illness of one of my most valued predecessors in the chair of this Society, the late Dr Abercrombie. I believe his case was then regarded, not indeed as an unprecedented, but certainly as an unusual one; and yet, at that very meeting, other parallel cases were produced, (one of them by Mr Goodsir, which had happened about the same time;) and, later in the session, a third case was minutely and accurately described by my friend Dr Maclagan and has since been published by him.

" I rejoice, gentlemen, to observe, that men of large professional experience, and authors of new methods of applying the resources of science to their legitimate object,

the alleviation and cure of the ills of suffering humanity, regard this Society as the most appropriate channel for conveying their original thoughts to the profession and to the public. At our first meeting, Professor Simpson laid before us an original method of treating the embarrassing case of *placenta prævia*, a method of which he is the undoubted author, and which is calculated to save many valuable lives. Some time afterwards, we had an explanation from Professor Syme of an improvement in a very different department; I mean his method of amputating at the knee, instead of at a point many inches higher up. This also appears to be a great practical improvement. Professor Christison's valuable and practical suggestions, as to a certain class of distressing cardiac disorders, may be appropriately placed under the same category.

" I regret that we have had so few reports of public medical institutions; but we received from Dr M'Kinnon a report of the proceedings of the Lunatic Asylum, which is valuable.

" Even individual cases have sometimes been invested, by the zeal and talent of their reporters, with as much interest as whole groups. Need I refer you for a proof of this to Dr Bennett's case of poisoning with hemlock, which has enrolled that gentleman, not merely among the successful cultivators of the science of toxicology, but among those who have contributed to the illustration of history and biography; the biography, too, of one of the greatest philosophers and moralists of ancient Greece.

" We have also had ingenious methods of investigating and of discriminating diseases, which have been explained to us by Dr Warden, Dr Spittal, and others; besides a variety of other communications, which I hope their authors will not suppose to be undervalued, because they are not specifically mentioned, since it is altogether impossible for me, in the course of this occasional address, even to attempt a digest of so great a variety of communications. I am quite sure that I shall carry the Society along with me, when I express generally our sense of obligation to all the authors of the communications of this session, for the great instruction and interest which they have afforded us.

" I had hoped, gentlemen, to have been able to congratulate you on justice having been done to the medical profession by our Legislators;—but alas! this morning's post informed us, that we are not to expect it during the present session. I believe that if our friends in the southern part of the kingdom would consider the question of medical reform with more reference to the interests of the profession and of the public, and with less reference to the interests of individuals, and of particular medical incorporations, the difficulties of legislating would be easily removed.

" And now, gentlemen, it only remains that I should declare this Society adjourned, till the second Wednesday in November next; and that I should beg of all of you, both of those who have favoured us with communications, and of those who have not, to remember, that it is not in the power of your official members, not even of our excellent Secretaries, able and zealous as they undoubtedly are, to perpetuate that interest which has characterised our proceedings, unless aided by the zeal and co-operation of those among us, who may have new and valuable matter to communicate. "

[Communications from Mr Bradley of Preston, and from several other Gentlemen, have been received, and will be inserted in our next number.]

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Pl.1

Mr Kerr's Splints.

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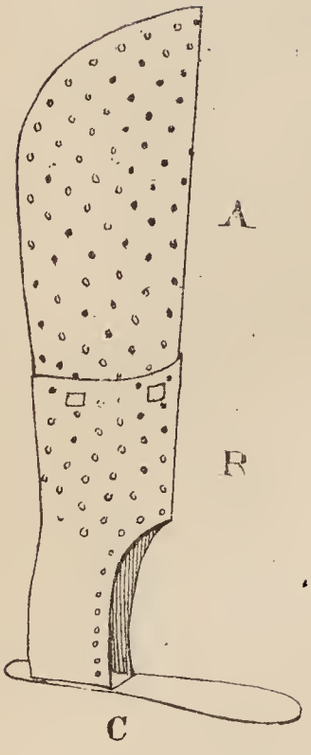

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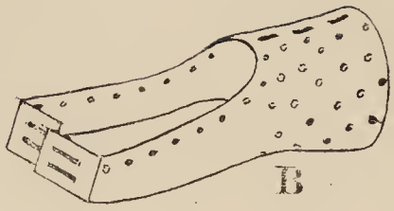

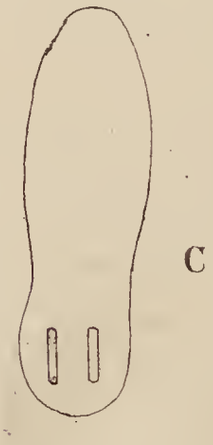

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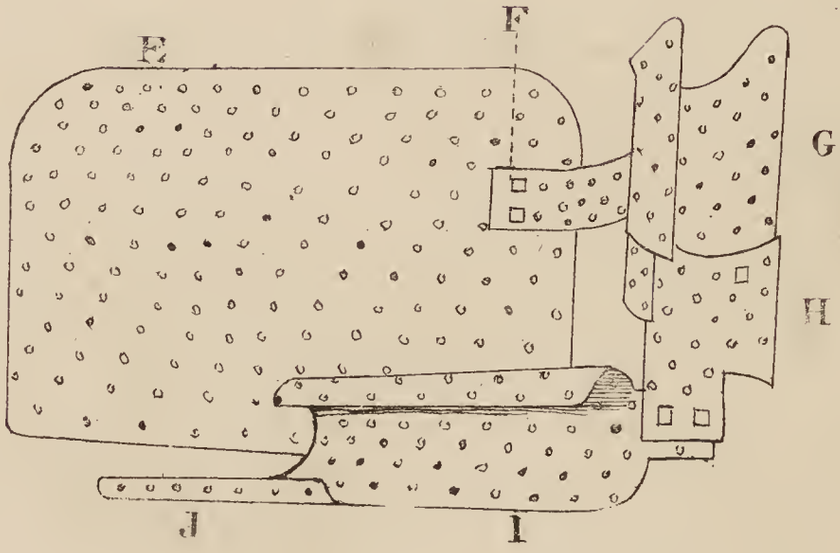

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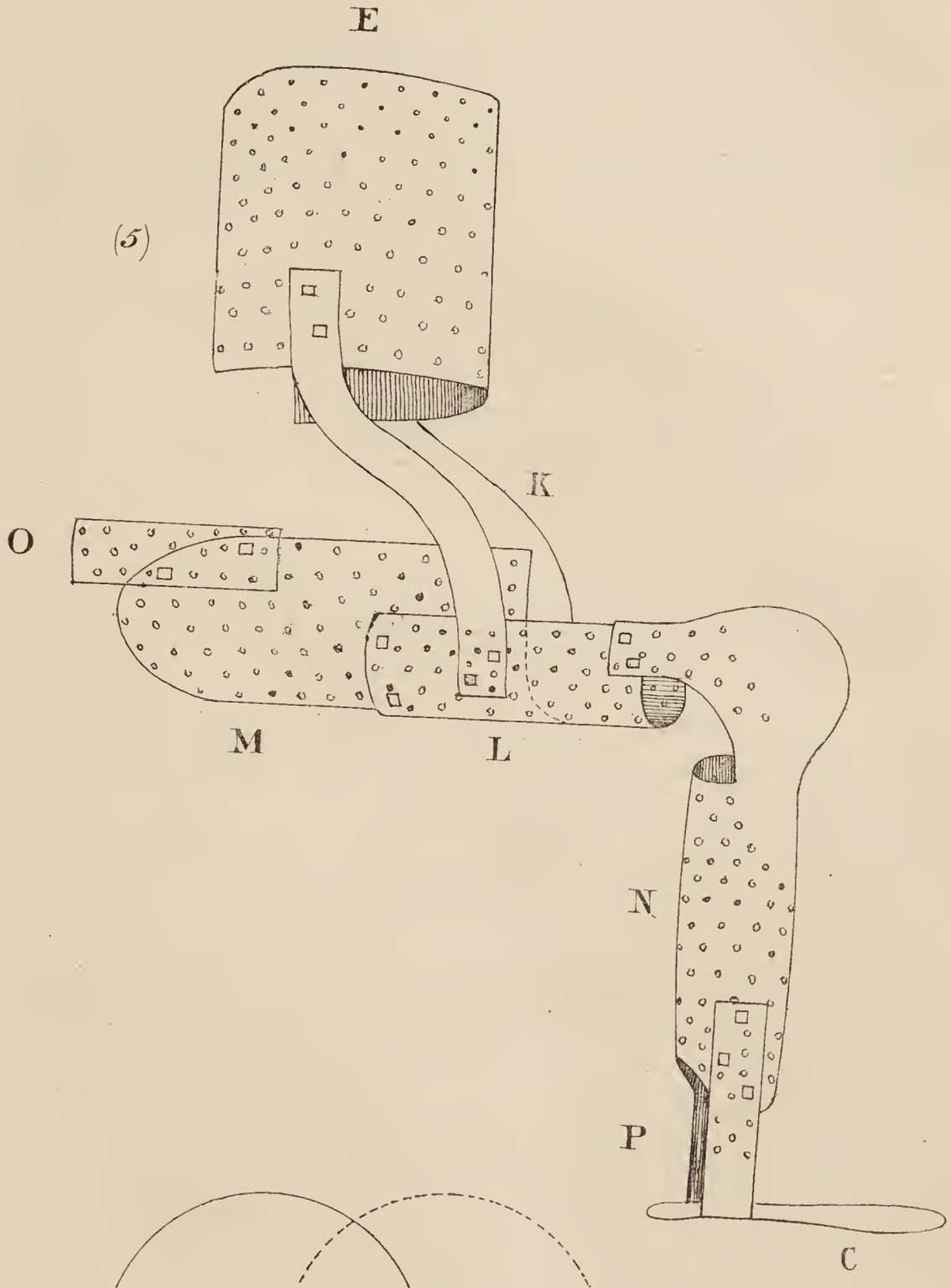
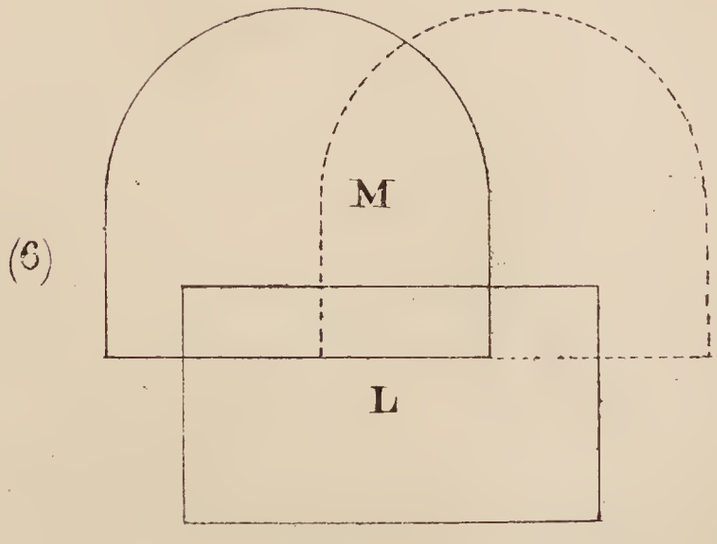
Mr Kerr's Splints.





THE

NORTHERN JOURNAL OF MEDICINE.

No. XIX.—NOVEMBER 1845.

Part I.—ORIGINAL ARTICLES.

On the Treatment of Fractures by Splints of a New Construction.

By William Kerr, Surgeon, Glasgow; Corresponding Member of the Medical and Physical Society of Calcutta.

A comparison of the apparatus employed in the management of fractures, with the nicely contrived machinery used in the arts of the present day, is very far from being favourable to the former. Notwithstanding numerous contrivances, in different ages, these have presented so few advantages, that, I believe, I am correct in saying, most cases of fractures are treated by flat boards adapted in some measure to the inequalities of the body by pads, and fastened by tapes and rollers. We see machines displaying much ingenuity in daily use for the most common purposes of life; and yet, when man himself is disabled, the means resorted to indicate so little contrivance, that they may be supposed to be the same which were resorted to in the infancy of surgical art. If the splints in ordinary use really fulfilled the purposes for which they are intended—if they kept the bones steadily in their places, without producing pain or uneasiness, and at the same time allowed a tolerable share of comfort—then their simplicity would be a very great recommendation. Let any person, however, read the confessions of authors, and the records of cases treated by the most eminent surgeons, when skill and care failed to produce satisfactory cures of even simple fractures, and he will come to the conclusion, that detached pieces of flat board do not adequately fulfil the intended purpose. This conclusion will be strengthened, if he learn, that, in the present state of art, a tendency of one fragment of bone to slide past the other can in most fractures only be opposed by binding the splints more tightly on a limb already bruised by the injury; and after considerable suffering, the result is, contraction and stiffening of the muscles, and over-

lapping of the bones. Besides these objections to ordinary splints, they are signally defective in a very important particular, namely, comfort. Unless tightly bound to the fractured limb, they cannot hold their places; the feelings of the patient naturally demand that the bruised limb, while held steady, should not be tightly bound; and yet the surgeon must bind his splints upon it, because these splints, from their primitive simplicity and rudeness, are incapable of attachment to adjacent uninjured parts of the body, able to bear the requisite pressure. It is not a slight addition to this discomfort, that strict confinement to a particular position in bed, must, in some fractures, be submitted to for a period of four to eight weeks; and if, from excessive irksomeness or galling of the bandages, the patient seeks to relieve himself by occasional slight movements, he does so at the risk of displacing the bones, the splints bound with so much firmness being incapable of fulfilling the intention with which they were applied, unless aided by absolute rest. The immoveable apparatus introduced in the dark ages, and since revived under different modifications, such as starch bandages and stucco, when applicable, does not require such absolute rest as is necessary when boards are used. But being made to encircle the limb, on which, as soon as quite dry, it is hard and immoveable, it is objectionable, because the compression may be either too great or too little, and that the surgeon cannot, without destroying the apparatus, remove it for the purpose of satisfying his mind respecting the position of the bones. Besides, it is also deficient in not admitting, in general, of support from fixtures attached to adjoining sound parts of the body. A perusal of Sir Astley Cooper's remarks on oblique fractures of the thigh is sufficient to show the defective state of surgical apparatus, for this class of fractures, in the hands of the very best surgeons. One patient, after three months' confinement to bed, recovered with a shortened and bent limb, the upper portion of the former overlapping and displacing the patella. In referring to this case, I do not attempt to throw the slightest imputation upon Sir Astley, the fault unquestionably lay in the inadequacy of the apparatus to preserve the bone steadily in its place; for it is mentioned at the beginning of the case, that slight extension replaced the parts, and yet the splints were unable to maintain this slight extension, and secure to the patient a useful limb. Another, who met with a worse fracture, was unable to walk with crutches, till fully two years and two months after the accident, and recovered with the bone above the knee excessively enlarged, the fractured point adhering to the skin, and holding the patella immoveable. Such results having occurred in the practice of one so eminent (and I have no doubt the recollection of my readers will furnish others, which produced no little anxiety and unhappiness to all concerned), a case is established,

why an attempt ought to be made to find out some means by which the intentions of the surgeon shall be better fulfilled.

My attention was first called to the possibility, or even to the necessity, of improving the present system of splints, by the following occurrence:—Six years ago, a weaver from a neighbouring village, applied to me for a simple fracture of the leg, near the ankle, which had happened five months previously, but which had unfortunately not united. On receipt of the injury, the limb was set by a surgeon, who placed the patient on his back, with a a wooden splint on each side of the leg. After a confinement to bed of seven or eight weeks in the same position, on attempting to set his foot on the floor, he found to his sorrow that union had not taken place. In fact, the surgeon had attended carefully enough to prevent lateral bending by a splint on each side, but had overlooked a sinking of the heel, and lower portion of the bones of the leg, in consequence of that part of the bed on which they rested being not sufficiently firm. Several medical men had been applied to, but without benefit; and when he came to me, he feelingly lamented his misfortune, which, if incurable, would reduce him to the rank of a pauper. Interested in his case, I, in a few days, invented a tin splint, similar in its plan to that in the drawing for fractured legs. This was bound upon the front of the leg, having a band behind the heel and ankle. The splint was worn night and day. The band being gradually tightened, brought the lower portion forward nearly to its proper position, when it re-united very firmly, giving a useful limb. The splint was worn four months, being longer than I believe was really necessary; during the whole of this time he was permitted to sit up, and walk about with crutches.

The success of this case encouraged me to attempt similarly the treatment of recent fractures of the leg, and the result has equalled my expectation. At first, however, I had no means of adapting the same splint to different individuals, and was therefore under the necessity of getting one made for every case. This led to making the splint in three pieces, A, B, and C, and fastening them together by small screws, Z. A covers the fore and upper part of the leg, and is hammered out at the sides, partly to make it fit the calf better, and partly to have a slight spring, which gives it a firmer hold of the limb. B covers the lower part of the leg, and embraces the ankle and posterior part of the sole. The sole part of B consists of two layers, one belonging to the right side, the other to the left; these can be pushed in or drawn out on one another, so as to be adapted to different widths of the ankle. These straps beneath the sole are two and a half inches broad, and on account of the strain upon them, are made of two plies of tinned iron soldered together. The sole piece C is of thick tinned iron. The rest of the splints, and my splints in general, are made of that known to tinsmiths by the

name of "small iron, three crosses." To prevent the edges of the splints getting torn, they are bound with a narrow strip of tin soldered on. It will be observed that A, and the greatest part of B, are perforated with holes; these serve the double purpose of permitting the escape of perspiration, and allowing the splints to be screwed together. My first splints were destitute of these holes, and the patients, in consequence, complained much of heat and perspiration. A second improvement was piercing all the holes according to one guage, so that splints not originally made for each other can be screwed together. The distance between the holes from margin to margin, is about half an inch, and the diameter of the holes about one quarter of an inch.*

In fitting on a splint, the upper splint A is slid within the lower one B, till the proper length is obtained; this is preserved by a small screw in front in the middle row of holes, which, for greater convenience, are elongated into slits. The splint is then adjusted by the hand to the proper width, which is maintained by a screw on each side, connecting A and B, and by the screws fastening the sole to B. The splint being fitted to the size of the fractured leg, which may be done in a few minutes, it is bound on by a stout piece of cloth of the same length as A, covering the back and sides of the leg, and either secured on the front of the splint by four or five pairs of tapes sewed to its edges, or by as many straps and buckles. There is a corresponding piece of cloth for B, and being behind the heel, it is of necessity tied to the stirrup part of the splint. Due attention to this cloth will effectually support the heel and lower portion of the fracture in their proper places, and prevent such a misfortune as want of union. The foot is bound to the sole splint by an ordinary roller. Behind the leg, a cloth is greatly preferable to a roller, on account of the former not requiring the leg to be lifted when the splint is taken off to inspect the condition of the limb. On these occasions the leg is placed on a firm pillow, the tapes are untied, and the splint lifted off—the splint cloth lying beneath upon the pillow. The splint and splint cloth form nearly a perfect mould for the leg, possessing the advantage of being easily removed for inspection, and easily altered to suit the lessened thickness of the leg as the swelling abates. The only padding necessary is one or two plies of soft cloth, such as moleskin.

With this splint the patient, on the very first day of the fracture, is able, with the assistance of his hands, to turn his leg from side to side, so that he is at no time confined to one position. This is not a trifling comfort; a limb bruised by the injury which fractured the bones, gets uneasy when kept long in one position, and is relieved by being turned from one side to the other, or to

* X is a diagram showing the distance between the holes and their size in my splints. If adopted generally, by makers of splints, much trouble will be saved to purchasers.

the back at pleasure. Such, too, is the firmness with which the bones are kept in their places, that the patient on the fifth day is generally able to be out of bed, and on the seventh to walk a little with crutches, the weight of the limb being carried by a sling around the neck, and fastened to the instep of the splint. In four or five weeks the use of the splint may be discontinued.

A man in the employment of the Forth and Clyde Canal Company, had one of his legs broken by a cart passing over it. In the third week he walked about two miles on crutches, while getting from the place where the accident happened to his own house. At the commencement of the fourth week he was able to perform light work in the Company's stables, wearing the splint the whole time, and at the end of that week put off the splint entirely. The patient was first visited by a surgeon who had not leisure to attend to the case, but pronounced both bones broken. The patient himself was fully sensible of crepitus, which was as distinct as in any case I have ever witnessed, leaving no doubt of the occurrence of fracture.

The speedy and perfect cures made by this splint are owing to the broken bones being held quite steady from first to last; in proof of which, when the cure is completed, there is no exuberant callus, but rather a slight furrow at the site of the fracture, which, in course of time, becomes filled up. The bones of a leg are situated in its anterior third, the splint covers two-thirds of the circumference of the fleshy part of the leg, and at the ankle nearly three-fourths, thereby preventing any anterior or lateral displacement, and the splint cloth behind prevents any posterior, while the firm binding of the foot to the sole splint prevents the fracture being disturbed by any movement of the foot.

The next fracture which engaged my attention was that of the clavicle. A daughter of my own, three years of age, fell upon her shoulder, and fractured the bone. I got a small breastplate, which was sewed to her stays, and to the upper part of this plate was fastened, by two screws, a strap of tin-plate, terminating in a hollow splint, in which the arm was securely held, at its proper distance from the side. As soon as the splint was put on, she became quite easy, and ceased to display any apprehension of the shoulder being touched. At the end of three weeks the fracture was quite well, and the splint removed without the slightest vestige of a break remaining.

E is the breastplate; around the top and sides are brass eyelets, through which the splint is sewed to stays, or an equivalent to stays, for binding it to the patient's body; without eyelets the sewing thread would be cut on the sharp edges of the holes. F, strong tin strap screwed to breastplate, forming an artificial collar-bone, when screwed to G, a splint containing the upper part of the arm. H, sliding splint screwed to G, to suit arms of greater lengths. I, splint for the forearm, capable of being screw-

ed to H, either at a right angle with the arm, or in the same straight line. The last position being for adaptation to fractures of the olecranon, and partial dislocations of the elbow. The splints G, H, I, lie on the inside of the arm and forearm. G and H embrace about two-thirds of its circumference; I, somewhat less. The splints are moulded by the hand of the surgeon to the size of the arm and forearm; one or two plies of moleskin are laid next to the skin for padding, and a roller bound around the whole from the axilla to the wrist. A rest for the hand J, is slid within the splint I. The breastplate being the splint to which the others are fastened, and on which the steadiness of the fracture consequently depends, care must be taken to bind it firmly to the body. Besides the stays to which it is sewed, a firm band may be tied or buckled over it. The breastplate, when made of the strength of tin-plate already mentioned, so protects the chest, that the patient does not complain of the breathing being oppressed. In fitting it on, its farther end ought to be placed under the opposite axilla from the fracture; for to this point, and no farther, it will be pressed by the weight of the fractured extremity. The breastplate ought therefore to be capable of embracing half of the circumference of the body. The shoulder straps must be of firm, unyielding cloth or leather; the strap over the fractured shoulder is to be kept on the sternal side of the fracture.

The objects to be accomplished in the treatment of a fractured clavicle, have always been clearly seen, but the means employed do not adequately fulfil these objects. Mr Syme says, "great difficulty has been experienced in treating this fracture. When the cushion in the axilla is secured so high and so firmly, as really to serve the office of a fulcrum, it compresses the nerves and blood-vessels beyond endurance; and if allowed to descend so as not to do this, it increases the distortion, by separating the arm from the side."

Mr T. W. King, in the Cyclopædia of Practical Surgery, expresses himself similarly. He says, "notwithstanding the greatest care and even severity, whatever the apparatus be, the weight of the arm gradually, if not quickly, produces displacement." Pelletan, at the Hotel Dieu, in Paris, and others, "have been led to forgo the use of bandages, and placing the patient on his back, with the arm on a pillow, have left the repair almost wholly to nature." These remarks are to be understood as applicable to those cases where, from the obliquity of the fracture or other causes, there is considerable tendency to displacement; in such, in spite of all the surgeon's efforts with the bandages at present in use, considerable overlapping and deformity at the site of the fracture will be the result. I have only to add, that since I invented the apparatus described, the patients have been easy while wearing it, without numbness of the arm, or other unpleasant symptoms, and the cures satisfactory.

The application of this apparatus to fractures of the humerus will be readily seen. The shoulder is held firm by a cloth fastened to a row of eyelet holes along the upper edge of the arm splint G, which, to produce greater steadiness, here rises both at front and back, to the top of the humerus. The shoulder being thus fixed, the arm can be elongated to the proper length by shifting downwards the splint H, having the splint I for the forearm screwed to it at a right angle; and this is kept perfectly steady by being screwed to the breastplate. Ten screws are required for connecting the splints for a fractured humerus; two at each end of the tin strap equivalent to the clavicle; two connecting the arm splints; two connecting the lowest of these with the splint on the forearm; and two fastening this last to the breastplate. When the surgeon wishes at any time to inspect the arm, he merely requires to take off the few turns of the roller which here surround it. This is done with the greatest facility, without in the slightest degree disturbing the splint or the bone. The steadiness of the arm indeed does not depend upon the splint applied to itself, but upon the fixture derived from the breastplate and shoulder at the one extremity, and the forearm and breastplate at the other. The arm, while kept perfectly firm and steady, and defended from all causes which can disturb it, is thus relieved from injurious, or even unpleasant compression.

Since the invention of this apparatus, I have not required to use it upon adult females. I apprehend that the pressure upon the mammæ will be a considerable obstacle, which possibly no description of padding between, or at their sides, will obviate. But very probably the end may be attained by using a breastplate having similar portions cut out at the proper places, the weakness of the splint thereby caused, being repaired by a pretty strong arched strap of tin crossing from side to side of the gap over the mammæ. For several years I have used, in disease of the hip-joint, splints similar in their general design to those described in this paper, and having a breastplate as an essential part of their plan. In adult females the breastplate has had always similar gaps for the mammæ, and yet has answered its purpose quite well.

There is no class of fractures in which union more frequently fails to take place than in those of the humerus; and excepting, perhaps, the former, no bone which, when obliquely fractured, so often unites clumsily, leaving to the patient a contracted and enfeebled arm. These disagreeable terminations are unquestionably owing to the ordinary means possessing neither steadiness nor the power of extension. To a disposition in an oblique fracture to overlap, the surgeon can oppose no other obstacle than tightening the roller around his wooden or pasteboard splints, so as to compress the arm more firmly, which very possibly does not prevent

the displacement, while it produces pain and swelling, terminating in contractions of the muscles.

Confessedly, the most difficult class of fractures to manage are those of the thigh. One body of medical men place their patients on their backs, the inferior extremity being held in the same straight line with the body by a long straight splint. Another class prefer binding the knee and hip-joint, and laying the limb upon a double inclined plane, reaching from the tuberosity of the ischium to the foot, which is fastened to the apparatus. Mr Amesbury, whose opinion ought to be of much weight, from the great attention he has bestowed upon fractures, approves of this last position, but thinks that the ordinary double inclined plane is defective; that it ought to be a triple inclined plane—that is, it ought to have a third inclined plane for the body of the patient. He thinks that failures have taken place with the ordinary double inclined plane owing to this, having no means of fixing the body, or at least the pelvis of the patient, as firmly as the leg and lower portion of the thigh, therefore permitting the upper portion of the thigh to be moved by the motions of the patient's body. A bedstead and mattress of a peculiar form being essential to, or rather nearly constituting, Mr Amesbury's contrivance, its bulk and expense are important obstacles to its purchase by private practitioners. I have never seen it in use, and therefore cannot speak of its merits; and, from causes which I do not know, authors, in discussing the treatment of fractured thighs, have, without particularizing Mr Amesbury, directed their remarks to the double inclined plane and the straight position. Mr Syme, who advocates the latter, says, that "the worst cases of retracted and ununited femur are met with in persons treated by means of the inclined plane by surgeons, whose known reputation precludes the objection that the machine might have been carelessly or unskilfully employed." Perhaps the truth is, that the cure is not unfrequently unsatisfactory by either plan, and that every case of fractured thigh gives the medical attendant a good deal of mental uneasiness. In some cases of oblique fractures of the thigh, where ordinary means have failed, the limb has been placed in a long narrow box, into which plaster of Paris was poured, and allowed to solidify, binding it from the haunch to the ankle in a mould of stone; but this plan, for obvions reasons, has never become popular. Mr T. W. King, in the Cyclopædia of Practical Surgery, says, "specimens of union, without lateral displacement and overlapping, are few; and transverse fracture scarcely seems to prevent their occurrence in general, excepting when it happens near the condyles."

It is admitted, that in fracture of the thigh, when recent at least, a slight force properly applied is sufficient to place the fractured surfaces in opposition. The difficulty is to keep them there during the weeks necessary for a cure. The chief causes of dis-

placement undoubtedly arise from the apparatus employed not binding the trunk of the body and the fractured limb so firmly together, that the leg and lower part of the fractured thigh follow the slight shiftings of position which a person, restricted not to move from the spot on which he is laid, feels himself compelled to make to relieve the soreness of his body.

Extending to this the same principles which guided me in the management of other fractures, after various trials, I invented an apparatus which I had lately an opportunity of using with a most favourable result. A boy, four and a half years of age, got one of his thigh bones broken, at the commencement of its lower third, by a cart-wheel falling on him. Not having splints ready to suit, Dessault's splint was applied for a few days. My apparatus was then put on. It consists of a double inclined plane of tinned iron, deep enough to keep the thigh, knee, and leg steady, having its upper end resting on the tuberosity of the ischium, and fastened to the body at a right angle, by a broad breastplate, which covers the chest. These are the outlines of the plan ; referring to the engraving—E is the breastplate, which ought to be broad, reaching from the axilla to the bottom of the ribs, in order to keep the body firm, and form a counter extending power. Two, or if necessary, more straps, of strong tin K,* are screwed at one end to this, and at the other to the lower thigh-splint L. To increase strength, these straps ought to be attached as far as possible from one another, both on the breastplate and thigh-splint. In my first attempts, the necessary elongation of the splint to suit the length of the thigh was obtained by placing the sliding splint nearest the knee. The simplicity, lightness, and strength of the apparatus are increased by the fixed splint being next the knee, and the sliding one next the pelvis. M is the sliding splint, shaped somewhat like a scoop. When the thigh is sufficiently elongated, this splint is screwed to the fixed splint L, having its inner side resting on the tuberosity of the ischium, but not pressing against the pubes, and its outer side rising high enough to protect the trochanter major and upper part of the femur. Consequently, its plane is oblique, compared with that of the lower thigh-splint. Fastened to this last splint L, at a right angle, is a hollow splint N, receiving the back of the leg, and having at the top broad plates to keep the knee steady. The breastplate is fastened to the body by common stays, aided by a band fastened over all. A roller is wrapped around the thigh, and another around the leg. In this apparatus, extension is performed by the leg-splint, and counter-extension by the breastplate. In my little patient,

* Of the thickness known to tin-smiths, as " No. 16 wire-guage." The sole C is of the same. The splint F, the connecting parts of H and I, the knee-plates of N, and the splint P, are of " Nos. 20 and 21 wire-guage."

these were sufficient; but if a case should occur in which additional counter-extending power is required, it may be obtained by fixing a padded band to the inner and upper edge of the thigh-splint, passing from this over the pubes and anterior superior spinous process, to a strong strap of tin O, screwed to the upper and outer part of the thigh-splint. The steadiness of my patient's thigh was very apparent, not only in gentle movements, but in rough jolting of the body. Several of my medical friends, who visited him with me, in order to try the efficiency of the splint, shook it without disturbing the thigh—the body, thigh, and leg moving together. He could be carried in a person's arms, set upon a chair, and turned from one side to the other in bed with the utmost ease; had the accident happened at sea, the rolling of the vessel would not, I apprehend, have disturbed the fracture. The extension and counter-extension being borne by large surfaces, were therefore little felt; and during the whole time the apparatus was worn, he made no complaint of uneasiness. A soft towel folded, was the only padding beneath the thigh and leg. The splint was removed on the 27th day from its application, and 32d from the accident. When released from the confinement of the splint, the site of the fracture could not be detected, and there was not the slighest excoriation of the skin. One of the circumstances which most forcibly struck my medical friends, was the entire absence of discomfort, and in consequence the muscles of the thigh appeared to the eye as relaxed while wearing the splint, as they are in a sound person when sitting on a chair. Much has been said by authors regarding the necessity of placing the limb in a position which will relax the muscles most likely to disturb the fracture; but another point of equal importance has been greatly overlooked, namely, in most instances, the want of comfort endured by the sufferer from the apparatus employed. If some part of it is constantly irksome, or constantly galling the patient, efforts will be made sometimes consciously, and sometimes unconsciously, to relieve himself. He is directed, for instance, not to shift his body at all for several weeks, from the place where he is laid—a rule equally necessary whether the straight position, the double inclined plane, or Amesbury's fracture-bed are employed. In the straight position, counter-extension is made by a band in the groin, and extension by a collar on the ankle; this last often produces excoriation of the skin, or even sloughing; and if the surgeon, desirous to avoid these, slackens the bands, he does so at the risk of a shortened thigh. The effort to withdraw any part from whatever makes it uneasy, is so instinctive, that in employing apparatus, not always comfortable, it is not surprising that the patient often disturbs the proper position of the bone by attempts to make himself more comfortable.

If this apparatus equal my expectation in keeping fractured thigh-bones steady, it may solve the long agitated problem of the

practicability of union of fractures of the neck of the femur, and it may be of very great utility to old people, who, it is well known, are apt to sink and die under the effects of sloughing of the nates, arising from long confinement in one irksome position.

Since the preceding inventions were brought to some degree of maturity, I have had little experience of compound fractures, but I flatter myself that they are fitted to produce a very considerable improvement in this class of accidents. Steadiness, without injurious compression, are the objects to be attained. In my contrivances, connections may be formed to fixtures on the trunk, making the splint very steady; a bruised and inflamed limb does not require to be firmly compressed, the firmness being derived from a sound part, while, at the same time, the whole moves with the body in its motions. In a case of compound fracture of the patella, of three weeks' standing, where the patient was considerably exhausted by great suffering, much relief was obtained, and a cure ultimately effected by a straight splint, embracing the front of the thigh and leg. Sir Astley Cooper says, that "there are scarcely any accidents to which the body is liable, which, generally speaking, more imperiously demand immediate amputation than compound dislocation of the knee." I am happy to be able to record a case in which the limb was saved, and life at the same time preserved. A girl, twelve years of age, while swinging behind a carriage in motion, unfortunately threw her left leg within the spokes of one of the hinder wheels. She was instantly thrown to the ground, and one of the condyles of the femur thrust backwards, through a rent in the flesh and skin, measuring four and a quarter inches in length. The dislocation was speedily reduced, and a long hollow straight splint placed on the front of the thigh and leg, which were embraced by it. To permit the ready discharge of matter, the limb was supported on a frame, and the matter drained away without hinderance into a vessel beneath. The girl is now perfectly well, with the exception of an ankylosed knee, but this being in the straight position, she walks with very little lameness. During the progress of this case, the tenderness of the limb prevented the firm application of the splint, and consequently, the knee was not held so steady as I wished. A trial was made, for a short time, of a splint in the reversed position—beneath instead of above; it had no connection with a splint on the body, and was not superior in efficiency to the one on the front of the limb, which was again resorted to. I now think that a considerable improvement could be made in a similar case, by using a breastplate, and connecting this with splints beneath the thigh and leg, reaching from the tuberosity of the ischium to the foot. This would permit the splint being bound with sufficient firmness to sound parts, the trunk of the body at the one extremity, and the foot and ankle at the other, thereby freeing the tender and inflamed limb near the knee from injurious pressure. Greater

steadiness, and less suffering would be the result, and the cure would be proportionably hastened.

In compound fractures of the leg, there is a choice either of the splint for simple fracture, or of the splint for a fractured thigh, with the addition of a sole splint C, screwed to a strong strap of tin P, which again is fastened to both sides of the splint for the back of the leg. Since the invention of these splints, those compound fractures which I have seen, have not been severe, either from the nature of the accident, or perhaps from the mode of management; they have been treated successfully, and with great ease to the patient, by the splint for simple fracture, which being the least cumbrous, I would prefer, when practicable. When there is much discharge of matter, however, which ought always to get away without hinderance, and especially when there is much pain and swelling, preventing compression of the leg itself, the splint for fractured thigh ought to be preferred. If the wound be in the front of the leg, the splint will not oppose the escape of matter; and if in the sides or back, an aperture ought to be made in the splint, or rather a new splint, which will cost only two or three shillings, ought to be made with a sufficient aperture to suit the case. The same remark is applicable to compound fracture of the thigh. The cost of a single splint is a trifle, compared with saving a limb, or the more speedy restoration of the patient's health. The length of the preceding description has perhaps conveyed the impression of complexity in the contrivance. I am quite sure, however, that this impression will cease as soon as the splints are seen.

One set of splints is sufficient for all sizes of adults; and probably two sets for the different sizes of younger persons. The surgeon, by moulding them with his hands, is able to fit them to the width, and by shifting the sliding splints, he can adapt them to the length of a limb. Moulding a splint is best done upon a limb of the size to which it is to be applied; and by adopting this plan, the risk of cracking the splint is avoided. For the sake of cleanliness, the splints are japanned. Owing to their form, they are very easily packed into a small space. Those required for a fracture may be carried in a travelling bag, excepting perhaps the breastplate, which may be put beneath the vest without being observed. A screw-key, or ordinary pliers, will be required for fastening the screws; a small round file for lengthening the holes, and a punch for piercing new ones will be useful.

In hospital practice, the leg-splint N, the lower thigh-splint L, and even the strong straps K, instead of being single, may be rivetted or soldered together, in order to save time in adaptation to a patient. For children this arrangement will always be most convenient.*

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* Whenever cloth is to be sewed to a splint, eyelets are to be fastened in the holes

Some of my medical friends have objected to my contrivances, that they take too much time in being adjusted, and therefore give a preference to the splints in common use, with which they allege, the first setting and bandaging of a fractured limb can be more speedily finished. Granting this to be true, it must be admitted that frequent inspections are afterwards necessary to make sure that the bones are in their places, or if not, to put them right, and that those inspections do occupy considerable time. Whereas, with my splints, the labour is wholly at first; and the succeeding inspections, which moreover require little time, are rather for the surgeon's own gratification, and to keep the patient's mind easy, than from necessity. There is no comparison of my splints and the common, in point of comfort; mine give positively no uneasiness; there is no injurious compression, and, besides, in simple fractures at least, there is a much greater probability of a good cure, provided the bones have been originally well set.

The application of splints, such as now described, to diseased joints, is obvious. For this purpose, they ought to be made as light as is consistent with strength, soldered instead of screwed together, and overlapping as little as possible. This subject, however, is beyond the limits of this paper; and, besides, I do not consider myself at present sufficiently prepared to enlarge upon it. I can confidently say, however, that if suppuration has not taken place in diseased hip-joint, the application of a splint divests this excruciating disease of its horrors. I have often seen a patient screaming from pain, and apprehension of the slightest movement, in the course of a day or two, or even an hour or two, able, merely by putting on a well-fitted splint, to sit up with ease, and scarcely conscious of having an illness, though for weeks previously in nearly constant agony.*

40 Cambridge Street, Glasgow,
15th Sept. 1845.

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to prevent the thread being cut; eyelets are therefore required along three sides of the breastplate; along the top of the arm-splint G; along the curved end of the thigh-splint M, and the under notched end of N; on the breastplate for the attachment of stays; on G, for cloth over the shoulder, or under the axilla, if the fracture be of the head of the bone; on M, for a band from O; and on N, for cloth from side to side at this place, to prevent the back of the leg resting on an edge of tin.

* The Splints are sold by Mr PRIMROSE, tin-smith, New Bridge Street, Glasgow; and by Mr W. B. HILLIARD, surgeons' instrument-maker, 88 Buchanan Street, Glasgow. Cost of a full set for an adult, with the requisite number of screws, about £2, 4s.

EXPLANATION OF THE PLATES.

(1.) A, B, C, Splints for fractures of the leg.

(2.) Z, Screw for fastening one splint to another. A washer of tin, copper, or leather adds to the firmness of the screw, and when the head of a screw would press uncomfortably, a leather washer, pared to a thin edge all around, prevents it.

(3.) X, Guage for holes, and their distance from each other.

(4.) E, F, G, H, I, J, Splints for fractures of the clavicle and humerus. The breastplate E is fastened to the body by stays, with a firm roller over all, and kept to its proper height by broad and firm shoulder-straps. The arm and forearm are held in the splints by rollers. F preserves the arm at a proper distance from the side. G and H permit the proper elongation of the arm, while I, screwed both to the arm-splint and breastplate, maintains a steady and undisturbed extension. J is a rest for the hand.

(5.) E, K, L, M, N, Splints for fractures of the thigh. Great steadiness is given to the thigh by the tuberosity of the ischium resting on the splint; by the broad plates at the knee, and by the broad surfaces for extension and counter-extension. In the event of the counter-extension from the breastplate permitting any shifting of the pelvis forwards upon the thigh-splints, a padded band is to be fastened to O, passing over the anterior superior spinous process and pubes, down to the inner margin of M; and in the event of movements of the foot disturbing the thigh, the splints P and C will be required. The thigh and leg are bound to the splints by common rollers.

(6.) Shows the shape of M and L as cut by the tinsmith, and their relative position when applied to the right side. This is reversed when applied to the left, as represented by the dotted line. M and L are made to slide on each other to permit adaptation to the length of the thigh.

Case of Intus-susception of the Colon, following Parturition.

By Mr Bradley, surgeon, Preston.

I was called at half-past 11 o'clock on Friday night, the 28th of February 1840, to Julia Reynolds, aged 38, in labour of her ninth child. Being informed that the membranes had ruptured about a quarter of an hour before my arrival, I immediately made an examination, and found the os uteri but partly dilated, the head of the foetus entering the brim of the pelvis, with short pains occurring every five minutes. In about an hour and a half, the head had descended into the hollow of the sacrum, where it remained upwards of an hour without advancing. I then gave her a dose of ergot of rye, which brought on strong and frequent uterine action, but it did not effect the expulsion of the foetus until five o'clock in the morning. In about an hour subsequent to delivery, the patient being tolerably easy, I left her.

At 6 o'clock P.M., the same day, she took an ounce of castor-oil, which operated freely.

March 1.—I visited her, and found the whole of the rectum, which had been down upwards of twenty-four hours' protruding externally, and considerably swollen. I immediately reduced it,

but with great difficulty. The patient complained of great pain in the abdomen, and rectum, with tenesmus. I ordered her an anodyne draught and half an ounce of castor-oil, which eased the pain in the abdomen.

2d.—The pain at the rectum and tenesmus no better; the abdominal pain returned; she has had no stool since the day of her confinement; abdomen rather swelled and tender; water scanty; and I was informed that the rectum descended on the slightest effort at stool. I ordered her another anodyne draught, and half an ounce of castor-oil, which removed the pain in the abdomen, without any other beneficial results.

3d.—Still unable to make water any better. I ordered her a diuretic mixture, which she took without any effect. Daily from the 1st to the 7th, she took half an ounce, sometimes more, of castor-oil, without any evacuation, excepting slimy matter, sometimes slightly tinged with fæces. From the 1st to the 5th, the rectum was falling down continually, although bathed with a decoction of oak bark, since which it has remained within the sphincter ani. During the time that she was taking the castor-oil, the swelling and tenderness of the abdomen increased; the pain at the rectum, with the tenesmus, continued. The tongue rather white and moist, with great thirst. Micturition difficult and scanty, but the pulse was natural.

7th.—I ordered her an aperient draught, composed of sulph. magnes. ℥i., ol. menth gtt. ij. tinct. hyoscyami ℥iss, spt. æther. nit. ℥ij. infus. sennæ ad ℥iv. M. One half to be taken immediately, and the remainder in three hours, if the bowels be not moved. The whole was taken. This mixture relieved the tenesmus, but procured no stool.

8th.—She was seized with cramp in the stomach and bowels; the swelling and tenderness of the abdomen increased; the difficulty of micturition was unabated. Condition of the tongue and thirst the same, and pulse natural. I directed a repetition of the draught, which she said had not either diminished the tenesmus or relieved the pain.

9th.—About 11 o'clock, A.M., I visited her, and found the swelling and tenderness of the abdomen and pain at the rectum not mitigated; had passed nothing but a little slimy matter. About two inches of skin was protruding through the anus. Her water begun to gush from her suddenly when she coughed. Tongue dry; thirst the same; pulse continued natural. I gave her an injection of warm water, but without any relief. About 12 o'clock, her husband, of his own accord, gave her an emetic of antimony, which caused her to vomit a considerable quantity of bilious matter, after which, she said, she was a little easier, but much weaker. About 1 o'clock P.M., I gave her another injection of warm water, without any better effect. At 3 o'clock, 5 and 7, I gave her an injection, each containing an ounce and a half of castor-oil, with-

out procuring any stools, except now and then about a table-spoonful. From 1 o'clock, her pulse gradually rose to about 90; cramp in the stomach and bowels increased; swelling and tenderness of the abdomen remained the same; pain at the rectum was unabated; cold sweats and hiccough occurring now and then. In half an hour after the last injection, she vomited about a pint of a whitish fluid, with a considerable quantity of castor-oil. At 8 o'clock, I called in Mr Brown of Preston, who made an examination, per anum, and discovered an intus-susception of the colon, which he attempted to reduce, but found it impossible, in consequence of adhesion having taken place. He pronounced the prognosis very unfavourable, and ordered a ℈j. of pulv. et ipecac. opii to be divided into six pills, and one to be taken every hour until easier.

9th.—About 10 o'clock A.M., I visited her, and found her no easier; had vomited the previous night; this symptom continued until morning; pulse about 100; difficulty of micturition the same; had only taken two of the pills, which she vomited.

At 3 o'clock P.M., I visited her, and found her a little easier; she had passed a great quantity (upwards of two gallons) of matter, per anum, amongst which were numerous scybala; she could make water naturally; the urine was very high coloured, and deposited a sediment; cramp no better; swelling of the abdomen very little reduced, but the tenderness was not so great. I ordered her to continue the pills.

Every day from now she had one or two liquid stools, and could make water very well, but could only pass her stools in a recumbent posture; none of the other symptoms suffered any abatement; pulse rose to 120.

13th.—At 1 o'clock P.M., she began to spit blood; pulse sunk to about 105; and at 10 o'clock P.M., the unhappy sufferer died apparently in great agony.

Post-mortem examination 18 hours after death. Abdomen greatly distended; on opening the cavity a considerable quantity of turbid and offensive fluid escaped; the peritoneal surfaces greatly inflamed, with universal adhesion of the intestines to each other, by recently effused lymph. The uterus somewhat large and flabby. The colon for about seven inches had fallen down, or, in other words, was intus-suscepted into the rectum, to which it had become firmly adherent by strong bands of coagulable lymph, whilst the protruding portion in the rectum, for about four inches, was in the second stage of gangrene, if not quite sphacelated.

On the Scrofulous Diathesis. By John Nicolson, Surgeon, Hexham, Northumberland.

Scrofula has of late attracted considerable attention, but certainly not more than its importance demands. On looking over the different theories which have been proposed to explain its nature, we are only struck with the great diversity of opinion that exists. Thus, we find one writer attributing it to disturbed action in the alimentary canal; another, refers it to disorder in the cutaneous function; a third, to a morbid or obstructed condition of the lymphatics; and a fourth, *excluding every external circumstance*, considers it to be entirely dependent on "hereditary transmission."

It is impossible for any observant person to overlook the frequent existence of a morbid state of the digestive tube and its appendices; and it is equally obvious that the skin does not always in this disease perform its duty. But is there any affection which implicates the entire economy for the time of its continuance, that does not disturb the action of both of these organs? In fever, nature presents us with alterations on these parts, equally, and indeed, more striking than scrofula. For example, in typhus the bowels ulcerate, and the mesentery is enlarged; and, though there have been writers, yet, at the present time, there surely are few who would attribute the pathology of fever to this lesion. The skin, also, in typhus is subject to extreme alteration —at one time it is hot and imperspirable—still we are not inclined to limit the pathology of fever to cutaneous disturbance. One of the most common of the characteristic effects of a strumous state of the body, is an inflamed condition of the lymphatic glands; therefore it is not astonishing that some should have attributed scrofula to obstruction in this system of vessels. But it is unnecessary to prove that this is an effect, and not a cause, of what is called the strumous diathesis.

Next comes the exclusive theory of M. Lugol, and those belonging to the same school—"*that scrofula is entirely an hereditary disease.*" I think there are not many candid and unbiased practitioners who will subscribe, without reserve, to this sweeping opinion. It is true, that we do often observe this (as well as other diseases) make its appearance in members of the same family, aye, even in successive generations; and then we are too easily led to conclude that it depends on a poison lurking in the system, waiting a fit opportunity to put forth indications of its presence.

If we put ourselves to the trouble of a little further inquiry, we should frequently gain information, which would cause us to pause before giving a settled opinion. Let us look around us and examine two or three generations back in any one, or every family

to which we have access, and we shall find all have at one time or another given decisive evidence of some particular form of scrofula in one or more of its members. Phthisis, says Lugol, is the appointed death of the scrofulous, and intimates that all so tainted may expect to go to the grave at an early age. Now, resort again to the same criterion, and it will be found that individuals of both sexes, born of scrofulous parents, frequently live to as great an age as those who present no appearance of this habit. I could mention many instances of persons living to the age of eighty, and who scarcely ever knew what it was to have pain in any shape, yet several of their brothers and sisters died of scrofulous affections. If these examples were placed before any stranger, he would pronounce them free from scrofula. Is this not contrary to all *a priori* reasoning, suggested by the doctrine of "exclusive hereditary transmission?" Hence it does not appear to have any more right to the title of hereditary taint, than has gout, apoplexy, jaundice, or dyspepsia. I do not deny that persons of the same family resemble each other in the form of body and disposition of mind. Nay, I would go farther, and suppose that, if not the atoms which compose it, at any rate, each particular organ, *may be expected* to resemble the same in a brother or sister; and as far as this goes, admit a similarity in the morbid liabilities, as well as in healthy action. We are accustomed to regard apoplexy as most likely to occur in men of full habit and short-necked; and jaundice in those of dark and sallow complexion, with what is termed a "bilious aspect." But, in what relation do these corporeal peculiarities stand in reference to the diseases? Their existence certainly does not imply, that in the *one case apoplexy*, and in *the other jaundice*, is inevitable. Again, does apoplexy confine its attacks to those only who are of stout habit and short-necked? or does jaundice only occur in persons who have the misfortune to be "bilious looking?" On the contrary, we meet with both in subjects where such diseases, a little time before, could not have been anticipated, and the same may be said of scrofula.

So far only, then, can we admit predisposition to disease in any form; but writers, generally, who embrace the opinion, that many diseases, and scrofula in particular, are hereditary, imply that a poison exists in the system, which is transmitted, with all its virulence, through all succeeding generations; that it is a *something* loitering in the frame, as a separate element, independent of, though along with, the normal constituents. Such an opinion of any disease, to say the least of it, is unreasonable, and supported on insufficient data, as the following considerations will tend to make manifest:—

1. If such a poison existed in any part of the human family, it must have had an origin; and as we have undoubted evidence of cases of scrofula as far back as medical experience is recorded,

there is no right to suppose that it did not begin as soon as any other disease. In fact, if we were not to allow ourselves to be so far carried back in the history of man, and to take it upon us to say that the first instance of this disease occurred at a much later date, there has been sufficient time, by intermarriage alone, to cause a scrofulous blood to circulate in the veins of every human being; and should this be true, it is no longer to be looked on as a disease, but as a natural property of our constitution.

2. Allowing that there is a scrofulous element in certain families, why does it show itself in some of the members, and not in others? We sometimes see those with the least appearance more subjected to its ravages, than those who have the distinctive marks of a scrofulous habit, more decidedly impressed on the exterior aspect. If such a poison had gained admission into the system, it would doubtless show itself, as does typhus, measles, small-pox, and scarlet fever.

3. It is not contagious. We know from direct experiment, that when the secreted matter is introduced into a healthy person, it does not introduce the disease. How is this? If it can be transmitted from father to son, as represented, we ought to be able to communicate the disease, when we actually insert, and cause to be circulated, a substance which is the secreted and distinctive characteristic of scrofulous action. Why is it that Lugol is so particular in not allowing a strumous woman to suckle her children? If they are born of what is called scrofulous parents, they must have scrofula; and he admits that it is not communicable by either contact or inoculation. There is something incomprehensible, and apparantly contradictory, in all this exactness.

The *scrofulous diathesis simply consists in a more or less impoverished condition of the blood;* and in proportion as this exists, so is the strumous habit manifested. This is the *proximate* derangement in the system; and any circumstance, or combination of events, capable of producing it, are entitled to be considered as a *remote cause.* Let us next inquire into the nature of these circumstances.

The symptoms of scrofula are liable to appear after an attack of any of the *exanthemata*, in consequence of the weakness which they produce. Improper diet has the same effect. Exposure to damp or cold produces this state of the system, by deranging all the functions of the body. Scrofula has been considered by many to depend on a morbid state of the liver and bowels; and certainly this event may be placed with great propriety among the *remote causes.* When these organs are not performing their ordinary duties, it is impossible that the blood can maintain its normal constitution. Nothing is worse than being placed in a confined and unhealthy atmosphere. Look at the pale and emaciated forms of those who live in the narrow and confined alleys of dense-

ly populated towns. There can be no doubt that light is essential to the animal as well as the vegetable creation; and we can only be struck with the unhealthy appearance of miners and others, who live most of their time beyond the reach of sunlight, and the liability they manifest to the different forms of scrofulous inflammation. It might be said that these are not the remote causes of scrofula, but merely the means of calling a disease into activity which was resting dormant in the system. In reply, it is only necessary to appeal to any one's experience, which will supply ample evidence of the fact, that children born of the most healthy parents are equally liable to the attack after being subjected to the debilitating influence of such like circumstances.

Another support is given to this view, by the kind of treatment which is found most successful in its cure. We employ no positive specific, but act on the suggestion of events. We correct the state of the bowels, if such is required; then we give tonics and alteratives, and the scrofulous effects are decreased or cured.

Since the humeral theory began to be somewhat revived, more attention has been paid to the fluids of the body. We now feel it our duty to use the laboratory as a means of accurate diagnosis. The blood has been analysed in almost every disease, and much light thereby thrown upon pathology. I have subjected a vast number of specimens taken from patients in every stage of scrofula to anaylsis, and found it always under the standard of health. Below, are 12 cases arranged in a table, to save room, which correspond to the average of all my examinations :—

	Globules.	Fibrin.	Dissolved substances in Serum.	Water.
1	101·	3·	79·5	816·5
2	98·	2·8	79·	820·2
3	98·	2·4	79·1	820·5
4	97·	3·	79·	821·
5	96·5	2·5	78·	823·
6	80·	2·3	78·7	839·
7	79·	2·	79·	840·
8	79·	2·	80·	839·
9	63·5	1·2	80·	855·3
10	64·	1·8	79·	855·2
11	65·5	1·7	78·5	854·3
12	64·	2·	79·	855·

Such is the evidence founded on chemical examination; and, aided by the microscope, we discover facts which give equal proofs of deterioration. The globules are fewer in number, appear lighter coloured and irregular. Sometimes they look as if the circumference were notched and divided.

The phenomena of struma almost invariably are presented in the form of inflammation; as ophthalmia, inflammation of the joints or skin, &c. The view here taken of scrofula accounts satisfactorily for such an event. A very erroneous notion is preva-

lent, viz. that in proportion to the degree of plethora, is the obnoxiousness to inflammatory action. Nothing can be more incorrect, as any practitioner may attest, by referring to his own statistics. A very slight exposure to any efficient occasion, is adequate to produce a smart attack of inflammation, when the blood corpuscles are below their normal proportion. So it is that we have strumous ophthalmia, and similar affections, occurring so frequently in the poor and in debilitated constitutions.

Hexham, Northumberland,
September 1845.

Cases of Abnormal Abdominal Pulsation; one arising from excessive depletion, treated with tonics; the other from the increased action of the heart, treated with venesection. By G. L. Bonnar, Surgeon, Auchtermuchty, Fifeshire.

In the current volume of the Lancet, page 43, there is recorded, by A. Wolff, Esq., London, a case of abnormal pulsation of the abdominal aorta, very similar in some respects to the following, which, during the course of last year, came under my observation:—I was not in attendance on the patient during the successive attacks of cramp in the stomach; but the details of the case are given in as nearly as possible his own words.

G. P., an intelligent young man, æt. 22, of a sanguine nervous temperament, unmarried, had been bred a carpenter, but owing to frequent luxation of the right scapulo-humeral articulation, had been obliged to quit his calling. The effect of this on the patient was very apparent; he became morose and dejected in a great measure, and for many months, having nothing to engage his mind, and being unable to work, this state of things increased his natural nervous tendency. At the time he was seized, he was keeping a grocer's shop in this town, and had been so engaged for a few months. He is, and always has been, a lad of extremely regular and sober habits, with an earnest wish to be engaged in some laudable occupation.

Tuesday, 4th June 1844.—6 A.M. Rose as usual, walked for two hours before breakfast; on his return home at 8, felt chilled and very sick. Mr ——, surgeon, was sent for. Patient was now seized about stomach with an excruciating pain, accompanied with a sense of prinkling all over the body. Was put to bed, and had warm blankets and bottles applied to surface. He got something from a phial, which, with the external warmth, made him perspire profusely. He was then bled to about ℥xxxii, as nearly as can be judged, from the number and size of the vessels which received the blood; blood presented no appearances of inflammation; had had passage in his bowels that morning.

11 A.M. No return of cramp. Mr —— again bled him to same extent; got some medicine which he vomited; had about a tea spoonful of nitrous ether.

9 P.M. Was again seized with cramp; was bled until he sickened; pain in stomach subsided; passed a restless night; had a mustard cataplasm on region of stomach, which was followed by a cantharides blister; he felt an indescribable want about stomach, *accompanied with palpitation.*

Wednesday, 5th.—Had a dose of ol. recini; no return of cramp.

6th to 29th.—Had during this time gentle aperients; diet consisted of beef-steaks, port wine, and a bottle of London porter daily; strictly confined to bed; very weak.

30th.—At 8 P.M., seized again with cramp; compared it to a severe gripe about left hypochondrium; warm bottles were applied, and nitrous ether, about a tea spoonful, was repeated three times at intervals; was not bled.

1st July.—At 2 A.M., cramp over whole body; was bled to same extent as before; sickened; pulse so rapid and feeble, as not to be counted; had prescribed sp. æth. nit. as before.

11 A.M. Again seized with cramp; he was bled to same extent, and had the ether repeated; cramp was subdued.

10 P.M. Again seized with cramp. V.S. same quantity as before; nitrous ether; mustard to pit of stomach, followed by a blister.

The palpitation about the region of stomach, which followed the severe depletory measures practised on the patient on the 4th of June, when, at least, he lost ℥xc. of blood, had, by the generous diet, &c. allowed from the 6th to the 29th, subsided about eight days before; it now, however, returned, with extreme violence, so as to shake the bed on which the patient lay, and cause a heaving of the bedclothes. Its situation was rather beneath the umbilicus, and a little towards the left side.

2d.—As soon as blister came off, ten leeches were applied over seat of palpitation, and an enema administered.

At this period his friends had become very anxious, additional medical aid was requested, and —— ——, Esq., surgeon, ——, was sent for. After hearing the history of the case from the medical attendant, and examining the state of the patient, the palpitation was pronounced to arise from *aneurism of the abdominal aorta;* and, of course, the most unfavourable prognosis was given to the relatives of the patient. Valsalva's practice was forthwith adopted as the only means of cure; the diet was brought down to bread and water; five grains of calomel were administered each night, and large doses of tincture of digitalis, gtt. xxii. every three hours.

3d—13th.—Bled with ten leeches over seat of palpitation six times during this interval; digitalis given every four instead of three hours.

14th.—No return of cramp since the 1st inst.; but was again bled to about ℥xxvii.; did not feel at all well after the bleeding; tinct. digit. continued, and increased a little.

29th.—At 11 A.M., had a threatening of returning cramp; *palpitation was very strong in left hypochondrium;* sent for Mr ——; was bled ℥xxvii.; digitalis continued.

30th.—Leeches again put on; a calomel powder prescribed, followed by castor-oil and enema.

August 1st—9th.—Lay during this interval in a state of great prostration, but without any return of cramp.

10th.—Was this day removed to his father's house, about a mile distant, in the small village Dunshalt; he felt much agitated, and the *palpitation was very much increased;* digitalis continued.

25th.—V.S. to ℥xii.; felt very unwell thereafter; *pulsation much increased.*

26th to 2d September.—Had ten leeches applied three or four times during this period, and calomel given him to a slight extent.

During these intervals, between the attacks of cramp, he was never entirely free from pain, but experienced a constant gnawing uneasiness about stomach; at times much subdued, but at other times approaching to an acute pain, so that he could bear no weight over the seat of the pulsation.

Being the ordinary medical attendant at his father's house, I was, on the morning of the 2d September, suddenly called to reduce a hernia which had troubled the patient's father for the first time. I had frequently been requested to visit the patient before, but professional etiquette prevented this, unless in the presence of the medical attendant. But being now in the house, and receiving an urgent message from the patient (who believed himself fast dying), I was induced to visit him, but only in the capacity of a friend. Never having seen an aneurism seated so far down in the course of the aorta, I was anxious to embrace an opportunity of examination. The history of the case had been often told me before, and I expected to find all the well marked symptoms of aneurism of a large vessel. Judge, then, my surprise, when, on a careful examination, I discovered not one sign of existing aneurism, except the pulsation, and even this *not* the characteristic pulsation of aneurism at all! After thoroughly satisfying myself, by the aid of that invaluable instrument, the stethoscope, I came to the conclusion that this was a case of abnormal pulsation of the aorta, such as I have sometimes, though never to so great an extent, observed in hysterical females, and not an instance of aneurism, as it had been pronounced and treated for.

On bringing the whole history of the case to bear on the opinion I was led to form, I found the latter corroborated.

On taking my leave, I observed, that although it was not my

duty to interfere with the case, yet my personal regard for the patient made me warn him against further measures of depletion. This was the more necessary, as Mr —— had given the patient to understand that venesection was the chief remedy to be relied on in the treatment of the affection.

He continued much in the same state until the 20th of September, when he came under my care; and the following were his symptoms at that time :—

Inability to raise the head; extreme agitation on the slightest cause, accompanied with cold perspirations; noises in the ears; great anxiety and mental depression; pain in abdomen, especially over seat of pulsation, increased on the slightest pressure; pulsation very violent, extending for about one inch above, to three inches below umbilicus, and about an inch to the left of the mesial line at the upper part, and two inches at the termination of the pulsatory movement below; the pulsation was at times much subdued, and at other times very violent, especially on the slightest agitation of patient's mind, or on the least motion; pulse quick and very feeble; appetite good; bowels regular.

The treatment I judged necessary was the very opposite to that which had been adopted by the preceding medical attendant. Every thing was done to sustain the hopes of the patient, and administer remedies which might repair his exsanguined frame. The pains in abdomen, for which he had been so frequently leeched and blistered, were purely tympanitic, and relieved at once by a pill containing the common asafœtida pill of the pharmacopœia, prescribed along with pulv. capsici, and the aromatic essential oils. Bitter infusions alternated with the preparations of iron, were administered, but all stimulants were prohibited, as they increased the pulsation, and added to the nervous excitement of the patient. The bowels were kept in good condition by the above pill; generous diet, in small quantities, but frequently repeated, was enjoined.

Under this regimen he gradually but slowly advanced; the palpitation diminished in some degree, but the pains in abdomen vanished entirely. The patient, who formerly spoke in a half whisper, recovered his voice, and things seemed to be going on well.

About the beginning of November, he was alarmed by a chilliness which he felt, like that which preceded his first attack of cramp, and his agitation was extreme; by the exhibition, however, of two drachms of ether, containing about half a grain of muriate of morphia, the feeling passed away. The greatest difficulty I had to encounter, when any thing occurred to disturb the patient, was to dispossess his mind of the ideas which seemed to have been rooted there, by the prognosis of his former attendant; but gradually as he improved, his mind in some measure overcame the fears these impressions had produced. At last he was persuaded to rise, and

take within doors that exercise which the winter weather would not permit him to do without. When the season became milder, he ventured to the air, which, from his horror at the feelings of chilliness which contact with it produced, these being associated in his mind with the commencement of his illness, was a great advance towards his permanent restoration to health. Soon afterwards, he was persuaded to use the shower-bath, which was immediately attended with the most beneficial results. His progress since then has been uniform, and he is now (21st August) enjoying himself in the West Highlands, among his friends, benefited, I hear, by the change.

22d August.—G. P. called on me this afternoon; he returned from the west yesterday; is much improved, and feels much stronger; he still, however, complains of palpitation in the old spot, but does not heed it much; he asked for an additional supply of pills, as he feels uncomfortable when without them for any length of time.

I may mention here a very curious symptom which had annoyed him much latterly. He complains of a numbness of the whole *left* side of the body, "as if the one half did not belong to the other," also a prinkling of the left hand and foot, accompanied with coldness. The weakness of the left leg is sometimes so great as to make him *drag* it when he walks; and on a comparison, the left hand is paler in its colour than that of the opposite extremity. I have employed frictions, with croton oil, along the course of the left side of the spine, with temporary benefit, the sensations returning after a few days. These symptoms I cannot account for; they seem to be connected with that peculiar state of the nervous system of the patient, in which the abdominal pulsations were manifested; and being an effect of the same cause, I hope, as the constitution gets strong, they will disappear altogether. Since his jaunt he thinks that he is, in this respect, much better.

On offering a few remarks on the above details, I will not enter into the expediency of the treatment adopted at the commencement of this case; suffice it to say, that an individual of a nervous temperament, lost, in the short space of ninety-three days, by nine bleedings at the arm, the enormous quantity of *at least* 15 lbs. of blood, besides being bled with ten leeches, twelve or thirteen different times. The prostration and nervousness of the patient induced thereby were extreme, and little wonder; added to this also, was the effect produced on the spirits of the patient by the prognosis of the surgeon, unguardedly delivered within the patient's hearing, "that the articles of his shop should immediately be sold, as he would never again be able to do any thing for his own support." The patient lay in expectation of death, not with the calmness and serenity of an unagitated and strong mind, but with that state of a shattered nervous system, which, while he

expected, made him fear and tremble at the slightest change which seemed to indicate the approach of dissolution. It was *then* that the pulsation, dependent on a peculiar state of the nervous system, the result of excessive weakness, was to be treated with repeated venesection, leeching, and starvation. Without meaning in the least to detract from the professional character of any man, I would here advert to an error into which too many practitioners are apt to fall. When a disease is presented to their notice, obscure in diagnosis, and, it may be contradictory, apparently, in its symptoms, a *prominent symptom* is selected, a diagnosis formed, and a prognosis delivered accordingly, while other, often less marked, but by no means less important symptoms, are left out of consideration altogether, which may materially modify, nay, wholly alter, as in this case, the opinion of the nature of the affection. I am by no means surprised at the error of diagnosis into which Mr — fell; before he saw the patient, his mind was tinctured with the opinion of the surgeon who had seen the case from its very commencement; and it is little that *one* examination of such a case can do towards enabling any individual, under such circumstances, to form a thorough diagnosis. In the case of Mr A. Wolff, referred to at the commencement of this paper, Dr C., the physician whose advice was asked, was of opinion that the patient laboured under aneurism, even after the *second* examination, although Mr Wolff entertained a different idea, and the results of the treatment of the lady proved him to be correct. Had it been determined at that time, to what *class* of aneurism the case belonged, and had the symptoms of the case been applied to each species of aneurism, it would have been seen that it could not have been referred to any of the divisions of that disease. *Dilatation* of the vessel it could not be, because the boundaries of the pulsation were too abruptly defined, and its manifestation had been too sudden; dilatation is a work of time. For the same reason, it could not be a case of true aneurism, with the sac formed by *all* the coats. Had it been an instance of true aneurism, with rupture of the inner and middle coats of the vessel; or had it been a case of circumscribed false aneurism, either of which might have occurred suddenly, in both of these instances would tumours have been felt on compressing the abdominal parietes towards the spine; but in the instance before us, no such tumour was perceptible. I am aware that aortal aneurism of the same spot has been detected after death, and its existence never clearly made out during life, but in these instances the pulsation was obscure, and the aneurism suspected only from the stethoscope-signs; but, as I shall immediately detail, the employment of this invaluable instrument in the case under notice, only served *negatively* to corroborate the conclusions at which I had arrived. On its being applied to the seat of pulsation, I heard no bruit which belonged to an aneurismal tumour; nothing

of the *hoarse* sound, as of a fluid seeking its way through a distended sac was there; no whizzing noise, as of a fluid rushing through a narrow channel was heard; but a sharp *click* struck the ear at each pulsation, which gave the idea of a weak vessel yielding to a certain extent to the passing current, until stimulated by the over-distension, it made a sudden and vigorous effort to regain its proper calibre, and dislodge its over-accumulated contents. Again, the pulsations had no *lateral* breadth, nothing of the bellows-like expansion of an aneurismal sac, but they extended more, as it were, from the spine *directly forwards;* also the margins of the pulsatory movement were well, even abruptly defined. With these physical signs, I thought the case no longer doubtful; and the results of the treatment employed prove the correctness of the opinion. I cannot inculcate too strongly the use of the stethoscope in doubtful cases like the present, and would urge its adoption by every member of the profession; for there are those still who neglect its use, and I was much surprised to find, upon inquiry, that Mr — had never applied, even his ear, to the patient's abdomen!

But what is the peculiar state of the vessel in such cases? Few cases of abdominal pulsation have come under my observation, but none so strongly marked in character as the above, and, with the exception of the case detailed below, all have occurred in individuals of a nervous disposition, after long continued illness, or supervening on the occurrence of some profuse evacuation. A pulsatory state is by no means peculiar to the aorta. We often see beating of the temporal and carotid arteries, and even violent action of the heart itself, the general arterial system remaining quiescent. May not these pulsations and those of the aorta be dependent on the same cause? If so, a minute attention to the state of the superficial arteries thus affected, careful observation as to the state of the patient when the symptom presented itself, and, where the pulsation continued till death, a minute examination of the state of the vessel, its vascularity, elasticity, &c. of one part compared with another, might throw some light on this obscure and interesting subject.

As to the treatment to be adopted in these cases, a few remarks will be made, when we have detailed the following interesting instance of aortal pulsation, arising from a very different cause from the preceding.

Abnormal Abdominal Pulsation.

Case 2.—J. P., æt 32, has been in bed 2½ years with hypertrophy of left ventricle of heart. He is tall and of a full habit; fair complexion. A few members of the family have fallen victims to phthisis; unmarried. About 18 months ago, he came under my care, but so aggravated were his symptoms, that I much feared the greatest attention would have little effect in relieving

his state. The least noise excited palpitation of the heart to a very great extent; and the excitement of the presence of a stranger made the sweat stand thick over his face and forehead. The carotides throbbed violently, and the pulse was full and strong. A number of medical gentleman had seen him, and advised remedies, from which he had reaped no benefit, but no one had ever tried venesection. The case appeared to me, notwithstanding this tacit opinion of at least five medical brethren, to warrant more active measures than had been as yet adopted, and accordingly I recommended V.S. in small quantities, but frequently repeated. The reaction, after the first bleedings, which consisted only of ℥ij ss. were violent; V.S. was repeated every three weeks; the improvement of the patient was decided and gradual. He continued to advance for a few months, until a family occurrence excited him so much as to raise the irritability of the heart to a higher standard than ever. The heart beat very violently, and a pulsation of the abdominal aorta strong and well marked, at times causing violent heaving of the bedclothes, attracted his attention. His pulse was full and strong. The treatment I adopted was directly opposed to that of the former case, as the cause of the pulsation here seemed to be the violent action of the heart itself. Accordingly, low diet and venesection, frequently repeated, soon caused, in this instance, the subsidence of the abdominal palpitation.

In this case, likewise, there was no aortal tumour, and the physical signs were the same as in the former instance.

Under this treatment, he rapidly improved, and at this period he enjoys good bodily health. Before the lancet was first used, the patient was unable to speak, save in a whisper; and the noise of a carriage passing his window increased the beating of his heart, so as to make the perspiration stand in large globules on his forehead; but now he can talk well and enjoy this life; but when he attempts to use any exertion, the subsequent reaction is such as to prostrate him for hours afterwards.

It may be impossible to state why a *particular* portion of an arterial vessel should be so affected, or what is the peculiar pathological state of the part in this abnormal condition.

In the foregoing instances, the vessels appeared to contract suddenly and violently upon their contents, as if stimulated forcibly by over-distension. In the *first* of these instances, if the vessel was gorged, it was from a weak state of its sides, which thereby being rendered comparatively unable in themselves to resist the current of blood, sent with the ordinary action of the heart, yielded to the greater force from behind. In the *second* instance, the vessel was over-distended, not from its own weakness, but from the comparatively increased action of the heart itself, which, in like manner, would become the greater *vis a tergo;* but while, in the one case, the force at fault, dependent on weakness, had

to be strengthened, the over-powerful force in the other, dependent on intensity of action, had to be subdued.

With the single exception, however, of the case of J. P. where, as I have said, *the symptoms depended on a too violent impetus given to the blood by a hypertrophied heart, in proportion to the strength of the coats of the vessel receiving the current*, all the cases of abnormal abdominal pulsation depended on a peculiar weakness of the affected part of the vessel, whereby *it yielded to the current propelled from the heart, beating with its usual force*, required tonic treatment with generous diet; and I have never found this line of practice fail. The exhibition of warm carminatives, also, have been attended with marked effects in relieving the pains by which these palpitations are sometimes accompanied.

Depleting measures, as Mr Wolff's case and that of G. P. sufficiently prove, are by no means admissible. Had they been much longer persevered in, in the case to which I have first alluded, they would, long ere this, have ushered the patient into an untimely grave.

Auchtermuchty, 9th September 1845.

Expulsion of a Piece of Bone from the Gullet at the end of Eight Months. Communicated by Robert Brown, Esq., Surgeon, Preston.

The following case of prolonged lodgment of a foreign body, for the period of eight months, in the upper part of the œsophagus, giving rise to severe respiratory embarrassment, but without occasioning any impediment to deglutition, is sufficiently curious to merit publicity.

Mrs Backhouse, æt. 62, whilst eating a beef-steak pie, in January 1845, accidentally swallowed a piece of bone. She was much distressed at the time, by efforts to vomit, during which some blood was brought up. Embarrassed breathing, cough, muco-purulent, and occasionally hæmoptic expectoration, with loss of strength, and emaciation, soon followed. Auscultation failed in discovering the cause of so much pulmonary disturbance.

This deranged condition of health continued until the morning of Thursday, August 28, 1845, when, during a severe paroxysm of coughing, she brought up a large mouthful of phlegm —experienced the sensation of something giving way in the throat, speedily succeeded by the feeling of a sharp substance across the passage. During a fit of vomiting, she succeeded, by means of her finger, in removing the accompanying piece of bone.

A week subsequent to the discharge of the bone, all traces of previous irritation were entirely removed.

Part II.—REVIEWS.

An Essay on the Properties of Animal and Vegetable Life; their dependance on the Atmosphere, and connection with each other, in relation to the Functions of Health and Disease. By Edward James Shearman, M.D., Member of the Royal College of Physicians of London, &c. &c. London, 1845. 12mo, pp. 173.

This little work is designed to give a popular view of the subjects of which it treats. We have been much pleased with the perusal of it. The author has been able, very successfully, to accomplish the end he had in view. The several subjects are treated of in a clear, methodical, and judicious manner.

Our readers will understand best the character of the work by the following enumeration of the subjects spoken of:—It consists of six parts, besides an appendix; one on Vegetation; a second on Digestion, the Circulation of the Blood, and Animal Heat; a third on the Secretions and Excretions; a fourth on Combustion, Fermentation, Putrefaction, and Decay in Vegetable and Animal Matter; a fifth on the Formation of the Atmosphere; a sixth entitled Observations and Reflections on Agriculture, Animal Life, Health, and Disease.

The object of the author is distinctly expressed in the following quotation:—

"It has often occurred to me, when replying to questions put by my patients, that if they would give themselves a little trouble, and take time to examine into those general laws which God has given animal and vegetable creation, they would not only be more tractable and patient under sickness, but would be less liable to be affected by disease; because they would be able to avoid those general causes which constantly produce it.

"These laws are so few, so uniform in their action, and so simple, that should the perusal of this little essay be of no other use to its readers, it must have the tendency to exalt the admiration of that Supreme Being, whose transcendent skill is so far above that of man, as to be able to keep up animal and vegetable life in so easy a manner.

"My object in the following pages will be, to show, as briefly as is consistent with clear explanation, in plain language, devoid of technicalities, *what animals and vegetables are*, and *how* they live. And, as I do not pretend to be writing for professional readers, I hope, by avoiding any observations which might be considered by any one personal, to escape that criticism which I am well aware this Essay will be justly exposed to from purely scientific persons."—P. 1, 2.

As a sample of the mode in which the several topics are handled, we take the following passages:—

"The soil does not afford that real nourishment for the growth of plants that is

generally supposed. It merely supports them in the situation in which they are placed, and allows the air and water to permeate through it to the roots, and absorb the salts which are in a state of solution in the soil, particularly ammonia, lime, potash, and soda.

" Plants are composed of carbon, hydrogen, and oxygen, with a portion of nitrogen. They possess absorbent vessels, which have the power of *fixing* or *secreting*, certain parts of gases; much in the same way as the blood-vessels of animals: and they live entirely on gas or air. This is absorbed by the roots in the mould, and the leaves in the atmosphere.

" Plants feed upon *carbonic acid gas*, *water*, and *ammonia*. Carbonic acid gas, which we shall afterwards find principally proceeds from animals, is taken up by the absorbents, which fix the carbon in the plant, and give out, or exhale, the oxygen gas, which is the great supporter of animal life. They also take up water, decompose it, fix the hydrogen in the plant, and give out part of the oxygen. And they absorb ammonia (which is composed of three atoms of hydrogen and one of nitrogen), that they meet with in the soil as well as the air, and fix both its hydrogen and nitrogen.

" Lignin, or that part of plants which constitutes wood, hemp, flax, &c.; and the sugar, gum, starch, oil, &c. of plants in general, contain no nitrogen, but are altogether composed of carbon and water. But wheat, beans, peas, grapes, &c. are composed of nitrogen and carbon, with the elements of water.

" Light and heat are necessary for the perfection of these functions in plants; consequently they go on better in summer and by daylight, than in winter and by night. Without the sun, vegetation would cease to exist. During the night, vegetables merely absorb the gases through their vessels; and, for want of light, neither fix the carbon, hydrogen, or nitrogen, but may be considered to be dormant, or at rest. Consequently, plants improve the atmosphere in houses by day, by absorbing carbonic acid gas, and giving out oxygen, but deteriorate it by night.

" We thus see that the vegetable kingdom is the great producer of organic matter. Plants live on the air; and from the air, not only form organic vegetable matter capable of giving nourishment to animals, by supplying them with carbon for *respiration* and *fat*, and also with nitrogen to construct their muscles and other tissues: but constantly give out that sort of gas which enables animals to breathe and live."—Pp. 4—6.

The following passages will show the mode in which our auther endeavours to lay open the nature of the mysteries of disease to the general reader :—

" Every time we breathe and move; each time our heart throws out its blood; every action of our lives—tends to wear us away! Our tissues and muscles are made of the same animal matter as those of other animals, and are continually wearing out. This is proved by the quantity of excretions constantly coming away from us, in the forms of perspiration, expiration, urine, and fæces. Every thing in nature has a tendency to decay. When we clean our teeth, we wear out our teeth as well as our tooth-brush. But, by conveying albumen and fibrine again into our blood, we keep up the necessary supply. In youth, we complete our growth, by taking in a much larger quantity of carbon and nitrogen than we require: and, in adult age, are enabled to prevent the wear and tear of the system necessarily connected with our occupations.

" It will be readily seen that this process, simple and beautiful as it is, cannot go on, if the organs through which it has to pass are out of order; any more than a watch or a steam-engine can act steadily when their mechanism is broken. This is not the place o enter into the nature of the diseases of these organs; but it may be useful shortly to

examine into the methods by which we can distinctly and positively detect the various changes which disease brings on in the organs of the circulation.

"Every motion in nature produces a certain sound. We hear the wind whistle and the torrent roar: the flute and the trumpet give their natural tones. The air enters the lungs by the bronchial tubes, which are branches from the wind-pipe, and goes from them into the air-cells, producing a certain natural sound which is called *vesicular*. The lungs, being filled with air, ought to sound on percussion, hollow, like an empty barrel, the ribs being its hoops. And, in the healthy condition, the vocal resonance is of a peculiar muffled character; such as you would expect to hear in a person speaking to you through a large sponge filled with air.

"If the bronchial tubes become inflamed, the inner membrane not only becomes thickened, but a secretion of an adhesive substance remains in them, which immediately alters the sound, according to the degree of the inflammatory action. Or, if spasmodic action of these tubes exist, preventing the air from entering the lung, no sound can be heard. Or, in inflammation of the lungs, the very fine vessels become half clogged up by a tenacious fluid; and the air, rushing in through this fluid in them, gives a peculiar crepitating sound, decisive of the state of the organ.

"Again, all states of inflammation, and nearly all diseases of the lungs, produce that sort of condition which thickens, or consolidates, their fine spongy texture. And then the voice assumes a very different sound: being conducted better to the ear of the listener. And the sound on percussion, instead of being hollow and resonant, is flat and solid.

"In the very beginning of tubercular consumption, long before there is any cough, debility, or any other visible symptom, it is a very easy task to a person well acquainted with the nature and cause of the different sounds of the breathing, voice, and resonance of the lungs, to discover, by their physical signs alone, the commencement of that incurable and unmerciful disease: and, of course, to adopt proper precautions, before the complaint has made so much progress as to be too late to repair. Whereas, if such knowledge is not applied to a case of this description, it is left alone until cough and difficult breathing make their appearance; which symptoms are are too often treated as inflammatory. The unfortunate sufferer is lowered by a weakening system of treatment, and soon brought into that condition which renders all human assistance unavailing. These remarks might be continued to an almost indefinite extent; but enough has been named to secure the attention of the reader."—Pp. 22—25.

We regret that our limited space prevents us from citing a few additional passages to warrant the favourable opinion we have formed of Dr Shearman's book.

In a note accompanying his work, when sent for review, Dr Shearman requests us to correct one or two oversights in the printing. Two of these only are of importance. At p. 60, equivalents are inadvertently used for parts, in stating the composition of water; and at p. 89, in speaking of the atmosphere, hydrogen is used instead of nitrogen. We now take leave of Dr Shearman, trusting that his work will obtain that degree of favour from the class of readers addressed in it, to which, by its undeniable merits, it is entitled.

Experimental Researches upon Febrile Caloricity, both before and after death—Post-mortem Fever. By Bennet Dowler, M.D., of New Orleans. (From the Western Journal of Medicine and Surgery, June and October, 1844.)—Pp. 50.

The varying temperature of the body for some time after death, in different kinds of cases, is a subject which has hitherto drawn but little attention. It has been long known to practical men, that a much longer time than usual sometimes intervenes before the dead body acquires the temperature of the surrounding air; and it is not an unfrequent remark of those who have been much engaged in post-mortem examinations, that traces of the living temperature occasionally are discovered, even as long as twenty-four hours after death. It sometimes happens that even the relations of the deceased take notice of the unusually long retention of warmth in the body, and send for the medical attendant some hours after the event, to ascertain if resuscitation be not possible. As far as we have observed the cases in this country, in which the warmth of the body long outlasts the period of death, are chiefly those in which death takes place by the head. And we believe this coincides with the general experience of practitioners in this country. We have been struck with its long continuance, not merely in cases of suddenly fatal apoplexy, but in general dropsy of considerable standing, with coma supervening before death, and in erysipelas, ending rapidly with signs of affection of the brain. Such facts, however, though plainly long known, appear to have attracted little notice. They appear to have hardly suggested even a passing idea of the possibility of this temperature of the dead body being not the lingering remains of the living temperature, but a new development of heat, independent of life.

As far as we remember, for our time does not permit us at present to search for authorities, Dr John Davy was the first to publish cases which seemed to point to the necessity for a more diligent investigation of this subject. Dr Davy's paper is contained in the third volume of the Edinburgh Medico-Chirurgical Transactions. The facts stated in that paper are sufficiently remarkable, namely, that in a number of the instances he found the temperature of the body after death to be considerably beyond the temperature admitted to belong in general to the most active stage of febrile disease. One case in particular he mentions, in which some time after death the temperature was as high as 113 deg. F.

Dr Davy's paper was published before the Asiatic cholera reached Europe. During the prevalence of that epidemic, it was matter of common observation, that the coldness and shrunk state

of the surface, characteristic of the disease, gave way after death, and that the warmth and plumpness of the surface returned.

The papers before us on "Febrile Caloricity, before and after death," for the use of which we are indebted to the distinguished professor of Materia Medica in the University, bear so many marks of sterling honesty of purpose, notwithstanding some occasional flights of romance, that we cannot help putting considerable faith in the author's statements, extraordinary as they are.

The following is the first case which Dr Dowler reports:—

"As illustrative of this subject, and the origin of this investigation, as mentioned above, I will here recount a part of my observations, in the first case in which I took the post-mortem temperature. The heat, in this case, was less than in many others—the history is less perfect—no positive thermometrical data had been recorded before death. The skin, during the two last days of the malady, was so remarkably cold, that some medical gentlemen regarded the case as a congestive, rather than yellow fever; but the history, as well as the autopsy, fully satisfied me that it was the latter. The stomach contained 12 ounces of black vomit.

"A native of the United States, born about the 40th degree N. latitude, aged 25, late a steamboat man in southern Louisiana, resident in New Orleans two weeks, died of yellow fever, August 7th, 11 A.M., 1843, after an illness of four days and a half.

"Air of the dead house 83 deg. Experiments began 20 minutes after death; axilla, 5 min. 108 deg.; under the tongue, 5 min. 103 deg.; epigastrium, 5 min. 108 deg.; 5 min. same; perineum simply closing the limbs, 10 min. 104 deg.: centre of the thigh, 10 min. 109 deg.; tongue, 10 min. 100 deg.; epigastrium, 5 min. 109 deg.; axilla, 5 min. 104 deg.; thigh, 5 min., old incision which had been made too large, admitting the air freely, 107 deg.; 3 successive obs. in different parts of the abdominal cavity, each lasting 5 min., gave nearly 107 deg. Experiments now ceased 1 hour and 35 minutes; resumed 3 hours and 20 minutes after death. Dead house, 81 deg.; epigast., 10 min. 104 deg.; outer side of the lungs, 10 min. 103 deg.; base of the right lung, 5 min. 104 deg.; between the liver and diaphragm, 4 hours after death, 104 deg. Temperature of the brain not taken. The body rested on a stone floor, which was directly on the ground—no cover but a linen sheet, which was removed when the experiments began; the room much ventilated—brisk winds, with heavy showers of rain, during the observations.

"In this case the coolness so remarkable to the touch disappeared in 15 minutes after death. The axilla at 25 min., and the epigastrium at 40 min., both gave 108 deg., while the thigh, 1 hour after death, gave 109 deg.; in 1 hour 15 minutes the epigastrium attained the same elevation as the thigh. This, the culminating era of the morbid caloricity, was followed by a gradual but slow declination, differing much from simple atmospheric refrigeration, inasmuch as the thigh and the epigastrium, and other abdominal regions, after trials for 25 minutes, gave exactly the same temperature. Refrigeration from the surrounding *media* progresses from the circumference to the centre, until the putrefactive period, when the air, the surface, and the centres, coincide very nearly. The body exposed to a hurried, brisk wind, at 81 deg., for a period of 4 hours, gave in the centres, 104 deg.—that is, 4 or 5 deg. beyond the healthy heat."—P. 498, 499.

In the second paper, there is the analysis of two series of tables. The first series relates to the temperature before death, in the several stages of yellow fever; the other, to the tempera-

ture after death, in persons cut off by that disease. These tables are very interesting—(our space permits to quote but a small part of them.)

"ANTE-MORTEM SERIES. ANALYSES OF SUMMARIES.

"Analysis of Table No. 1, showing the primary period of yellow fever in persons that recovered:—24 cases: mean time of illness when the observations were taken, 26·81 hours; mean of air 81·3 deg.; mean of the hand 101·22 deg.; maximum 107 deg.; minimum 95 deg.; mean of the axilla 103·11 deg.; maximum 109 deg.; minimum 102 deg.

"Analysis of Table No. 2, showing the temperature of yellow fever in the middle periods, in those who recovered:—40 cases: mean time of illness when the observations were made 5·92 days; mean of the air 82·52 deg.; mean of the hand 100·42 deg.; maximum 107 deg.; minimum 94 deg.; mean of the axilla 103·11 deg.; maximum 109 deg.; minimum 97 deg.

"Analysis of Table No. 3, showing the temperature of the convalescent period of yellow fever patients:—26 cases: mean time of illness when the observations were made 6·50 days; mean of the air 82 deg.; mean of the hand 96 deg.; maximum 100 deg.; minimum 91 deg.; mean of the axilla 98·46 deg.; maximum 102 deg.; minimum 83 deg.

"Analysis of Table No. 4, showing the temperature of the primary period of those who died of yellow fever:—12 cases: mean time of illness when the observations were made 24·62 hours; mean of the air 83·75 deg.; mean of the hand 102·54 deg.; maximum 197 deg.; minimum 97 deg.; mean of axilla 105·91 deg.; maximum 109 deg.; minimum 100 deg.

"Analysis of Table No. 5, showing the temperature of the middle period of those who died:—25 cases: mean time of illness when the observations were made 6·04 days; mean of the air 81·16 deg.; mean of the hand 99·4 deg.; maximum 106·5 deg.; minimum 91 deg.; mean of the axilla 103·39 deg.; maximum 107 deg.; minimum 99 deg.

"Analysis of Table No. 6, showing the temperature of the fatal stage of yellow fever:—51 cases: mean time before death when the observations were made 16·01 hours; mean of the air 81·24 deg.; mean of the hand 92·25 deg.; maximum 104 deg.; minimum 81 deg.; mean of the axilla 99·56 deg.; maximum 106·5 deg.; minimum 90 deg."

"POST-MORTEM SERIES. ANALYSES OF SUMMARIES.

"Analysis of Table No. 1, showing the post-mortem fever of regions:—43 dead bodies: mean time after death, when the observations began 29·5 minutes; maximum delay in three cases 3 hours; minimum 1 minute; mean duration of the experiments 1 hour and 32 minutes; 4 maxima, being 1 of 4 hours and 8 minutes, and 3 of 4 hours' duration: mean of the air 84·4 deg., partly taken in the dead-house, and the residue from other records; mean of the axilla 104·44 deg.; maximum 109 deg.; minimum 96 deg.; mean of the thigh 104·71 deg.; maximum 113 deg.; minimum 100 deg.; mean of the rectum 104·05 deg.; maximum 111 deg.; minimum 100 deg.; mean of the epigastrium 105·48 deg.; maximum 111 deg.; minimum 101 deg; mean of the chest 102·95 deg.; maximum 107 deg.; minimum 97 deg.; mean of the heart, generally of the right side 103·5 deg.; mean of the brain 98·71 deg.; maximum 102 deg.; minimum 95 deg. The chest and rectum are omitted in about half the cases, and the brain, perineum, pelvis, liver, and heart, in a proportion somewhat greater. The liver was observed in nine cases, and gave a mean of 106·33 deg.; a maximum of 112

deg.; and a minimum of 102 deg. The perineum without incisions gave a mean of 104·45 deg.; a maximum of 109 deg.; and a minimum of 101 deg., in 10 cases. The pelvis and lower abdomen in 9 cases, averaged 105·05 deg.; maximum 107 deg.; minimum 100 deg.

"This table is sufficiently curious, but we utterly despair of showing from it, by a comparison of organs at different periods, the surprising phenomena manifested by post-mortem fever, in particular regions remote from the centre, at prolonged intervals after death, requiring hours to reach its maximum; then, sometimes declining to the temperature of the centre, both keeping pace for a time, and then the centre falling more rapidly, leaving the thigh stationary, at perhaps 106 deg., for many minutes—reversing all the laws of refrigeration known to philosophers. So we leave this subject for the present.

"Owing to circumstances not necessary to mention, it often happened that the post-mortem fever had begun to decline—actual refrigeration had progressed upon the surface—before I commenced the observations. In selecting bodies, my preference was for those the most recently dead. When a body begins to refrigerate, of course the parts most distant from the centre will cool first. In this way the average of the thigh, great as it is, is more or less reduced, but I have not for that reason suppressed a single case. It will be seen that the thigh affords a maximum of 113 deg., exceeding every other region.

"Analysis of Table No. 2, showing the decline of post-mortem fever, or the incipient refrigeration of regions, the forerunner of putrefaction:—17 cases: mean time dead when the observations began 6 hours and 48 minutes; mean of the air about 86 deg.; mean of the thigh 94·26 deg.; maximum 103 deg.; minimum 84 deg.; mean of the epigastrium 97·5 deg.; maximum 106 deg.; minimum 84 deg. The following regions were not examined in all the dead bodies: mean of the lungs 94·28 deg.; of the heart 93·25 deg.; of the liver 96·5 deg.; of the rectum 99 deg.; of the axilla 96·88 deg.; and of the brain 85·33 deg.

"Analysis of Table No. 3, showing the period of refrigeration in which the body and surrounding media coincide very nearly in temperature, and in which putrefaction declares itself, accompanied by suppleness of the limbs, softness of the muscles, relaxation of the cornea, abdominal distention, green discolorations of the skin, and fetid gases:—19 cases: mean time dead 17·04 hours; mean temperature of room 84·39 deg.; mean of the thigh 85·35 deg.; of the epigastrium 88·11 deg.; of the lungs 89 deg.; of the axilla 86 deg.; and of the brain 79·12 deg.

"The common opinion that putrefaction is accompanied or caused by an augmented heat in the human body is quite erroneous, as we shall see hereafter."—P. 286—289.

We have no intention of speculating on these statements, made, as we see, by Davy first, and now extended by Dowler. Dr Davy does not mention where his observations were made; it was plainly however in a warm climate, like those of Dr Dowler. The subject is very worthy of investigation in our more temperate climates; nor till observations in these shall have been made in sufficient numbers, can we pronounce the subject ripe for speculation. Dr Dowler's first paper contains many valuable suggestions on the precautions to be used, and the fallacies to be avoided in making observations on the temperature of the body both before and after death.

An Inquiry into the Homœopathic Practice of Medicine. By William Henderson, M.D., Professor of Medicine and General Pathology, and lately one of the Professors of Clinical Medicine in the University of Edinburgh. London, 1845. 8vo. pp. 141.

We look on the publication of this book with more of a feeling of sadness than of anger. Of Dr Henderson's talents and acquirements we had formed a high opinion, and, in common with his many friends, had marked him out for a distinguished place in medicine. His appointment to the Chair of Pathology in the University of Edinburgh, at an early period of life, seemed a propitious omen—an earnest that he was to realize the hopes entertained of him. We fondly imagined that "his greatness was a ripening," but, alas! for human prescience; we dreamt not of the "killing frost of homœopathy." This book puts it forth to the world that he has bound up his fame with the fortunes of homœopathy. What that fortune is to be, it needs but little reading in the history of delusions to predict.

The work consists of preliminary observations, and something more than a hundred cases. We proceed at once to extract a passage from the preliminary observations.

"The most conclusive method of determining what credit should be awarded to remedies, in the treatment of diseases, would certainly be a comparison of the results obtained in a considerable number of cases in which these remedies were employed, with the issue of a like number of cases left entirely to themselves, such precautions being adopted as might leave no room for the interference of an influence capable of disturbing the experiment. It was with this method in view, that my researches were begun; but in the course of fulfilling the former term of the inquiry, I found myself persuaded of the actual power of the remedies, and relinquished the purpose of undertaking the latter; because, what I had mainly proposed to myself by the investigation—the satisfying of my mind on the subject—was accomplished, and I did not feel inclined to encounter the personal risk and anxieties that would necessarily attend the completion of the inquiry in the manner originally intended, however cautiously conducted, for the satisfaction of others, who might, as I thought, and continue to think, perceive in a mode which appeared to me a tolerable substitute, a sufficient reason, if not to be convinced, at least institute experiments for themselves."—Pp. 52, 53.

Though, in our opinion, Dr Henderson here proposed to himself what is altogether a work of supererogation, yet, if it was to be undertaken at all, his plan of a double inquiry was essential to a just conclusion. If he had carried through the plan of comparing the effects of no treatment at all with the infinitesimal treatment, the regimen and moral influences being preserved, as nearly as possible, the same in both series of cases, Dr H., we are well convinced, would have appeared, in his work, not as the deluded advocate, but as the uncompromising opponent of Hahnemannism. By abandoning the most necessary part of his proposed

inquiry, he has been seduced into an irreparable error. It is not a case in which he can retrace his steps.

Let Dr Henderson ask himself why he was originally led to fix on a double course of inquiry. It was, we will affirm, because he saw clearly enough, before he allowed the mists of homœopathy to obscure his mental vision, that, if diseases recovered as readily under infinitesimal as under regular treatment, the proper conclusion would be, that, in the cases under experiment, the recovery was spontaneous, or independent of any strictly therapeutic operation. We said above, that Dr H.'s whole proposed inquiry was a work of supererogation, because the medical profession is already convinced that many such diseases as form Dr H.'s cases, often recover spontaneously ;—and this can easily be shown to be no admission of the uselessness of treatment, or of the medical profession. Dr Henderson's opinion, it is true, was an exception. Before he undertook this inquiry, he did not believe that many diseases, such as the homœopathists profess to cure, recovered spontaneously ; but only that it was possible that such was the case. Hence, while others deemed it needless, he thought it necessary to inquire into the effects of infinitesimal doses, and to check his observations by a simultaneous observation of the consequences of no-treatment. Here, however, he did not keep the requisite guard on himself, but falling a victim to his credulity, forgot the object with which he set out, and jumped to the startling conclusion, some what wide of Hahnemann's, that regular treatment is good, but homœopathic better.

Dr Henderson here loses all claim to the title of a logical inquirer. He is content to stop short, without fulfilling the conditions of the problem proposed by himself for solution, as soon as his own mind yields a temporary belief. He compels us, therefore, to consider, whether the mind of a man possessed of such talents and acquirements as we acknowledge to belong to Dr Henderson, be necessarily a safe guide. The highest talents and the most extended acquirements, are not incompatible with a deficiency of those qualities which alone can guide the judgment, under complex circumstances, in the search after truth. There is a kind of good sense requisite, without which, knowledge and even a high degree of skill only lead to folly.

> Good sense, which only is the gift of Heaven,
> And though no science, fairly worth the seven.

The proposition just made, the reader, we imagine, will allow us to take for granted, without troubling him with the very accessible superabundant proofs to be found in the history of the opinions of the most talented and accomplished among men of celebrated character. In short, that is equally true of the mind, which Celsus says of the body : " Raro quisquam non aliquam partem corporis imbecillam habet." And thus, when the results of an inquiry can be affected in any considerable degree by the peculiar

turn of the inquirer's mental character, that character must be scrutinized with as little ceremony as the rest of the data, before our assent is given to the conclusion.

Numerous as have been the opportunities we have enjoyed of judging of Dr Henderson's professional excellencies, the publication of this work is the first occasion on which his turn for estimating, on any considerable scale, the relation between cause and effect, in complex circumstances, has been offered to our attention; and the facility with which he shakes himself clear of the part of his plan essential in his first view, to a right opinion of the case, and the "sang froid" with which he declares how speedily his own mind was made up that regular treatment is good, but homœopathic better, assuredly do not entitle us, friendly as we are, to pronounce him possessed of firmness of purpose, or logical acumen, in carrying through a difficult investigation.

So long as he looked at the subject at a proper distance, he held that all the affirmations of the homœopathists, as to the efficacy of infinitesimals, were groundless, unless it could be proved that similar diseases did not equally recover under no treatment. And yet, without showing why he should be more trusted than they, he all at once comes forward and asks us to believe his attestation of the efficacy of these infinitesimals. Here, we would remark, he is in a worse predicament than the homœopathists themselves; for at the very time when he calls on us to believe his testimony, he gives us reason to suspect, by abandoning the inquiry which, in his sober judgment, he had deemed essential to establish the pretensions of homœopathy, that he is one of those men possessed of so little steadiness of purpose in their opinions and belief, as to be "blown about with every wind of doctrine." We can conceive no alternative, unless Dr Henderson confess having been already secretly a convert to Hahnemannism, before he undertook the prosecution, or even formed the plan of this inquiry. In this alternative, we should distrust his cases altogether as an "ex post facto" attempt to justify an error which he felt he had already embraced. We are aware that rumours are current of some of the cases being known to be coloured to serve the purposes of homœopathy. To these rumours we shall pay no attention, trusting that Dr Henderson's once known ingenuousness has not been corrupted, even by contact with the pitch of homœopathy.

To the review of these cases we now proceed.

The first on the list are eight cases of Cynanche Tonsillaris, in which the recovery was rapid. Of the whole number of sore throats which occur in any one year, there is but a small proportion of severe cases. Eight cases, therefore, of this disease, occurring within little more than 12 months in the same city, and at a time when the prevailing complaints were undeniably of a mild character, afford no foundation for any certain conclusion.

We know that numerous cases of sore throat occurred in the same period, which terminated as quickly under no treatment at all, or under slight regular treatment. We feel well assured that Dr Henderson will not persevere very long in the use of infinitesimal doses of belladonna, in cases of Cynanche Tonsillaris, without discovering their inefficacy. We will cite a case of sore throat within our own knowledge, which, in homœopathic hands, would have made an admirable ninth case on Dr H.'s list.

A medical man, to all appearance in perfect health, during a short excursion to the country, on a fine day in last June, sat for about an hour on a bank in a marshy place; the next afternoon he felt some difficulty of swallowing, and on examination, the left tonsil was found considerably enlarged. He used some simple remedies, and went to bed earlier than usual. He was called up in the night to a patient, and detained about an hour. Next morning, the swelling was considerably increased, so that he could neither swallow nor speak without great difficulty. A mustard poultice was applied, and a strong solution of nitrate of silver was occasionally used for the throat, with the effect of promoting the discharge of the constantly accumulating mucus. The swelling and pain continued to increase: he passed an uneasy night owing to the swelling, and the next day took no sustenance beyond a few bits of softened maccaroni. The third night was also sleepless and uneasy, but early in the morning, pus was discharged with great relief, or rather with perfect recovery. The right tonsil did not become affected. The patient, within the last ten years, had, on two several occasions, suffered from suppuration of the tonsils, the pus not being discharged for eight or nine days. The duration of the whole attack just reported did not exceed 72 hours.

The ninth case is that of an infant recently weaned, who, having been previously in good health, was attacked with vomiting, which is represented as having been cured by infinitesimal doses of arsenic. The vomiting had lasted two days before the symptoms are reported, or the infinitesimal doses of arsenic were prescribed. It is not surprising, then, that there was thirst and a wan, exhausted appearance. But where is the evidence of serious disease? For an infant a few months old, a pulse at 152 is not an extraordinary acceleration. The belly is described as soft, and the motions, several in the day, not unhealthy looking. Is idiopathic vomiting, that is, vomiting independent of the presence of other diseases, likely, in this country, to prove fatal in a child who had enjoyed previous good health. Is there any practitioner who would venture to pronounce it improbable that a child, recently weaned, and having enjoyed previous good health, attacked with vomiting in the beginning of October, should obtain a crisis in two days, and recover, even though the treatment had been injudicious? This is a case of smart October cholera; but cholera

in this country is not, in most seasons, to be reckoned among our fatal or very dangerous diseases; severe cases of our cholera recover without remedies. All that we can promise from art is the shortening of the patient's sufferings, and the diminution of the final mortality in bad seasons. Treatment, while it shortens the sufferings, husbands the strength, and thus saves life in cases which might otherwise have proved fatal by exhaustion, or by the system being laid open to the inroads of inflammatory action. There is but a single case of this kind here reported; but even were there many, it is manifest that, under such circumstances, little would be proved in regard to the effects of an unestablished remedy. If, in a case of cholera, say in an adult, we administer forty or fifty drops of laudanum at the end of a fit of vomiting, and observe that half an hour elapses before the vomiting recur, while, previously to this treatment, it had occurred every quarter of an hour, we feel entitled to say that the laudanum has restrained the vomiting, not because there is in this instance sufficient foundation of fact for our inference, but because in support of the observation, it is incontestible that opium has the power in general of restraining vomiting. Yet even here, that is, looking to this single supposed exhibition of laudanum, it cannot be affirmed that, without the laudanum, the recurrence might not have been postponed equally long from spontaneous changes in the system. Such are the difficulties which beset the study of the phenomena of living nature, preventing any thing but a long and varied train of observation, with frequent correction of errors, from being available for just conclusions. Dr Henderson may perhaps complain of our debarring him the benefit of the homœopathic belief in the power of infinitesimal doses of arsenic to restrain vomiting, while we take advantage of the belief of regular practitioners in the sedative power of opium. If so, we must remind him of his being engaged in the attempt to prove to us unbelievers that alleged property of a few atoms of arsenic. He is not to forget that he is addressing himself, not to those who, being of his tribe, worship his idols, but to us who, in the case of opium at least, can challenge the world, in all ages, to deny that we are of the true faith.

The next seven cases are attacks of looseness, reported as cured by infinitesimal doses of arsen. mercurius, bryonia, aconit. carb. vegetab. antimonium crud. rhus, tinct. of aconite ($\frac{1}{2}$ drop), pulsatilla, mercur. solub chamamilla, nux vom. We preserve Dr H.'s own nomenclature and contractions to the letter, as we wish to be tender with these filmy attenuations of our own more solid drugs. Of these seven cases, none is in the least remarkable except the first (No. X). All the rest are simple cases, such as often recover without medical treatment, merely by avoiding causes of aggravation. Surely No. XI. might have been cured sooner; for the stools became reduced to five on the second day, and

to four on the two subsequent days, and yet he is not pronounced cured till after ten days, and even then is reported weak, though the evacuations, during most of that time, had assumed a healthy character.

The first case, namely No. X., we have said, is remarkable; —it is so, because Dr Henderson says the man was given over to him by the late Dr Graham, as dying of dysentery; and that he was cured by infinitesimals of arsenic, mercurius, bryony, carb. veget. and rhus. This case is not strictly a case of dysentery, but one of continued fever, complicated with looseness. The epidemic to which this case belonged, every body remembers, was one not more distinguished by the numbers it attacked, than by the small mortality it caused. Looseness of the bowels was not unfrequent in the latter part of the disease, and among the aged and intemperate, proved fatal to a considerable per centage of those so affected. The age of this patient (30) falls within that division in which the mortality under looseness was least, and no intemperance of habits is marked against him. The looseness in this man's case commenced early in the disease, or about the end of the first week, while, according to Dr Halliday Douglas's experience, "though the more severe forms did not manifest a preference for any particular stage, in the fatal cases the attack occurred after the relapse."* The mitigation of the dysentery in this man's case began at a period within which the second crisis often lay, so that his recovery may not unreasonably be ascribed to a spontaneous critical change. Moreover, it is to be remarked, that after the infinitesimal treatment was commenced, and not many hours before the mitigation of the symptoms, two enemata of starch and laudanum were administered, one of which was retained for an hour.

But we shall beg pardon of our readers for dwelling so long on Dysentery, in connection with the supposed evidence of the efficacy of infinitesimal doses. Surely dysentery is not a disease, at least on the small scale of seven cases—only one of which is an Hospital case—by which to test the truth of an incredible treatment. Is any disease less subject to rule in its origin, progress, duration, and danger? and how seldom comparatively is dysentery fatal with us, unless when it prevails extensively as an epidemic?

The next two cases are cases of short bowel complaint in previously healthy infants, which, wonderful to relate! ran a favourable course; not a jot the worse for homœopathic treatment.

Next follow four cases of alleged *Erysipelas*.—Shrine of Saint Antony! What an abuse of words!

The next (No. XXIV.) is a case of a mote in the eye, which tempts us to cry out, Beate Martine!

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* Northern Journal, February 1845.

The cases represented as cases of acute rheumatism, are too ridiculous. Surely Dr Henderson does not expect to persuade us, that cases of threatened rheumatism do not often go back without the aid of homœopathy.

The next is a fatal case of peripneumonia. We premise that we are ready to believe this case would have proved fatal under any treatment at the stage in which the man was brought to the hospital. We cannot, however, exculpate Dr Henderson from blame in this instance. The patient was indeed beyond any well-grounded expectation of recovery; but, nevertheless, it was not impossible that he should recover. Dr Henderson was not entitled, as an hospital physician, according to the understood duty of such physicians in this country, to trifle homœopathically with a case like this. The man was within forty hours of dissolution, and twenty of these short hours were wasted in infinitesimal frivolities, and, to crown the mockery, he was put under legitimate treatment during the latter half of this brief span. If a person, in the full possession of his mind, places himself voluntarily under Dr Henderson's care, knowing him to be a disciple of homœopathy, we shall admit that Dr H. may consider himself entitled to treat him by infinitesimals, so long as the Legislature keeps aloof, even in a case of imminent danger to life. But it is far otherwise, when one is carried by friends to an hospital bearing the character of an institution, conducted according to the established rules of medicine. When a man, labouring under an acutely dangerous disease puts himself, or is put, under one who is believed to be a regular practitioner, he is not dealt justly with, if the treatment adopted be dictated by the mere whim or caprice of an individual, or by the dogmas of a sect, if these be at variance with the recognized precepts of medicine. Doubtless, a medical man is permitted a certain range of choice in his treatment, but there can be no pretext for confounding, as the homœopathists affect to do, the liberty of such a range, as falls within recognized regular practice, with the suggestions of caprice, or of forbidden dogmas. What then a patient has a right to expect, at least when immediate danger is impending, is, that he shall be treated according to the sincere and conscientious interpretation put on the rules of regular practice by his medical attendant—in short, that he shall have the benefit, in such critical circumstances, not of the loose vagaries of one man's mind, however fully persuaded he may feel for the moment of being right, but of the then state of the profession, according to the best of the practitioner's judgment on a careful consideration of the case. We are well convinced of this view being the only correct one, and that it does not tie up any one from legitimate efforts for the improvement of medicine. Such justice Dr Henderson's patient did not obtain. He was allowed to die of a curable disease, in a public British hospital, (his state, at his entrance, we allow, was all but hopeless,) without

the due application of the remedies sanctioned by the profession in cases of this nature.

The next case, (No. XXXIV.) that of a girl, ten years of age, represented as one of severe peripneumonia, cured by infinitesimals of phosphorus, of tartar emetic, of bryony, and of sulphur, is, we confess, attended with some difficulty, on the supposition of its being in all respects faithfully reported. It is the only alleged case of peripneumonia reported as so cured, and as tendered in evidence of so-called facts, it might fairly enough be rejected as unequivocally defective in some of the best established normal characters of peripneumonia. But we shall not avail ourselves of what might sound like a technical objection. At the best, in short, it is an abnormal form of peripneumonia. If it was peripneumonia, it was peripneumonia without the usual pain or uneasiness of the chest, with hardly any cough, without the expectoration characteristic of the disease, or rather with no expectoration at all, and without oppression of the breathing. Before the introduction of percussion and auscultation, this case could not have been argued as one of peripneumonia. We should be the last to make light of these two invaluable aids to diagnosis. Still, to pronounce them infallible guides, notwithstanding the absence of the ordinary general symptoms, is, we think, to assume that they have reached a degree of perfection which they are but in the course of attaining. We do not doubt the signs derived from auscultation and percussion, being as constant as possible in peripneumonia, but we know that there are non-inflammatory states of the lung, and states not amounting to actual inflammation in which similar signs are produced. And we affirm, that these states have not yet been investigated with the requisite care to ensure freedom from error in the diagnosis, when the concurrent general signs of peripneumonia are absent. Oedema of the lung, for example, we are persuaded, is a much more frequent occurrence than is commonly believed, while its medical history, and the conditions under which it arises, remain almost unexamined, though it produces physical signs similar to those of peripneumonia, and it is acknowledged to create a difficulty in the diagnosis hardly to be overcome except by attention to such general symptoms as are defective in the case before us. *

Again, what has been named febrile hepatization, though it imitates the physical signs of peripneumonia, is hardly inflammatory. Let Dr Henderson compare his own report of this case, with the passage we are going to quote from Dr Williams on Diseases of the Chest, and say, whether he can reasonably ask us to believe, that his infinitesimals here cured an unequivocal case of inflammation of the lungs—a case of severe peripneumonia. The reader should be made aware, that Dr H.'s case set in with

* See Williams on Diseases of the Chest. P. 145.

headache, and pains in the hypochondria, white tongue, much feverishness, and restlessness, but no cough. After a few days, there was much thirst, heat of skin, delirium, with much talking and watchfulness. On the evening of the seventh day, the pulse became reduced in frequency, and the restlessness, delirium, and watchfulness, gave way to quiet and sleep, after which her recovery was rapid. The physical signs, first observed on the morning of the seventh day, were as follows :—"On the right side of the chest the percussion sound is dull, posteriorly as high as the spine of the scapula, and from the axilla, all down the lateral aspect of this side. Bronchial respiration and bronchophony are very distinct over the dull parts, but there are no rattles—coughs little."—(Henderson, p. 107.) The next day, some small mucous rattles are discovered at the lowest part of the left back, and subcrepitation now and then on the right back, where the percussion sound is dull, and on the following days the subcrepitant rattles increase as recovery takes place. The passage before referred to in Dr Williams' work on the Chest, is as follows :—

"In these cases (in fevers) there is dulness on percussion and absence of breath-sound in the lower and back parts of the chest ; but, as Dr Stokes has remarked, little or no crepitation. This is probably because the engorgement is more *congestive* than *inflammatory*, and being at once produced, renders a great part of the tissue impervious to the air. But this degree of congestion, if it occupy the middle parts of the lung, may give *bronchophony* and *bronchial respiration*."—P. 140.

We shall not err, then, we think, if this case be set down as a fever, with congestion of the lungs, rather than a case of severe peripneumonia.

Why the next case is introduced, that of an infant, in vain treated homœopathically, when moribund, we cannot guess, unless it be in evidence of Dr Henderson's faith in infinitesimals stopping short of their power to put an end to mortality among mankind.

So end the inflammatory cases ; and, on looking back on them, we must say, were such cases of spontaneous recovery not "plentiful as blackberries," the human race could not have survived up to the invention of medicine.

Of the non-inflammatory cases, the first are eight cases of headache, alleged to have been cured by infinitesimals of belladonna. We will take it upon us to say, that with very little trouble, any one may collect dozens of cases as strong as these in favour of any kind of treatment, however absurd or frivolous. Why this should be, we cannot take time to explain. But surely Dr Henderson does not need to be informed of what every medical man knows, that there is something in the history of periodical complaints of a trivial kind, especially in females, which favours the pretensions of no matter what inert remedy any old woman chooses to patronise.

The next (No. XLIV.) is the case of a lady suffering under headache, which, incredible to relate ! even a perseverance of four

months in infinitesimals of pulsatilla, nux vomica, sepia, graphite, lachesis, and bryonia failed to relieve.

Three unsuccessful cases besides follow; one, a case of hysteria in a milliner, whose general health was much disordered, and the other two, cases of epilepsy.

The next case—one of anomalous periodical convulsion in a lady—is surely not of a kind to carry weight with any one but the most superficial observer, in favour of the efficacy of infinitesimals.

The next is a case of partial paraplegia, in which some improvement seemed to take place under the use of infinitesimals of silica, cocculus, and sulphur. Dr Henderson, however, flattering himself (would we could say justly) with being equally open to conviction on the side of regular medicine, as on the side of homœopathy, admits the possibility of the improvement being due to the employment of strychnia prescribed by regular practitioners, just before the infinitesimal practice was adopted.

Dr Henderson does not join the homœopathists in their extravagant belief of the curability of tubercular consumption by infinitesimals. He says, however, that so beneficial is their effect on suspicious chronic coughs, that there is some excuse for this belief; and some cases are given in illustration of the fatality of genuine phthisis, under homœopathic treatment, and of the disappearance under it of suspicious symptoms; the latter case is too easily paralleled in regard to so-called remedies of every grade of probability.

The next is a case of spasmodic asthma, in which we are told great relief was afforded; but the patient having ungratefully refused, in the presence of a regular practitioner, to acknowledge the benefit obtained, Dr H. dismissed himself. We will only remark, that every old woman who tries her hand on spasmodic asthma, comes off, for a time, with credit.

About fifty cases follow of deranged digestion, constipation, and irregular or interrupted menstruation, alleged to have been cured or relieved under the infinitesimal treatment. All of these, without exception, judging by the description given of them, we pronounce to be either cases such as continually surprise the practitioner by getting well under no treatment, or by the mere effect of regimen, and the moral influence of a medical man's attentions.

Several cases of anomalous, or, at least, of unnamed skin-diseases, follow, some of which disappeared quickly, others at the end of several months, while others were merely mitigated under the infinitesimal treatment. These cases of skin-disease, will, we think, make few converts to homœopathy. But since Dr Henderson professed to engage in an experimental inquiry into the grounds of homœopathy, surely there is one skin-disease, cases of which he could have collected by the score, which would have af-

forded an "experimentum crucis" on the comparative efficacy of infinitesimals and regular treatment. That disease is common itch, respecting the actual presence of which, no dispute could have arisen, and which regular practice, borrowing from popular usages, justly boasts, in a given number of cases, of curing within a nearly fixed average time. Surely itch can be cured speedily by infinitesimals, according to the homœopathic creed; for the newest homœopathic pathology ascribes a large proportion of obstinate chronic diseases to itch ill-cured by regular practice. Let Dr Henderson publicly cure a score of cases of well marked itch by infinitesimals of the reputed remedy, we really do not know the homœopathic specific, unless it be cowhage, the dolichos pruriens (mucuna), and that in a half or a quarter of the time usually required in regular practice with solid ounces of sulphur ointment, or the internal use of the same remedy, and he will lay a far surer foundation for homœopathy than all the cases he has here taken the pains to record.

We have come now to the 116th case; there are in all 134, but the last cases afford no new remark, being repetitions of rheumatic disease, and of general disorder of health, similar to some commented on in a previous part of this article.

We must condense into a small space, the further remarks we had proposed to offer. Dr Henderson has probably been seduced by the empty boast of homœopathy, that its conclusions rest on an induction of facts—that it has experimental evidence on its side. Let him not be imposed on by words. When a homœopathist says his doctrines rest on inductive science, he expects his victims to understand that the scheme of homœopathy is constructed according to the Baconian philosophy. Bacon is never out of their mouths—induction of facts is their watchword; yet, when we judge of their apprehension of the Baconian philosophy, by the fruits of their reasonings, we find unequivocal proof that Baconian truth with them is "post hoc, ergo propter," and that there is hardly one of the idols against which Bacon preached with so much earnestness, to which they do not hourly offer incense.

We have seen a conjurer distribute no end of nosegays out of a small hat, and out of a mote of anemone the homœopathic Quack-Salver extracts the means of curing a thousand cases of disease: he puts a speck of phosphorus into a mediterranean sea of water, and boasts that a few sips will cure a man who lies panting and black in the face with an inflammation on the lungs. Which of them is the more worthy of credit? Does any one think it necessary to believe that the conjurer's trick is any thing more than a dextrous imposition? And why, because the thing is contrary to our experience. We will not believe our senses in a case that grossly contradicts all our previous experience. On a similar ground we reject the pretensions of homœopathy. Homœopathy

and infinitesimals are identical. Whoever attempts to separate them is a schismatic from Hahnemannism—the author of a new heresy. But the cure of diseases by infinitesimals is just as incredible as the distribution of a thousand nosegays from a small hat. We, for our part, pay homage to common sense, and treat with scorn the idea that a few grains of phosphorus thrown into the Mediterranean Sea will form a solution, a few sips of which will cure an inflammation of the lungs, such as in all past times Medicine has cured by large and repeated bloodlettings.

Take a parallel case: Suppose a dyer saw a man throw a few pinches of tumeric into the Lake of Geneva, and then pretend, without end, to dye calicoes yellow in every part of the lake; would he believe there was no trick in it? Would he think it needful to make an experiment himself before he pronounced it a deception? Not, surely, unless he were "as mad as a hatter." Yet, if a homœopathist tell us, that after this small addition, the waters of the lake can now cure jaundice, we must, forsooth, believe him.

The reader, we dare say, is ready to cry out, why the Mediterranean Sea and the Lake of Geneva!—it is too gross a jest on homœopathy. By no means; we are speaking on the faith of figures, and on the authority of a distinguished practical writer on pharmacy and medical chemistry, M. Cap, whose name is a warrant that there is no jesting in the case. With one or two short extracts from his paper on Homœopathic Dilutions, in the September number of the "Journal de Pharmacie," we shall conclude this article. We premise, that the homœopathic dilutions vary from three to thirty; the first dilution being with 100 parts of water, the second with 10,000, the third with one million, and so increasing by two ciphers for each additional dilution.

"The Lake of Geneva is twenty leagues in length, of three leagues at its greatest breadth, and 300 metres (nearly 400 yards) at its greatest depth. So that, estimating the prism of water, representing the ninth dilution at five times the bulk of the Lake of Geneva, we stop far short of the truth."

"If this ninth dilution be regarded as unity, the tenth will be represented by a cubic centimetre of the active substance, divided in 500 times the bulk of the Lake of Geneva, that is to say, somewhat more than that of the Gulph of Venice. The eleventh will equal, at least, twice the bulk of the Mediterranean Sea, and the twelfth, twice the surface of the earth, covered with water to the depth of a thousand metres, (about 1300 yards.)"—Journal de Pharmacie, Septembrie 1845. P. 192.

The thirtieth dilution to be performed at once on fifteen grains of a homœopathic medicine, would require a layer of water 1300 yards in depth, extending over a space equal to the area of the solar system!!

PART III.—PERISCOPE.

METEOROLOGY.

[We continue our extracts from "A Complete Course of Meteorology, by Kaemtz."]

"*Formation of Storms.*—In no phenomenon is electricity manifested in so evident a manner as in this; but there is none in which its part is so difficult to analyse. Storm-clouds are in general at first small, and rapidly become larger, in such a manner, that they seem to grow by the precipitation of the vapours which surround them; in a short time they cover the sky, which is generally of a very pale blue. In other cases, clouds are formed on different points of the horizon, which remain insulated, or finally unite; their characteristics are, that the *cirri* of the elevated parts of the atmosphere pass to the state of thick *cirro-cumulus*, and the *cumuli* form a compact and uniform mass of *cumulo-stratus:* which is clearly to be seen, especially when a storm is formed on the horizon. The entire mass presents very remarkable oppositions of light: in certain points it is of a dark grey, and in others it presents very brilliant colours, approaching to yellow: lengthened striæ may be seen of an ashy grey. When the sun is on the point of setting, these clouds are yellowish towards the west; this colour changes to grey and blue, and it seems as though the landscape were observed through a yellow or orange-coloured glass.

"The storm is frequently formed several hours before it bursts forth. In the morning the sky is completely pure, towards noon we remark some isolated *cirri*, which give a whitish aspect to the sky; the sun is pale and dim; there are parhelia or coronæ around the sun. Later, the *cumuli* appear, and, in spreading, they are confounded with the upper stratum. A short time before the storm bursts forth we see a third stratum, which is particularly remarked in mountainous countries. However, I have also observed it in the plans of Germany, although not so well as on the Alps.[1]

"The formation of storms is preceded by a slow and continued fall of the barometer, as must be the case when the *cirri* occupy the sky. The calmness of the air and a suffocating heat, which are due to the want of evaporation on the surface of our bodies, are circumstances quite characteristic. This heat does not proportionately affect the thermometer; it is peculiar to the lower strata of the air, for it decreases rapidly with the height. Thus corresponding observations at Munich, and on some mountains in Bavaria, show that, in the afternoon of stormy days, the decrease was 1 deg. for seventy-eight metres, that is to say, twice as rapid as it is at a mean. The observations at St Gothard, compared with those in neighbouring towns, prove the same thing; the anomalies of terrestrial refraction, which we then observe, tend to the same result. In the morning, the decrease of temperature being generally very slow, there necessarily results from it in the afternoon a very intense ascending current, which carries off the vapours toward the upper regions of the atmosphere, where they rapidly condense.

"*On Lightning.*—When the instantaneous precipitation of the vapour of water dis-

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"[1] In his notice on thunder (*Annuaire du Bureau des Longitudes* for 1838), M. Arago has shown that storms may be engendered by a certain number of agglomerated or superposed clouds; but he also quotes several examples, borrowed from Marcorelle, Duhamel du Monceau, and M. Hossard, in which the lightning flash is produced from a very small insulated cloud. These facts are contrary to the opinion of Franklin, De Saussure, and Beccaria, who do not admit that a solitary cloud can be stormy. This subject, therefore, claims the attention of observers."

engages a certain quantity of electricity, then there is a spark, as we see it in our private experiments; this spark goes from one cloud to the other, or from a cloud to the earth. We may distinguish from a distance these two kinds of lightnings. If the lightning joins two clouds, whose height is not equal, then the sky is irregularly illumined. We remark a point where the light is more intense, but it is not clearly defined: on quitting this centre, the light continues to diminish in intensity. If the lightning goes from a cloud to the earth, then we observe a narrow train of dazzling light, very limited and surrounded by a less intense light. We observe this same band when it joins two clouds which are equal in height, and which the lower clouds do not hide from our sight; in this latter case we only observe one light, as in the former: shall I add, that these lightnings are identical, but that the immediate view of the former is hidden from us by the clouds which pass before them?

"If lightning were immovable, it would appear to us under the form of a globe of fire; strong lightnings often terminate thus at their anterior extremity. Lightning affects the form of a zigzag, like the spark of our machines; perhaps it has really the form of a helix, whose projection seems a broken line. The unequal conductibility of the air explains this course of lightning, and also its bifurcations. During violent storms the principal lightning emits lateral branches, or appears ramified at its origin. In a very strong storm which took place at Halle in June 1834, the lightning had the appearance of a vertebral column, with the ribs that it supports.

"In general, the colour of lightning is a dazzling white; I have, however, often seen it verge towards violet. In 1834, several inhabitants of Halle made the same remark; the lightning was very high, and consequently took place in a rarified air. Now, we know, that if we make a spark pass through the receiver of an air-pump, its light is bluer in proportion as the vacuum is complete.

"It is generally admitted, that lightning moves from above downwards; however, numerous examples exist of its having followed an opposite direction. The spark probably leaves both bodies at once, as we see it when we bring a ball near to the conductors of an electric machine. I have remarked several times, in two clouds of the same height, that two flashes of lightning have left each of them, and united in the middle of the interval which separated them.[1]

"*Thunder.*—Sooner or later after the lightning we hear the thunder; this noise results from the displacement of the air by the spark and irruption of the surrounding air, which fills up the vacuum formed, as it happens when we open a case that closes well. Thunder follows lightning, because sound, by travelling 333 metres a second, does not reach our ear so quickly as the luminous sensation.

"[1] M. Arago (*Annuaire* for 1838) distinguishes three kinds of lightnings:—

"1st, *Zigzag lightnings*, which usually describe zigzags in space; sometimes they bifurcate or trifurcate at their extremity. Some facts would even lead us to think that their division went still further. Thus, on the 3d June 1765, the thunder penetrated, at the same instant, by four different points and distant from each other, Pembroke College at Oxford; and in April 1718, twenty-four churches were struck with lightning in the neighbourhood of St. Pol-de-Léon, although only three claps of thunder were heard.

"2d, *Sheet lightnings*, which present themselves under the form of lights that illumine the outlines of the clouds; these are the more common and more frequent in a storm.

"3d, *Ball lightnings, or globes of fire.* These move slowly from the clouds to the earth, and are visible for several seconds. M. Arago cites a great many examples of them.

"M. Arago then demonstrates, that the lightnings of the first and second classes do not last for the millionth part of a second."

" The noise of thunder is not the same, according as we are more or less distant from the lightning; thus, when thunder falls on the surface of the earth, those who are near hear a dry noise of varying power, which ceases immediately. Observers placed at a greater distance hear a series of noises, which rapidly succeed each other; these last differ completely from the rollings of the thunder, especially when the explosions take place between clouds. The rolling continues for several seconds, even a minute, and does not diminish in force; on the contrary, it seems to gather force from time to time, and appears intermixed with more violent claps, like the noise produced by a mass of something falling down stairs. The weak noise at the commencement increases successively, and does not attain its greatest force till a certain time. It is difficult to explain the rolling of thunder; we can only compare it to the sound produced by a rope put in motion. Ancient philosophers only saw in it a repercussion of sound by the earth, an hypothesis which seemed so much the more probable as the rolling is much stronger in mountainous countries than in plains: however, as we hear it also on the open sea, it was thought that the clouds, reverberated the sound. Deluc objected, first, that it was improbable that clouds, that is to say fogs, whose limits are scarcely defined, can reflect sound. However, I do not regard this reflexion as quite impossible, although I explain the rolling in another manner. On comparing analogous optical phenomena, we shall find that there is reflexion as soon as the properties of refraction and dispersion of light are on the point of changing. Some facts observed by the academicians of Paris during their experiments on the velocity of sound seem favourable to this hypothesis. In fact, when there were clouds between the two stations, Montmartre and Montlhéry, then the report of a cannon imitated to a certain degree the rolling of thunder, which never took place when the sky was clear.

" The nature of lightning plays, according to Brandes, Helvig, and Raschig, an important part; for it is lightnings that are directed upwards or laterally, which are accompanied by a rolling, whilst the lightning that strikes an object is accompanied by a dry and short noise. If we admit that lightning is composed of a series of small explosions as the optical experiments of M. Dove prove, each of these explosions must produce a noise. In a flash of lightning which falls, the noise caused by the first explosion reaches the ear of the observer at the same time as the last; but, in a horizontal flash of lightning, the noises produced at a greater distance arrive later than the others, and a flash of lightning which lasts a second, but which extends over a length of perhaps 2000 metres in a straight line, will produce a noise that will last seven seconds.

" The zigzag form of lightning, on which Helvig has insisted, is not of the least importance. He has distinctly seen a flash of lightning arrive on the earth in four leaps, and he has heard four noises of different intensity. Evidently the noises must have reached the ear at different intervals; and as it is at angles that the noise is the strongest, on account of the compression of the air, he thence deduced the unequal intensity of the sound."

SURGERY.

New mode of operating for the Cure of Vesico-vaginal Fistula.

M. Jobert (de Lamballe) gives the following details of an operation, which he has performed on a woman labouring under this distressing malady, from which she suffered after difficult labour:—

" The urethra had been entirely destroyed, and the loss of substance, which formed the vesico-vaginal aperture, extended backwards along the mesial line to within about 1½ centimetres (near an inch) from the neck of the uterus. To remedy this infirmity, M. Jobert

commenced by making a transverse semicircular incision on the anterior part of the neck of the uterus, at the point where the latter joins the vagina. The dissection was made from below upwards, the cutting edge of the bistoury being directed towards the cervix uteri, so as to protect the bladder from injury. Immediately after this incision, and the dissection, which isolated the base of the bladder, approximation of the edges of the wound was effected by pressing back the anterior portion of the vagina, and drawing forwards the posterior region of the bladder. The apposition and union of the lips of the wound then became easy. Now, a thick and solid cicatrix forms the floor of the bladder—a furrow from before backwards points out the part where the union of the edges of the fistula has been made. In front of this furrow, and at the position of the normal neck of the bladder, is observed a depression formed by an opening, through which a female catheter can be passed. There exists no urethra, but the vesical orifice of new formation appears to fulfil the purposes of this passage. The urine can be retained for several hours, and the patient experiences calls to evacuate the bladder, which she effects voluntarily. When she walks, the retention of the urine is more difficult, and less complete."—Séance de l'Academie Royal des Sciences, de 14 Juillet 1845.

Excision of part of Lower Jaw.

In the Medical Times of September 13th, a case of excision of part of the lower jaw is reported, as performed by Mr Rynd, in the Meath Hospital, for the removal of a large osteo-sarcomatous tumour, involving the base and ramus of the left side of that bone.

In the performance of the operation, an instrument was made use of, which the operator thought guarded him effectually from the risk of wounding the internal maxillary artery.—" The instrument closely resembles the ordinary dressing spatula, being somewhat thicker, blunt at the edges, but with its rounded extremity made sharp enough for cutting. This Mr Rynd passed between the bone, the internal pterygoid, the internal maxillary artery, and the other structures on its inner side, loosening their connection with the ramus of the jaw, and then cut into the joint from its anterior aspect, and so completed the operation."

This instrument may have been found to effect its purpose conveniently, but we do not think it can be looked upon otherwise than as a clumsy substitute for the scalpel, in the hands of one who is accustomed to the use of the latter instrument. No great difficulty is experienced in separating with the knife the attachments of the pterygoid muscles; and, when the tendon of the temporal muscle has been detached from the coronoid process, a little twisting outwards of the head of the bone renders the completion of the operation comparatively safe and easy. The vessel in question may, we think, always be avoided with a little attention, but, if wounded, as occasionally occurs, can be easily and safely secured by ligature.

The former practice of applying a ligature to the common carotid artery, previous to the removal of the jaw, had, we imagined, been entirely abandoned; but we see in the New York Journal of Medicine for January of this year, a case reported of periosteal disease of the lower maxilla, where, although the parts removed were not even so extensive as in the case above mentioned, Dr Mott thought it expedient, as a preliminary step, to apply a ligature to the common carotid. This dangerous complication is looked upon now in this country as quite unnecessary; and numerous instances are now on record of the removal of very large tumours, involving the greater part of the maxilla (in one instance of removal of the whole lower jaw by Mr Syme), where the hemorrhage was found to be quite under the control of the assistants.

Strangulated Hernia in the Inguinal Canal.

"A man was admitted into the Westminster Hospital with symptoms of strangulated hernia. He had been ruptured six or seven years previously, but had not worn a truss for several months. There was a fulness of the upper part of the canal, and a distinct protrusion could be felt against the finger when the man coughed. Mr Phillips operated the day after his admission. The incision extended from a little above the inner ring to a little below the external ring; and certainly at that time there was nothing to make it probable that there was much intestine in the canal. When the incision had passed through the aponeurosis of the external abdominal muscle, a tumour of the size of a hen's egg became at once apparent. The sac was found perfectly flaccid, and could be drawn much below the gut; there was no fluid in it, but when the inner ring was enlarged, three or four ounces of fluid escaped from the abdomen. The intestine was dark in colour, a good deal congested, but had not lost its polish. Some symptoms of peritonitis followed, which were appropriately treated, and the man recovered."—Medical Times, Sept. 13, 1845.

Treatment of Wounds of the Windpipe.

In Mr South's translation of Chelius' System of Surgery, we find the following on the treatment of the above injury:—

"When in transverse wounds of the windpipe, the bleeding is stanched, the edges of the wound should be brought together by bending the head towards the chest, in which position it is to be retained. This is done less certainly by bandages than by Kohler's cap; the patient is at the same time to be slightly inclined to one side, so that the secretion may not readily flow into the windpipe. If the windpipe be not completely divided, the edges of the wound should not be separated far apart, and the position already mentioned is favourable to union, as the stitches excite only irritation and cough, which mostly hinder the union. Only when the windpipe is cut through, and the edges of the wound gape widely, should they be drawn together with a broad ligature fastening the external skin merely."

["Position in the treatment of wounds of the windpipe, at whatever part, is always preferable to stitches, which are really of little service, as, from the constant drag upon them from the frequent attempts made to get rid of the mucus, and of the adhesive matter which begins to be secreted a few hours after the injury, they speedily ulcerate and are of no use, but rather hurtful from their additional irritation. The only real benefit obtained from them is that of preventing the edges of the skin turning into the wound, which interferes with the union; but even in this attempt they often fail. Keeping the edges of the wound as near together as possible with strips of adhesive plaster, applied longitudinally and obliquely across the neck, and over these a roller twice or thrice around the neck, is all that is either necessary or proper.

"It must be recollected, however, that even at the very first it is not always proper to close the edges of the wound; and the surgeon must, therefore, carefully notice, in dressing the wound, how the patient can breathe when the edges are brought together and covered up. Not unfrequently, the breathing cannot be carried on by the mouth, but only by the wound; under which circumstances, if the wound be shut up, difficulty of breathing, and even suffocation may ensue, unless all the dressings be removed, and the air allowed to escape by the wound. Its complete closure, therefore, must be dependent on the freedom or difficulty of breathing by the mouth; if there be no difficulty, the wound may be carefully closed; but, if there be difficulty, a sufficient space must be left opposite the wound into the windpipe, to permit the free passage of the air.

" Another circumstance may be also noticed as to the unneedfulness of stitches; that is, that these wounds rarely, if ever, unite by adhesion, but almost invariably by granulations, even under the most favourable circumstances. But the use of stitches after the establishment of the granulating process, as proposed by Friche, is quite superfluous.

" It is certainly proper at first to attempt union by adhesion, and sometimes the angles of the external wound will effect it; but generally the parts have been so much handled in search of bleeding vessels, as well as irritated by their continual separation by the air and mucus forced through the wound, that the greater part of the surface becomes sloughy. When this happens, it is better to remove all the dressings, except two or three strips of plaster for support, and to surround the neck with a light bread poultice in a muslin bag, so as to prevent any of the crumbs dropping into the air-tube." —J. F. S.]

We think the dangers of closing these wounds is too lightly dwelt upon by the translator; and one of the principal risks thereby produced is lost sight of, the flowing of blood into the trachea, which, in such cases, has so often been found to give rise to sudden and fatal attacks of asphyxia.

The wound, as he remarks, never unites by the first intention, with the exception of a small portion at the angles, and the approximation of the edges is consequently needless. Even should the windpipe remain untouched by the cutting instrument, the wound should not be carefully closed, as alarming consequences are apt to follow from the effusion of blood, which takes place for some time after the infliction of the wound, causing pressure on the trachea, and giving rise to severe and sudden attacks of suffocation. A case illustrative of this is mentioned by Mr Liston, in his Operative Surgery; in which work, the following remarks on the above subject are contained :—

" The immediate apposition of the divided surfaces is attended with great danger; the blood, as it flows from the vessels, and encouraged by the confinement of soft coagulum, passes by suction into the windpipe; some of it may be ejected, but the lower part of the tube is not very irritable, and the power of coughing is diminished, so that great part trickles down and fills gradually the extreme branches of the tubes. The breathing is quickened and slightly embarrassed, yet every thing may be supposed to promise well; the patient, however, in making some slight exertion, without warning to the inexperienced, falls suddenly into a state of asphyxia, and is lost. The same thing happens at a later period, from the secretion of serum, or accumulation of mucosity. The tubes and cells are found loaded, and the lung condensed."

We have observed considerable advantage derived from the use of sutures, applied at a later period, during the granulating process, in obviating the turning in of the edges of the wound, as proposed by Friche.

Table showing the mortality following the operation of tying the subclavian artery.

The following interesting summary of the results of this operation is given by G. W. Norris, M.D., one of the surgeons of the Pennsylvania Hospital.

The particulars of each case, and the names of the operators, are drawn up in a tabular form, of which the following is a digest :—

" The table includes sixty-nine cases, nearly all, I think, that have been recorded, and embraces those in which the ligature was applied below the clavicle, as well as those in which the artery was exposed within the scaleni muscles, either for the arrest of hemorrhage, or for the cure of disease.

" *Mortality.*—Of the sixty-nine cases included in the table, thirty-six recovered, and thirty-three died.

"*Sex.*—Of sixty-six cases, in which the sex is noted, fifty-nine were males, and seven females. Of the seven females, six laboured under aneurism, and one presented a tumour around the head of the humerus, which was mistaken for it.

Right or left side.—Of fifty-four cases in which the affected side is mentioned, thirty-one were on the right, and twenty-three on the left side.

"*Age.*—This is given in fifty-nine of the cases, of which number there were

Under	20			1
Between	20	and	30	10
„	30	„	40	22
„	40	„	50	11
„	50	„	60	6
„	60	„	70	8
Above	70			1

"*Disease or injury.*—Of the sixty-nine cases of operations mentioned in the table, fifty-six were done for the cure of aneurism, nine in consequence of wounds or secondary hemorrhages, one was made necessary in consequence of rupture of the axillary in an attempt to reduce an old luxation, and three were done for diseases supposed to be aneurismal.

"*Period the ligature separated.*—In 35 of the cases in which it has been noted, the ligature came away; in 1, on the 11th day; in 6, on the 12th; in 4, on the 13th; in 1, on the 14th; in 3, on the 15th; in 4, on the 16th; in 3, on the 17th; in 2, on the 18th; in 1, on the 19th; in 1, on the 20th; in 1, on the 21st; in 2, on the 22d; in 1, on the 27th; in 2, on the 31st; in 1, on the 43d; in 1, on the 47th; in 1, on the 85th.

"*Return of pulsation in the tumour after the application of the ligature.*—In three of the sixty-nine cases, pulsation returned in the aneurismal tumour after the operation. In one of these it was discovered thirty hours after the operation, and the patient died after repeated hemorrhages. In the second case, it was noticed the day after the operation, and disappeared in two days, the patient recovering; and in the third instance, it was observed two days after the operation, and at the end of forty days was still strong, though ultimately the disease was cured.

"*Hemorrhage after the operation.*—With three exceptions, all the cases, in which secondary hemorrhage followed the operation, proved fatal. In two of these it occurred before the separation of the ligature, on the sixteenth and nineteenth days; and, in the third case, it came on the fourth and fifth days after the ligature had been cut off.

"*Bursting of the tumour.*—In six cases, the tumour is stated to have suppurated, and either to have been opened or to have burst externally after the operation. Of these, four were cured, and two died. In two of them the suppuration did not occur till about the seventh week after the operation, and both of these did well.

"In two of the cases in the table, *the contents of the tumour were discharged through the lungs*, this termination in one case being followed by restoration to health, and in the other by death.

"*Causes of death.*—Of the sixty-nine cases, thirty-three, or nearly one-half, died. Of these, two died from sloughing of the tumour; nine, from hemorrhage coming on at various periods between the fourth and thirty-third days; five, from inflammation within the chest; six, from mortification of the extremity; one, from effusion on the brain; one, from exhaustion; one, from inflammation; three, from suppuration of the tumour; and, in five cases, the cause of death is not given.

"*Mistakes in diagnosis.*—In two of the cases contained in the table, the aneurisms had been mistaken for abscesses, and punctured previous to the operation. In three other

cases, malignant tumours about the shoulder were looked upon as aneurisms. The first of these (by Mr Baker) was that of a female, aged 18, operated upon in the Newcastle Infirmary, England. It proved to be a fungus hæmatodes. It became less in size after ligature of the vessel, but speedily assumed a serious aspect, and soon terminated her existence. The artery was found obliterated for at least one inch. In a case operated upon by Mr Nicol, the true nature of the affection was a medullary sarcoma of the upper part of the humerus. In the third of these cases, (operated upon by Mr Earle,) the artery was taken up in April 1835, and the aneurism supposed to be cured. On the 2d of July in the same year, the patient died of dropsy; and, on dissection, it became evident that no aneurism had ever existed. The tumour was of a dense structure, and lying over the artery.

"*Difficulties of the operation.*—These need not be here dwelt upon: every practical surgeon must be aware that at times they must be very great. Our only object at present is to call attention to the fact, that some of the most celebrated operators have failed in their efforts to pass a ligature round the subclavian. In a case at Guy's Hospital, Sir Astley Cooper attempted to tie the vessel above the clavicle. The aneurism was very large, and the clavicle thrust upwards by the tumour, so as to make it impossible to pass a ligature under the artery, without incurring the risk of including some of the nerves of the axillary plexus. The attempt was therefore abandoned. In a case of large aneurism of the right side, of four year's standing, which occurred to M. Dupuytren, in 1819, he succeeded, as he believed, after one hour and forty-eight minutes, in placing a ligature around the subclavian from above the clavicle. Pulsation in the tumour continued after the operation, which M. Dupuytren stated to have been the most tedious, difficult, and painful, that he had ever attempted; and, after death, which occurred on the ninth day, the ligature was found knotted loosely on that portion of the fourth cervical, which afterwards becomes the external-cutaneous or musculo-cutaneous nerve, and the artery was not included in the ligature.

"In the case of a soldier, aged 27, with hemorrhage from the arm-pit, resulting from a wound received in a duel, Professor Lallemand attempted, without success, to place a ligature upon the subclavian from above the clavicle. The hemorrhage was arrested by ligature of the wounded vessel, and he lived till the following day. In a case of aneurism, which occurred to Mr Cusack of Dublin, he attempted to place a ligature on the subclavian in its third stage, and in endeavouring to pass it, the aneurism was penetrated. An alarming gush of blood followed, which was arrested by plugging up the wound. The man survived ten days, dying of hemorrhage.

"In one case (operated on by Mr Travers), the sac was accidently punctured by the needle in the attempt to pass it beneath the vessel, and gave rise to 'terrific hemorrhage.' Even after the ligature was secured, the bleeding was not checked, till a sponge tent in the wound, and pressure were applied.

"In a case (operated upon by Mr Liston, which, by the way, was the first successful operation for axillary aneurism in Great Britain), the inferior nervous band, passing out to form the axillary plexus, was surrounded by the ligature instead of the artery: the mistake, however, was soon discovered; and the ligature, still retained, was used to pull the nerve a little upwards from its situation, so as to admit of the more ready exposure and deligation of the artery.

"In cases of great difficulty of passing the ligature around the artery, it has been proposed by Mr Hargrave and M. Cruiveilhier, to saw through or excise a portion of the clavicle—a procedure, we should suppose, which would greatly tend to increase the danger of the operation."—Amer. Jour. of Med. Sciences. July 1845.

MATERIA MEDICA.

Arsenic in Intermittent Fevers.

At the sitting of the French Royal Academy of Medicine (26th August 1845), a letter was read from M. Boudin, chief medical officer of the Military Hospital of Versailles, on the effects of arsenic in intermittent fevers. We extract from this letter a few of the results of M. Boudin's experience :—

1. After trying arsenical preparations on himself very freely, in the therapeutical dose, and exhibiting it to 2947 patients, he cannot impute a single inconvenience to the remedy.

2. By far the largest proportion of his patients laboured under intermittent or remittent fever, and a great many of them had previously used quinine without effect.

3. There was no selection of the cases subjected to treatment by arsenic, nor any exception made on account of age or season, unless that he found a somewhat larger quantity to be necessary in the summer season.

4. This treatment he has pursued in various parts of France on the great scale, and on patients brought from marshy districts, as from Senegal, Algeria, Syria, Italy, Corsica, the Delta of the Rhone, and from the citadel of Strasbourg; and he has accounts of the same treatment having been practised on the great scale by many medical men in many parts, both of the old and of the new world.

5. The duration of the treatment was in general short, and the number of relapses much smaller than where quinine was employed—which difference he ascribes to his habit of keeping up small doses of arsenious acid for some days after the paroxysms had ceased.

6. M. Boudin prefers the arsenious acid to all the arsenites; he dissolves one grain of arsenious acid (white arsenic) in about 16 ounces of water (5 centigrammes in 500 grammes), one-fifth part of which, or the fifth part of a grain, is the medium dose, *i. e.* about three ounces of the above solution; his largest dose is three-fifths of a grain.

7. In obstinate fevers, the arsenious acid is given twice on the day of the expected paroxysm, at an interval of two hours, and in such a manner that the last dose shall be administered three or four hours before the attack.—Bulletin de l'Academie Royale de Medecine, September 1845.

Effect of Savine combined with Alum in Venereal Excrescences.

M. Vidal insists much on the excellent effects of savine combined with alum in venereal excrescences. This application consists of two parts of burnt alum, and one part of powdered savine.—Journal de Pharmacie et de Chemie, September 1845.

PATHOLOGY AND PRACTICE OF PHYSIC.

Calculus in the Appendix Vermiformis Cæci.

(From Provincial Medical Journal, Oct. 1, 1845.)

"Sir,—Agreeing, as I do, in the opinion that it behoves the members of our association to support the scientific and general character of our own Journal, by any contributions, however humble, in the form of papers or cases, I venture to send you, for publication, the following case, briefly and hastily drawn up, but certainly interesting and very rare :—

" Late in the evening of the 13th instant, I was sent for to a young gentleman not quite twelve years of age, who had been for four days previously attended by a practioner residing nearer to him than myself. The parents attributed the cause of his illness to his having eaten, on the 9th instant, a quantity of blackberries, which they believed to exceed two pints, and there seems no reason to doubt the fact. I found him in the last stage of acute peritonitis, the whole abdomen greatly swollen, not exquisitely tender on pressure—indeed, but little tenderness was now evinced save in the right hypochondriac region.

" Calomel had been given at frequent intervals, leeches applied, and a blister was now upon the hypogastrium, though not rising satisfactorily. The vital powers were beginning to fail, the pulse between 130 and 140, and the extremities getting chilly, although there was a warm perspiration on the face; the tongue was moist, and rather white (as if mercurial.) The patient was perfectly sensible, and very calm and tranquil. He had complained often of nausea and sickness, but not rejected (as was stated to me), food or medicine.

" On the first day after the blackberries were eaten, he vomited some of them, and diarrhœa was most troublesome, the bowels being purged nearly every quarter of an hour; but since the morning of the 11th, no action could be procured from them, despite of the several remedies which had been prescribed and taken very frequently. Enemata had also been administered in vain. Seeing that there was so little to be done, or rather so little time to do what was proper, I prescribed saline aperients, in the effervescing form, every two hours, alternately with a pill of compound extract of colocynth and croton oil; the blister to be kept on; chicken broth to be given at intervals in small quantities.

" On the 14th, at ten o'clock, I was less surprised than grieved to find the patient more depressed, and that the medicines and broth had almost instantly been rejected from the stomach. The pulse was barely distinguishable, and the surface much lower in temperature, notwithstanding the constant efforts to preserve the warmth of the whole body. A warm bath was used, and ammonia prescribed; but the patient little fellow quickly sank, and died at one, apparently without pain.

" *Examination twenty hours after death.*—Marks of decomposition going forward rapidly, were visible externally, particularly upon the abdomen. Within the latter, a vast quantity of turbid serum was effused, and the entire reflections of the peritoneum exhibited the most intense vascularity. The appendix vermiformis of the cæcum lay rather more anteriorly than natural, and was somewhat directed to the left side. It was most conspicuous from the state of dark ulceration which it was in, and from forming the centre as it were of the inflammation existing during life. On more closely examining it, a perforation, surrounded by purulent matter, was found near to its blind extremity, large enough for the passage of a pea; and just above this a calculus, the size of a horse-bean, soft and pultaceous externally. The several convolutions of intestine adjacent were glued together by organized lymph, firmly adherent, and of the thickness of chamois leather, and were of a dark black colour. The cæcum contained some healthy feculent matter in a liquid state, and the mucous membrane internally was unaffected. No traces of the blackberries were met with.

" In a few minutes after exposure to the air, the concretion became harder, and rattled when shaken in the saucer containing it. My esteemed friend, Dr Prout, has kindly informed me, that 'it contains a small portion of a crystallizable fatty matter, which is probably cholesterine. The bulk consists of inspissated mucus, with a considerable proportion of phosphate of lime, and some carbonate of lime, the usual composition of all such deposits.'

" Just twenty years ago, I witnessed a case almost precisely similar, in the practice

of my friend and valued preceptor, Mr Wickham of Winchester. The subject was a young collegian, and the case is reported by Mr Wickham, in one of the numbers of the London Medical and Physical Journal, for 1826. Dr Prout tells me that a distinguished friend of his, the late Under Secretary for Ireland, died of a similar cause, after a short but very severe illness. He has never himself met with an instance.

"By some writers on calculous formations, allusion is made to the various organs and cavities in which these have been found, and I think the appendix vermiformis has been specifically mentioned, but I cannot at this moment give the references. There can be very little doubt that the concretion forms in the intestines, enters the appendix accidentally, wherein it becomes impacted, producing such fearful effects as an extraneous body, whereas, if it passed along the colon, it would be wholly unperceived.

"It may be perhaps as well to add, that I was facilitated in obtaining a *post-mortem* examination by the objection of the registrar to receive the cause of death from any other person than the medical attendant, under the recent regulation. The friends represented to him that the patient had been poisoned by blackberries, or something to this effect, and they were told by the registrar, that if such were the case, a coroner's inquest must be held. This at once decided the question in their minds, and they forthwith applied to me to open the body. I need scarcely remark on the extreme importance necessary, on the part of the medical man, not only in giving a verbal opinion, but in signing a certificate of the cause of death in such a case. The *ingesta* into the stomach might have been here set down as the cause, had not the contrary been proved by dissection.—I remain, Sir, your obedient humble servant,

"G. Bury."

"Whetstone, September 19, 1845."

Extraction of a Tooth: entire unconsciousness of Pain.

(From Provincial Med. Jour., Oct. 1, 1845.)

"On the 25th of August, A. B., a cook in a gentleman's family, came to me to have a tooth extracted. On looking at it, I found it not much diseased, but the gum inflamed; I therefore recommended lancing the gum, hoping that would relieve it. This I did freely in all directions around the tooth, it standing by itself. On using warm water, to encourage bleeding, and cleanse the mouth, she said it made it ache more, and thought she had better have it out. Accordingly I proceeded with the forceps to extract (it was an upper bicuspid.) At first she just placed her hand on mine, when I requested her to hold on the chair: she put down her hands, and I removed the tooth, not without considerable lateral movement, and a rather hard pull.

"I was about to give her water to wash her mouth with, when I found her head fall toward my shoulder, her hands hanging by her side, and her mouth open, taking no notice when I spoke; in this state she remained a sensible time, from one to two minutes perhaps, and I was about to alter her position, she quietly opened her eyes, with a little kind of winking, very much as I have seen them, when the hand of a mesmeriser was rapidly passed across (to undo the spell, I believe.) After she had cleansed her mouth, I asked her if it hurt as much as she expected, and she said, 'I knew nothing about it.' Let it be observed, that this was altogether different from those cases which I have several times witnessed, where the patient screams out with pain, and *faints away*. Now, I certainly did not think of *magnetizing* the patient, though, if she had heard something about it, and I had tried, perhaps I might, unpractised as I am in the art, (should I say *science*?) I feel quite persuaded the patient knew nothing of animal magnetism, and equally sure that it did not for a moment occur to me, till she said she knew not when the tooth came out.

" Mr Newnham, in answer to a correspondent in the Journal (March 12th), says, 'I never before witnessed an operation performed where there was *entire unconsciousness* of pain;' nor did I, till the case I have here narrated presented itself.

" I submit the case as one *not* 'borne with stoical apathy, heroic fortitude, jocular levity of expression, or apparent indifference to suffering,' but one in which there was *entire unconsciousness* of pain; and that, too, without any magnetizing process having been *consciously* gone through.—I am, Sir, yours faithfully,

" Richard Turner, M.R.C.S., &c."

" Tonbridge Wells, Sept. 19, 1845."

Analysis of the Fluid of Hydrocephalus, evacuated by puncture.

When first evacuated, the fluid was clear and colourless, but after standing for twenty-four hours it assumed a yellowish tint, though without becoming turbid; its sp. gr. at 66 deg. F. was 1010; its reaction acid; boiled either alone or with dilute nitric acid it did not become turbid. Upon evaporating a portion of it to dryness, and treating the solid residue with nitric acid, a coagulum was formed, which was readily soluble in caustic potash; boiling ether extracted nothing from this solid residue. Upon adding nitrate of silver to a portion of the fluid acidulated with nitric acid, a copious yellowish white precipitate was formed, becoming black on exposure to light: upon neutralizing the filtered acidulated fluid with ammonia, a yellow precipitate was produced, soluble in excess of the ammonia. Chloride of platinum caused in it a yellow crystalline deposit. A portion of the dry residue (left after evaporating the evacuated fluid), was mixed with hydrochloric acid and heated; upon cooling, numerous cubic crystals formed in the fluid.

It would appear, therefore, from the above analysis, that the evacuated fluid contained hydrochloric and phosphoric acids, potash, soda, and a small quantity of some substance, possibly a compound of protein, (the osmazome of chemists?); there were no traces of any salts of lime, magnesia, or ammonia; the salts of barytes did not indicate the presence of sulphuric acid. The conclusion drawn from the above results was to the effect that this fluid was not a product of inflammation, but simply the ordinary cerebro-spinal fluid, enormously increased in quantity.*—Spengler, in Oester. Medicin. Wochenschrift, Juli 1845.

Effects of Tobacco upon American Lawyers.

Dr Chapman states that he was consulted by a member of Congress, in the meridian of life, and of a stout frame. " He told me that from having been one of the most healthy and fearless of men, he had become 'sick all over, and as timid as a girl.' He could not even present a petition to Congress, much less say a word concerning it; though he had long been a *practising lawyer*, and had served much in legislative bodies! By any ordinary noise, he was startled or thrown into tremulousness, and afraid to be alone at night. His appetite and digestion were gone; he had painful sensations at the pit of his stomach, and unrelenting constipated bowels. During the narrative of his sufferings, his aspect approached the haggard wildness of mental distemperature. On inquiry, I found that his consumption of tobacco was almost incredible, by chewing,

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[* The above analysis corresponds very closely with one made by M. Barruel, (Journal de Physiol. tom. i. p. 96), of fluid drawn from a hydrocephalic head; not a trace of any inflammatory product, beyond a minute quantity of albuminous matter (in the ratio of 1 to 1000) being discoverable in it.]

snuffing, and smoking. Being satisfied that all his misery arose from this poisonous weed, its use was discontinued, and in a few weeks he entirely recovered.—Diseases of the Viscera.—Lond. Med. Gaz., Oct. 3, 1845.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

A new sign of Pregnancy. By Dr Pollender.

The author states, that during a practice of 18 years, he has observed a peculiar smell of the vaginal mucus to be a constant and unerring sign of pregnancy. The smell is musty, something like that of spermatic fluid or liquor amnii; and, after a vaginal examination, it cannot be mistaken for any other odour. In a great many cases of pregnancy, during the first, second, and third months, when the condition of the patient was doubtful, owing to the earliness of the period, the author never, in a single instance, failed to discover the true state of the party by means of this sign. According to his latest observations, this odour is perceptible as early as the eighth day of gestation.—*Med. Correspondenzblatt Rhein. and Westf äl. Aerzte*, 1845. Bd. iv., No. 1.

A Mole remaining for Fourteen Months in the Uterus.

In the *Med. Zeitehr. für Heilkand in Preussen*, is recorded the case of a patient who retained a mole in the uterus for the space of fourteen months. The body weighed one pound, and measured from five to six inches in length. The symptoms attending its presence in the organ were more those of polypus uteri than of mole pregnancy, but the body had no pedicle, and the author believed that he could distinguish in it the degenerated remains of an ovum.

Influenee of the Imagination of the Parent on the Foetus.

In the same journal, as the foregoing case is related, an instance of a female who produced a child destitute of fingers and toes, with the exception of one toe upon one of its feet. During her pregnancy, the mother received a fright from a man who had no fingers; for some days thereafter she suffered from fever and other ailments; and, further, she was not altogether free from the belief that her child would be born without fingers or toes.

Case of Delivery during Sleep.

M. Schultze was called on the 25th of May 1844, to attend the wife of an artizan, who had reached the full term of her fourth pregnancy. He found her lying in a state of profound somnolency, so that it was quite impossible to rouse her, either by violently shaking her, or by applying to her nostrils the most powerful stimulants, such as ammonia and ether. On the third day of this unnatural sleep, the woman, without awakening, was delivered of a healthy, living, and well-formed male child. On visiting the female the following day, M. S. found that she had not long spontaneously awakened from her sleep: and as she had no recollection of her delivery, she was somewhat astonished to find the child had been born without her having been aware of it.—*Annales d'Hygi ne, Jan.* 1845.

Twins at different Stages of Development, born at the same time.

In the July No. for 1845, of the American Journal of Medical Sciences, Dr H. N. Loomis mentions two cases of the above nature. In the first instance, there were born at the same time a full-sized healthy female child and a male foetus, measuring $4\frac{1}{2}$ inches in diameter. In the second case, there were born two males, one at the full time, the other about the fifth month.

Case of Procidentia Uteri during Labour, in which artificial means were necessary to effect delivery, with subsequent replacement of the uterus and complete recovery.

" In April 1829, a negro woman belonging to Captain George Rentz, of M'Intosh county, was taken in labour. She was about 40 years of age, of good constitution, mother of several children, and so far as is known, not subject to any previous prolapsus or other disease of the womb. Something unusual and anomalous having occurred during the progress of the labour, Dr Harris was sent for. He found her, on his arrival, in the following condition :—She was lying on her back, with the whole gravid uterus between her thighs, retained only by the ligaments, which were much stretched but not ruptured, and discharging from its external surface a serous or sanious fluid. The woman had been in this condition for about 24 hours. She had had no pain since the descent of the uterus, and was complaining of none at this time. The liquor amnii had been discharged. After a careful examination, no motion or other sign of life in the foetus could be perceived. The uterus appeared to be in a perfectly quiescent state, without any disposition to contract. The os tincæ was barely dilated sufficiently to allow the introduction of two fingers. Finding it absolutely necessary to relieve her as soon as possible, the Doctor proceeded to deliver her by artificial means—he opened the head of the child with a suitable instrument, and then, having an assistant to hold and support the uterus, he introduced his hand, and by careful traction, succeeded in removing its contents. There was very little pain during his manipulations. He now returned the womb, which had scarcely contracted at all, and advising the recumbent position left her. She had a very good ' getting up,' and two years ago, the Doctor learned, was in good health."

Ipecacuanha in Emetic Doses, a powerful restorative in some Cases of Exhaustion and Sinking. By Mr Higginbottom.

In the year 1814, I was first led to see the extraordinary beneficial effects of ipecacuanha, as an emetic, in a female who was in a sinking state in the last stage of cholera.

" The next case which attracted my particular observation, was the utility of ipecacuanha in severe uterine hemorrhage. I attended the patient three times in labour, in the years 1821, 1823, and 1826, and each time with most severe flooding immediately after the separation of the placenta. I employed the usual remedies, such as the sudden application of cold water to the abdomen, pressure to cause contraction of the uterus, with the administration of opiates, wine and brandy, which were at that time common remedies. These were cases of great anxiety, and I had to remain with my patient several hours before I thought it was safe to leave her.

" In her third confinement, I was afraid she would die. After having used all my remedies, and having given her half a pint of brandy, and a pint of port wine, which was of no avail, it occurred to me, that in the former cases in which I had attended her, when I had used the means to check the hemorrhage, that there was no amendment until she had ejected the contents of the stomach. I was then most anxious that vomiting should take place, in hope of relief, as she was rapidly sinking. I thought that as vomiting had been so beneficial to her before, I was in this case justified in producing it by giving an emetic. I directly gave her a drachm of ipecacuanha; a full vomiting succeeded, and a large quantity of fluid was ejected. I was much struck with an expression of my patient, which I had several times heard before in similar cases, after vomiting. After a deep sigh, she said, ' O ! I'm better; I'm better now.' The hemorrhage ceased directly, and did not return; the symptoms of sinking abated, and the

patient appeared in her natural state of body, but very feeble. A little plain gruel was all the nutriment given her, and she recovered gradually from her weak state. I attended the same patient three times afterwards, in the years 1827, 1829, and 1831; and what is very satisfactory in favour of the secale cornutum, which was about that time becoming more used in this locality, I gave, in every case, half a drachm of the powder before the birth of the child, a second such dose after the birth, before the separation of placenta. This remedy had the desired effect of preventing hemorrhage, so that I had no further need of the ipecacuanha, or indeed, of any other remedy.

"Several years ago, I had a patient on whom the secale cornutum had no effect in preventing hemorrhage, and I gave the ipecacuanha with a favourable result.

"For nearly twenty years, I had lost all confidence in the diffusible stimulants, such as wine, brandy, &c., in uterine hemorrhage, from a conviction that they increase the arterial circulation, and, consequently, the hemorrhage, and I find that opinion corroborated by the writings of Drs Clutterbuck and Ramsbotham.

"The utility of ipecacuanha in uterine hemorrhage has been proved by Dr Osburn of Dublin, but I am not aware that he has recommended it in extreme cases of exhaustion or sinking."—British Amer. Jour. of Med. and Phys. Science, Aug. 1845.

FORENSIC MEDICINE AND MEDICAL POLICE.

On a Source of Error in supposed Infanticide. By Dr Sewell.

Mrs B., ætat. 30, married, and pregnant with her first child, was seized during the night with labour pains. Being a refugee from the late fire (in Quebec), she occupied part of a garret, in which two or three other families and some young men were sleeping. Feeling a delicacy at being confined under such circumstances, she suppressed her cries till daylight, when she descended into a lower apartment, in which resided a woman who had been recently confined, to whom she detailed her feelings, requesting, at the same time, that some warm water might be given her to sit over to relieve what she described as a great pressure at the lower part of the bowels. She had scarcely seated herself upon the edge of a rather high chair, when a severe pain seized her, and, before any assistance could be afforded, (though one or two women were in the room,) the child was forcibly expelled, and fell head foremost on the floor, being killed on the spot. I should have mentioned, that I was sent for immediately after Mrs B. had descended into the lower chamber, but did not arrive till about twenty minutes after the delivery. The child, which was a remarkably fine one, was perfectly dead, and still attached by the cord to the placenta, which came away shortly after the infant. In the above case, not the slightest suspicion of criminality can attach to the mother; but suppose the delivery to have taken place in private, though there would be ground for a medico-legal investigation, still, with the fact brought before them by the coroner, that such cases as that now reported do not unfrequently occur, a jury should be extremely cautious how they return a verdict of wilful murder against the unfortunate mother.—The British American Journal, No. 5, p. 117, vol. i. 1845.

[The concluding remarks are made with reference to the case of Ann Pendry, *vid.* Lancet, June 21, 1845.]

Vinegar in Poisoning with Opium.

The same Journal (the British American) contains some remarks on a case of poisoning with tinct. opii, where vinegar was given as an antidote in two-ounce doses every half hour. Under this treatment, the *speechlessness* of the patient increased, and the drowsiness augmented, corroborative of the now universally received opinion, "that,"

(in the words of Professor Christison,) "in poisoning with metallic compounds, vegetable narcotics, and very many vegetable irritants, where it was once almost invariably used, it does harm, for the most part, instead of good, because it aids the solution of the active part of the poison."

Remarkable Suicide.

A female, æt. 50, cut her throat with a razor. While attempts were made to stanch the wound, she drew something from her pocket to which she endeavoured to attract attention by signs. When taken out of her hands, it was found to be a considerable portion of the walls of the respiratory tube. It consisted of the cricoid cartilage entire, of the left wing of the thyroid, of the right arytenoid, of a part of the upper rings of the trachea, and some fibres of the muscles of the larynx. The unfortunate female stated, by signs, that the mutilation was committed by herself, and that she had made five several attempts before she completed it. She survived thirty-four hours. It is observed, that if this female had died, without being able to make a confession, the circumstances would unavoidably have induced a strong suspicion of homicide. How few would have credited the assertion, had it been made by an accused party, that she had herself completed the horrid dissection, and then removed the parts to her pocket.—American Journal, quoted from the Gazette Med. de Paris.

Part IV.—MEDICAL MEMORANDA.

Case of Poisoning with Arsenic. By Mr Allison, of East Retford.

In a late number of the Provincial Medical and Surgical Journal, Mr Allison relates a case of a girl who swallowed two large teaspoonfuls of arsenic. Mr A. arrived at the house about half an hour after the second teaspoonful had been taken, and more than an hour and a half after the swallowing of the first; he found the patient vomiting, and tolerably free from pain, "but complaining of a sensatiou of burning heat in the throat and stomach, with a feeble pulse and a cold skin." About ten drachms of hydrated peroxide of iron, divided into three doses, were given together, with a considerable quantity of thin gruel, containing magnesia and some castor-oil. Copious vomiting took place several times. On the second day, the girl complained only of slight pains, and on the eight day, we may regard her as quite recovered. Mr A. seems to have had some doubt whether the girl actually took the arsenic. No one saw her take it. She said that she had, and her friends believed she had. She was subjected to a good deal of cross-examination in order to ascertain the fact. It would have been just as easily, and much more satisfactorily answered, by an analysis of the matter vomited. We consider the circumstances of this not inconsistent with the fact of her having taken the poison. An empty paper, labelled "arsenic poison," was found. She was only thirteen years of age, and not likely to be able to feign the symptoms of arsenical poisoning. The reason for her attempt at suicide, was being reproved for her misconduct with a young man, by whom she had become pregnant.

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Part I.—ORIGINAL ARTICLES.

On the Rules applicable to the employment of Venesection and of Opium in Obstetric Practice. By John Bremner, Surgeon, Marnoch. Communicated by Dr Thatcher.

In a succession of papers on the subject, it is the intention of the writer to lay before the profession the results of his experience during a lengthened practice, chiefly respecting the efficacy of venesection and opium, exhibited agreeably to a systematic plan in obstetric practice generally, but more especially in that description of cases which constitute the class of labours usually termed difficult or laborious.

In order to accomplish his design the more effectually, he considers it necessary to present a statement of the opinions and modes of practice recommended and sanctioned by the most intelligent writers on midwifery at the present day, as well as those who have flourished, since it began to attain the elevated position it now holds amongst the sciences; and also an abridged history and leading diagnostic symptoms of what he believes to be the genuine nature of the various affections by which the progress of parturition is compelled frequently to deviate so far from what is regarded as its more natural course and limits.

He, however, feels it incumbent on him to state, that, restricted as he is, to the well occupied pages of a monthly journal, he must inevitably pass over many circumstances, which, he imagines, might have contributed somewhat to the common stock of knowledge, and could not have failed to have rendered his intended illustrations much more complete.

When we take into consideration, that the figure of woman is the erect, and consequently, that there is demanded a more exact scale of admeasurement betwixt the proportions of the foetus and those of the pelvis through which it has to pass, together with

greater complication of structure, and more nice adjustment of the sexual organs in general, than is found to take place in most of the superior orders of the lower tribes, our wonder need not be excited, that, apart from the anathema which was at first more especially denounced against her regarding the important part she was destined to act in the propagation of the species, the obstructions in the way of parturition, should frequently be such, both in number and magnitude, as materially to augment her sufferings, and render her situation, upon the whole, much more critical and hazardous than theirs.

In addition to these, however, the parturient female often becomes the subject of a source of delay to the free transit of her offspring, by reason of an excited state of the sanguiferous system to which she seems liable, more particularly towards the latter months of pregnancy. Should this be discovered, and the proper remedies resorted to, so long as the system at large only is affected, its effect in retarding the progress of child-birth, if at all perceptible, will be extremely small.

Should it, however, have existed in any considerable degree for a period of some duration, without these measures having been adopted previous to confinement, the chances are ten to one, but that from being at first restricted to the circulating fluid, it has ere that crisis, settled down upon some important organ, the consequences of which will, with few exceptions, be such as greatly to increase her bill of "pains and penalties," and protract her delivery, not unfrequently, to a fearful length, not to speak of the imminent danger to which the lives of mother and child are so signally exposed, and, in but too many instances, become either singly or combined, the untimely victims.

Concerning venesection, as a remedy at once fully adapted to remove the state of excitement now spoken of, when the existence of such has been satisfactorily ascertained, along with many of its injurious tendencies, it is considered unnecessary to enter upon any discussion, seeing it differs nothing from a similar affection of the system, under circumstances entirely the reverse, and that however much it be calmed and alleviated by other means, we will seldom, if ever, be enabled to subdue it without the aid of the lancet.

Before proceeding further in the inquiry, which is designed to be made respecting the virtues of venesection in obstetric practice, it is here deemed expedient to mention, that the principal topics selected for investigation are, 1st, The circumstances requiring it. 2d, The extent to which it is to be carried, including certain remarks respecting its performance; and, 3dly, The period at which the operation may be had recourse to, in order to derive from it the most eminent services to the parturient female. An arrangement nearly similar will apply to the exhibition of opium, the properties of which it is purposed to discuss in succession,

when a humble attempt will be made to illustrate and confirm the utility of the respective modes of practice in each of the several cases which are found to retard the natural course of labour, where their employment has been suggested or confirmed by experience, by an appeal to cases as carefully selected and condensed as possible.

Like most others, this invaluable remedy had, no doubt, at the period when medical science was in a low and rude condition, been had recourse to with very little discrimination, and consequently with few beneficial results in the practice of midwifery.

In vol. i. of Dr Smellie's works, at p. 131, are the following directions :—" If the patient be of a plethoric habit, with quick strong pulse, the contrary method (to that of prescribing stimulants) is to be used, such as venesection," &c. And, upon consulting a case to which he refers, at p. 199, vol. ii., he writes as follows :—" She was a woman turned of forty, in labour with her first child, of a strong and healthy constitution, though of a thin habit; her pulse was quick, full, and hard—her skin hot and dry," &c. Under these circumstances, she was blooded to twelve ounces.

Dr Denman, in his Dissertation on Difficult Labour, says,—" When there is any unusual pain in the region of the uterus, greater than or different from that which may be considered as one of the common effects of pregnancy, or labour, there is generally an increase of that feverish disposition which, in a certain degree, is perhaps natural to all women with child; it will then be necessary to take away small quantities of blood," &c. At p. 25, he again remarks, " It does not seem necessary to bleed every patient on the accession of labour. For some, it must be highly improper. But when the feverish symptoms become violent, it is, I believe, universally proper, the quantity of blood being suited to the degree of fever and constitution of the patient."

At p. 180, of the late Dr Gooch's Practical Compendium of Midwifery, by Skinner, are to be met with directions very similar to those related above. At p. 185, speaking of the narrow or contracted state of the soft parts, he observes—" In a first labour, the os uteri dilates slowly, but more quickly in a young girl of eighteen or twenty, who is healthy and vigorous, than in a woman at a more advanced period of life. In women of forty years of age or more, if they have never before had a child, the process of dilatation is very tardy—the os uteri, though not constantly, found rigid and dry." After intimating that the slow dilatation of the aperture is in certain cases the effect of disease, and that the cervical portion is occasionally the seat of a very marked degree of irritative inflammatory action, he goes on to state—" In slight cases of this kind, the warm salt water injections before mentioned, are of great service; but when this peculiar affection of the parts

exists in a greater degree, bleeding is a still better remedy. When, therefore, the labour is long retarded from this cause, I advise you to take away about fourteen ounces of blood."

At p. 188 of Dr Campbell's treatise, published in 1833, the following paragraph occurs:—"The most frequent cause by which, in a primary labour, the first stage is retarded, is rigidity of the os uteri, or literally speaking, that unyielding disposition of the aperture usually met with in healthy young females, as also in those who are well advanced in life, before they become mothers. In this condition the os internum feels projecting, smooth, and polished, as if covered by a piece of the bladder. In such cases, the sufferings of the patient may be protracted from ten to sixteen hours before the first stage has made any considerable progress. The most marked benefit will be derived from venesection carried the length of causing a tendency to syncope." Nearly the same words, with regard to venesection, occur at p. 190, when describing an undeveloped state of the cervix.

Again, at p. 198, after unfolding the circumstances which take place in those cases where labour is protracted chiefly in consequence of an unyielding condition of the parts which close up the outlet, he subjoins,—"If the woman has not been bled in the previous part of the process, the greatest advantage may now be expected to accrue from the remedy; and occasionally where it has been resorted to, it becomes necessary to repeat it; but in this we are to be regulated by the condition of the pulse, on which, before we desist, we are invariably to make an impression."

In Dr Burns's work, 9th edition, p. 442, we read as under:—"The pains in tedious labour, connected with defective uterine action, may be continuing regular, but weak, not from exhaustion, but rather from the uterus not exerting the power it has; or there may be a tendency to remit, the pains coming on seldom. It is quite a mistake to suppose that defective, and what may be called restrained action, necessarily depends on debility of the uterus."

In this state of things, he remarks—"If there be heat of the skin, full pulse, with thirst and restlessness, perhaps starting, and especially if the os uteri be not relaxed, and the parts tight and rigid, venesection will be of great benefit, by making the uterus act with more freedom, and its mouth yield with greater readiness."

Again, at p. 443, after alluding to the effect produced on the uterus by hemorrhage, previous to delivery of the child, along with some additional observations on an excited state of the soft parts, an irregular and inefficient, though severe nature of the pains, as well as the premature rupture of the membranes, he remarks, "that," under these circumstances, "blood-letting is safe, and may be expected to do good;" but almost immediately adds,—"It is, however, a remedy, which, if imprudently employed, may do much mischief;" and particularly takes notice of its nox-

ious tendency in constitutions much enfeebled, and cases of exhaustion.—" In natural labour," continues he, " it is neither necessary nor proper; in labour not greatly protracted, nor unusually severe and slow in its steps, it is not to be resorted to."

After stating a variety of circumstances, at p. 459, principally relating to the unyielding condition of the soft parts, and the length of time the labour may on an average be expected to occupy, he once more proceeds :—" Blood-letting is the best remedy in such cases, and its effects are almost immediate. It is so beneficial, and so much to be depended on, that it is never to be omitted in any case of labour protracted from rigidity, unless the patient be much debilitated. Indeed, we ought not in cases of decided rigidity to wait till the labour have been tedious, but should bleed to prevent that. It is even useful, if resorted to, before labour."

The late Professor Hamilton, in 2d edition of his Observations on Midwifery, p. 136, when speaking of the interference necessary in cases where the liquor amnii becomes prematurely discharged, expresses himself in the following terms :—" When the pains take place, if the dilatation prove tedious, that is, if the continuance of strong pains for six or eight hours do not occasion its advance to such a degree as to give reason to expect its completion within a few pains, it becomes necessary to interfere lest the patient's health should suffer;" and farther adds—" Generally speaking, venesection to the extent of from sixteen to twenty-four ounces of blood, by weight, furnish the readiest means of promoting dilatation." With the preceding may be contrasted the directions contained in p. 214—" Irregular distributions of blood must obviously tend both to diminish the muscular powers of the uterus, and to lay the foundation for serious injury in some of the important viscera. But when this circumstance takes place during labour, it is almost invariably the fault of the practitioner; for there are decided marks denoting the approach of this irregularity of vascular action, which should lead to the adoption of the appropriate means of preventing it."

In 1st edition of Dr F. H. Ramsbotham's work, p. 243, is recorded the history of a case of primapera, where parturition was completed with comparative ease and safety, in from four to five hours; but who in her second confinement, the degree of rigidity of the os uteri was such, that notwithstanding venesection was employed three times to fainting, together with the liberal use of opium, rupture of its right side took place after labour had been protracted for fifty hours from the evacuation of the liquor amnii, and in whose case death took place on the fourth day.

" It is an instructive case," adds Dr R., " because it proves, that although an os uteri has relaxed and readily dilated in a first labour, it may in an after case possess a high degree of unnatural rigidity, and that, too, independently of any discoverable disease

in the organ itself. It proves, also, that the much vaunted power both of bleeding and opium will not always avail in removing rigidity."

At p. 251, after informing us of the caution with which his father used the lancet during the first stage of labour, in consequence of the after risk of flooding, and at the same time protesting his faith in, and determination to abide by the counsel and example of one so intimately connected and worthy, farther proceeds:—"With regard to venesection, then, as a means of relaxing the os uteri, I look upon it as powerful, but not devoid of danger: to do good it must be carried far enough to make an impression on the general system; for it is idle to expect advantage will be derived from it, unless syncope, or, at any rate, a degree of faintness be produced."

Regarding the treatment to be employed in a rigid state of the vagina and perineum, Dr R. writes—"Here, also, it is our duty to endeavour to relax the rigid structures; with this intention venesection has been had recourse to as liberally, and almost as universally as under rigidity of the os uteri itself; but it certainly does not possess the same power in this as in the case last under consideration. I am inclined to limit the use of the lancet to those instances where the rigidity is combined with heat, tumefaction, unusual tenderness, and unnatural dryness—symptoms which denote that injurious pressure hath taken place, and that inflammatory action has commenced."

The remarks of Dr Rigby, p. 211, with regard to the influence exerted by venesection, over the general system and organs more immediately concerned in child-birth, are as follow:—"When the labour is protracted by a state of general plethora, or local congestion, the expelling powers are not only enfeebled by the engorged state of the uterine circulation preventing effective pains, but the resistance to the passage of the child is increased by a similar condition of the soft passages, which are swollen and turgid with blood. It is in these cases that bleeding effects such a sudden and complete change; the pulse loses its oppressed character, and rises in point of strength; the uterus loses the thick solid feel which it had before; its contractions become active and powerful; the os uteri dilates; the passages become soft and yielding, and the whole process assumes a different character. By careful observation, this state can easily be discovered before labour has actually commenced; in which case much useless suffering may be prevented by previously reducing the circulation to a proper standard, and thus fitting the uterus for the exertions it has to undergo."

Dr Blundell, at p. 388, after presenting us with a very lengthened and almost frightful, although in many instances at least, by no means an exaggerated account, of such who are unhappily rendered so, in consequence of a rigid state of the os and cervix

uteri, and to the studious perusal of which in the work itself, the writer would urgently request the young and aspiring practitioner, thus argues, relating to its cure—"In the labours of rigidity it should be our first indication to produce, if possible, a laxity of the soft parts; but, unhappily, we are in possession of no very effectual means by which an indication of this kind may be accomplished. When women have large uterine bleedings, these generally produce much relaxation of the passages. Hence, in these labours of rigidity, we are advised to take a hint from this observation, and to make a free use of the lancet. By some it has been recommended, that a month before delivery, ten or twelve ounces should be taken away, and in a fortnight, ten or twelve more; and should the woman be robust when delivery commences, to bleed more copiously.

"To obtain the full effect from the relaxing powers of depletion, you ought by all means to perform your bleedings in the commencement of the labour; and this promptitude clearly becomes justifiable, when it is obvious, from the degree of rigidity, that to this venesection we must ultimately have recourse."

(To be continued.)

Appendix to Mr Kerr's Paper on Splints, contained in our last Number.

MEASUREMENTS AND WEIGHT OF SPLINTS.

	LENGTH.	BREADTH.	WEIGHT.
Splints for Fractured Leg.			
A	10 inches	10 to 7½	2 lbs.
B	9¼ "	8 at top.	
C	10 "	3⅜	
Splints for Fractured Clavicle and Humerus.			
E	17 inches	9½	3 lbs.
F	4 "	2¼	
G	6½ "	8¼	
H	3¾ "	8¼	
I	8 "	6⅜ to 5⅜	
J	6¾ "	1½	
Splints for Fractured Thigh.			
E	17 inches	9½	7½ lbs.
K, K	19 "	2¼	
L	9 "	12	
M	11 "	13 to 11	
N extreme length	15¼ "		
Knee-plate of N	5¼ "	extreme breadth 7	
Leg part of N	10 "	8½ to 7	
O	9 "	2¼	
P	9 "	2¼	
C	10 "	3⅜	

Though the sole of the splint for a fractured leg is represented fixed at a right angle to the leg, it can readily be slightly bent, or a pad placed beneath the heel, to allow the foot to assume its more natural angle in the recumbent position.

In the ordinary modes of managing a fractured clavicle, a pad is placed in the axilla, the arm being used as a lever, and the pad as a fulcrum. In these splints, this principle is abandoned—the arm is merely held in a hollow trough, at a proper distance from the side.

When the splints for a fractured thigh are fitted on, the splint M reaches over the tuberosity of the ischium, so that this tuberosity becomes the fulcrum in the movements of the body, and the continuity of the femur cannot be disturbed by the pressure of the upper end of the double inclined plane. This explanation is given, because in the paper to which this is an appendix, the upper and inner edge of M is said to rest on the tuberosity of the ischium; the word "over" instead of "on" would have left no ambiguity. In the plate, the splint O is drawn projecting backwards from M. The strength and convenience of the apparatus will be increased by screwing one end of O to the breast-plate, and the other to the thigh splint M, at the same time it will be equally useful for the attachment of a padded band, passing to the inner edge of M, or around the pelvis to the most convenient part of M posteriorly. The weight of this apparatus is scarcely felt by the patient, because it is almost wholly supported by the bed in the reclining position, and entirely by the seat in the sitting.

The two parallel lines in fig. 3, represent the binding on the edge of a splint, which at this place is therefore three plies thick. This binding, besides preventing the splints getting torn, is useful in giving the proper degree of firmness, an essential requisite for the success of the different splints.

In my contrivances, the same splints may be adapted either to the right or left side, except the long straps K, which only fit the side for which they are made; two straps for the opposite side, or four in whole, are therefore required with each set.

40 Cambridge Street, Glasgow,
14th November 1845.

ERRATA in MR KERR'S Paper in our last number.

Page 322, 15th line from foot, read *femur* for *former*.
Page 327, 8th line from foot, read *femur* for *former*.

Case of suspected Recent Delivery. By ROBERT BROWN, Esq., Surgeon, Preston.

I WAS requested, March 27, 1827, to visit a girl aged 18, residing at Bamber Bridge, respecting whom a report was in circula-

tion, that, on Sunday the 25th inst., she had been delivered of a child, and that violent measures had been used, nay, that it had been destroyed by fire; and that this accouchement was the third, and all by her own father.

The statement concerning recent delivery received considerable support from the village practitioner, who had attended the girl during the last few months, and on one occasion had expressed it as his opinion, and had also taxed the girl, with being pregnant. In company with the churchwardens, constable, and Mr Sherlock, the village surgeon, I paid the girl a visit, when I elicited the following particulars:—That she had been subject three several times to suppression of the catamenia for a number of months each time; that she last menstruated on the 31st July 1826; till Christmas her bowels were generally costive, after which she was troubled with diarrhœa; at Christmas she was prominent in the abdomen, which has taken place gradually; subsequently to which time, she does not think it either increased or diminished in size. She had from July also suffered with anasarca; the skin of one leg had burst, and still continues an ulcer, to which on Sunday morning last she applied some escharotic to destroy fungous flesh. The pain produced sickness with strong tenesmus, and whilst in the act of getting out of bed, "*them broke*" with her, and the floor became inundated with fluid and clotted blood. Her mother and another female friend found her in this situation.

Some of the clots were of a large size, but being regarded only as clots, were not examined, but thrown away. She continued to flood for 48 hours. We found the patient seated by the fire. The nature of the accusation rendered an ocular inspection of her person necessary. For two hours she resisted the entreaties of her friends, but at last consented.

The *integuments of the abdomen* presented nothing unusual, or at all similar to that of a recently delivered woman; but I could distinctly feel the fundus uteri, and it was somewhat bulky above the symphysis pubis.

The os externum was somewhat capacious, and a muco-purulent fluid, slightly coloured with blood, escaped from it. The os uteri was distinctly within reach, so much dilated as readily to admit three fingers. The mammæ somewhat large and plump, but without the least appearance of milk. I very much wanted to see the clots which had come from her, but they had been destroyed.

The case appeared, from existing evidence, highly suspicious of recent delivery (foetal); and had I found milk in the breasts, I should have felt justified in giving an opinion that she had been delivered of a child; but the milk absent, and no vestige or trace of a child or placenta forthcoming, I did not feel warranted in hazarding such a conclusion. I offered it as my opinion, that the

uterus had been recently distended, either by a mole or hydatides.

Case of Exhaustion, in which Transfusion of Blood was successfully performed. By R. Brown, Esq. Surgeon, Preston.

I was sent for, Nov. 2, 1837, by Mr James Naylor, to aid him in the management of Phœbe Hoskinson, æt. 37, a twin, a parturient female, in the Preston work-house. Mr Naylor was first summoned to her on Monday last, about half past one o'clock. The patient has been subject to epilepsy. On my arrival, I learned that in consequence of the sudden occurrence of most alarming prostration, he feared to wait my arrival—had punctured the child's head—and accomplished the delivery, but no improvement of the patient's condition followed this practice. The diligent use of external friction, and heat, and the free exhibition of stimulants, were promptly had recourse to, but without any improvement of the patient. The countenance of the patient was of a bluish red colour. Skin covered with a cold sweat. Respiration anxious, with frequent sighing—occasional cough, and mucopurulent expectoration. Pulse very slow, and almost imperceptable at the wrist. The lochial discharge about the usual quantity—the uterus very imperfectly contracted.

I suggested the use of ether, and ammonia, friction with mustard powder, and the application of hot smoothing irons over the heart, epigastrium, spine, and extremities. These were continued for 20 minutes without producing any good.

Considering it right to afford the poor creature every chance, I advised, but I confess without any great faith in its utility, the employment of transfusion. I hastened home for the apparatus. During my absence, the foregoing measures were continuously and diligently employed; but on my return (nearly half an hour) I could not discover the slightest amelioration in the condition of the patient. With some difficulty, a fitting person to furnish the required blood was obtained, and much to her credit and humane feelings, she was a volunteer on the occasion. Maw's instrument was the one employed; the central cup, designed to hold the blood, was surrounded by hot water, intentionally made two degrees above the temperature of the fluid. I took from the woman about ℥iv., which were received in the prepared vessel and in the quickest manner I could, whilst my assistant was engaged in receiving the blood into the apparatus, I punctured the right basilic vein of the patient, and most readily (after sending a stream of blood through the instrument, to expel the atmospheric air which it contained) passed the extremity of the tube into the vein. The piston was slowly worked; after its second movement the patient expressed that she could feel the transfused blood "go along her arm into

the heart, and quite warm it." Before I had injected the remainder of the blood, she gradually improved both in colour and in warmth, and avowed her delight that I was no longer of a "green colour but quite right."

Her subsequent recovery took place without any untoward symptoms.

Treatment of Cephalhæmatomata, or Bloody Tumours of the Cranium in New-Born Children. By WILLIAM M. HENDERSON, M.D., Corstorphine.

I HAVE seen an article in the Northern Journal of Medicine of December last, on Cephalhæmatomata, or bloody tumours of the cranium in new-born children; the second variety there described, or that in which the tumour exists beneath the pericranium, I have met with often, and have found it invariably produced by severe pressure in passing through the pelvic cavity, where the pains have been continuous, efficient, and active, and where a large head, in the course of two or three hours of severe labour becomes elongated and adapted to the narrow calibre of the pelvis. The following treatment I have usually adopted:—On the fifth day after delivery, by the subsidence of the puffy swelling of the scalp, the tumour will be more defined, and as coagulation will by this time have taken place in the bleeding vessels, a lancet may be pushed freely into it, and the contents pressed out; the part may then be bathed with tepid water, and a piece of rag applied loosely over the wound, and secured by the cap drawn close over it—this is all that is required. The part should be bathed with tepid water night and morning for a few days longer. If the tumour is very large, we may find the remains of it at the end of a week in the shape of a small tumour about two-thirds less in size; this should be treated in a similar manner. I have never required to lance it more than twice. I have never seen this variety of cephalhæmatoma produced by a rigid os uteri, or a lingering labour from inefficient uterine contractions, or from impaction in the pelvic cavity, requiring instrumental aid, though such perhaps might occur, were such a state of matters to remain long unassisted. These more generally give rise to sero-sanguinous effusion, producing a puffy swelled scalp, and probably also the first variety, namely, an effusion of blood under the occipito-frontalis muscle. The third variety, or meningeal apoplexy, is a frequent consequence of the head remaining too long impacted in the pelvic cavity, and by this means destroying life. I have only seen this variety in still-born children.

Corstorphine, October 1845.

Part II.

SURVEY OF THE RECENT LITERATURE OF THE HISTORY AND TREATMENT OF DISEASES.

No. I.—*Bright's Disease of the Kidney.* By Alexander Wood, M.D., F.R.C.P., Lecturer on the Practice of Medicine.

(*Concluded from page* 287.)

PART III.—SEMEIOLOGY OF THE DISEASE.

Few of the symptoms by which Bright's disease of the kidney shows itself, are directly referrible to the organs supposed to be primarily implicated, but are chiefly derived from those secondary lesions which arise in the progress of the original malady. The full notice which these received, when treating of the pathology of the disease, renders it unnecessary to enlarge upon them again under this head.

It has been already stated, that in addition to that form of Bright's disease, first described by its distinguished discoverer, which is essentially chronic in its character, M. Rayer had introduced us to an acute form, which, although not so common as the chronic, is yet by no means a rare affection, especially that variety of it which succeeds scarlatina.

As the symptoms of these two differ somewhat, it will perhaps afford a better idea of the real character of the disease, if the acute and chronic variety are considered separately, at least in this branch of our subject.

1. *Symptoms of Bright's Disease—Acute Variety.*—This variety of the disease differs from the other in frequently exhibiting a marked invasion. There is usually considerable febrile movement, occasionally, though not invariably, ushered in with a rigor. The pulse is usually quick and hard, and the skin dry. The urine, at this period, is often scanty, and contains a certain quantity of blood. It has a reddish, or deep brown tint, and has been compared by some to the water in which meat has been washed: its specific gravity is often above, and rarely below, that of normal urine. On standing, it deposits filamentous reddish threads, which appear to consist of the fibrine of the blood, (or perhaps an albuminous exudation, taking the form of the uriniferous tubes.) The quantity of urine voided in the twenty-four hours is always less than that of the liquids swallowed; in some cases, only twelve, or even only six ounces, may be passed.

The urine is generally deficient in its characteristic urinous

smell; and, after standing twenty-four hours, it often acquires an odour resembling that of boiled beef.

Although the bloody urine is usually more marked and more constant in that form of the disease which succeeds scarlatina, yet it is also very frequent when it results from exposure to the combined influence of cold and damp. This is the statement of M. Rayer; but I must confess that I have not often found the colouring matter of the blood mixed with the urine in cases consequent on scarlet fever. The urine, according to M. Rayer, may retain this character for two or three days or more, but in some cases it soon assumes a citron colour. Often during exacerbations, it reassumes the sanguinolent appearance, although it must not be supposed that the quantity of blood-globules present affords any index of the severity of the disease, or the intensity of the febrile movement by which it is accompanied.

The proportion of the elements of the urine in these cases varies exceedingly; not only is the quantity of albumen passed in the twenty-four hours very different in different cases, but it is subject to sudden variations in each individual patient. The normal ingredients of the urine are not so sensibly altered in the acute as in the chronic variety.

Micturition, according to Rayer, is seldom affected, unless in those rare cases in which the urethra is obstructed by clots of fibrine. Dr Christison, however, states that there is, "for the most part, frequent desire to pass urine, with, at times, difficulty, or positive pain in discharging it."

A dull heavy pain in the loins is frequent, often accompanied with a sensation of tightness, weight, and weakness. The pain seldom assumes the severe character it occasionally exhibits in simple nephritis, and is often more severe in the region of one kidney than that of the other. It is often difficult for the patient to determine the precise seat of the pain; and M. Rayer has never found, in these cases, the pain shooting down the ureters, and the retraction of the testicle occasionally met with in nephritis. Dr Christison has, however, occasionally observed pains shooting down the inside of the thighs and through the genitals.

Scarcely have the changes in the urinary secretion become apparent, than they are followed, often very speedily, by anasarca. This symptom usually shows itself first by a puffiness about the eyelids or the whole face, especially in those cases which have followed scarlatina. Occasionally, however, the swelling commences in the extremities, as happened in the cases alluded to at p. 148, where the ankles were alone swollen, and that very slightly. This was evidently an example of the acute variety of the disease, distinctly following exposure to cold and damp, but the pain in the loins was much more severe than that usually complained of,—so severe indeed, as to lead, at first, to the suspicion of lumbago being present.

It must, however, always be borne in mind, that in such cases, the anasarca may be absent, and the more closely attention is directed to the subject, the more numerous do the exceptional cases become.

Many trustworthy observers have found all the anatomical characters of Bright's disease after death in persons who, during life, never exhibited any tendency to dropsy, and in some of these cases the urine in the bladder has been found albuminous. A knowledge of this has led Professor Christison to regard the anasarca as an epiphenomenon, rather than as a regular symptom of the disease.

"But," observes M. Rayer, "cases of this kind must be very cautiously examined, in order to prevent us from interpreting them falsely. Not only may the albumen detected in the urine in the bladder after death be the result of mere transudation, but even certain affections of the bladder itself, as inflammation of its mucuous membrane, or that of the ureters or pelvis of the kidneys may cause the admixture of albumen with the urine. A little care, however, enables us to make the distinction; for, in the first case supposed, the coagulum is seldom so great as that in the urine in Bright's disease; and, in the second, the microscope will at once detect the presence of pus globules. It is especially necessary to examine the kidneys and urine carefully, in cases of sudden death without dropsy, the cause of which is not obvious. It is not sufficient, in such cases, to ascertain that the urine found in the bladder after death is more or less charged with albumen, while the kidneys are red and injected, nor that the urine was bloody or albuminous previous to death, the kidneys being enlarged and hyperemic, to warrant us in concluding that such were cases of acute Bright's disease. It is now sufficiently demonstrated, that many varieties of renal hyperæmia may be accompanied with the presence of a certain quantity of albumen in the urine. But when in phthisical individuals, death takes place somewhat suddenly, after a sensible diminution, or almost complete suppression of the urine, when the kidneys are found enlarged, dotted with red or marbled, (the kidneys are usually pale and shrunken in consumption), there can be little doubt as to the existence of the disease. The subject is one, however, admitting of farther investigation."—(Rayer, vol. ii. p. 194.)

When anasarca is present, the skin is usually hot and shining, and does not readily pit on pressure, and retains the impression of the finger for a very short time.

The tongue is often dotted and covered with a yellowish fur; the patient also complains of oppression of the stomach with nausea, and there is cough in some cases.

If venesection be practised, the blood is almost invariably cupped and buffy, often to a greater degree in this disease than in

pleurisy. The serum is often rendered milky by the presence of a fatty matter, easily separated by sulphuric ether.

The density of the serum is diminished, but increases as the albumen diminishes in the urine.

M. M. Rayer and Guibourt failed in detecting urea in the blood in any of their cases. Professor Christison has been more successful.

This enumeration of the symptoms has been taken almost entirely from M. Rayer, by whom the acute variety of the disease was first described—the description of Dr Copland is borrowed from the same source.—(Dictionary of Practical Medicine, vol. ii. p. 642.)

2. *Symptoms of Bright's Disease—Chronic Variety.*—The symptoms of the chronic variety consist chiefly in a modification of the same functions, from the changes in which we derive our principal information as to the acute. These are chiefly the state of the urine, and the blood, and the presence of the dropsical effusion, all of which have been already so fully considered, that little more need be added.

It must never be forgotten, that while this is by far the most common variety, it is also the most obscure, at least in the early stage, when we can best hope to effect a cure. It seldom presents the marked invasion generally met with in acute cases, but steals insidiously on, often not alarming the patient until the occurrence of the dropsy, or some other of the secondary lesions, cause attention to be directed to the state of the urine. It seems, in many cases, to develope itself during the presence or decline of some exhausting disease, occasionally after childbirth, the weakness it induces being, in such cases, often ascribed to the previous disease, until some of the more unequivocal symptoms appear.

In other cases, the complications appear earlier, and attention is thus withdrawn from the primary disease.

The fact is, that the symptoms by which the earlier stages of the disease are noted, can scarcely be said to be peculiar to it—an unnatural, waxy, bleached appearance of the countenance, often accompanied with dryness of the skin and excessive thirst, with gradually increasing weakness, being often all that is complained of; and as the dyspeptic complication often appears early in the disorder, these symptoms are not unnaturally supposed to be dependent upon it.

Sooner or later, however, a more acute attack will supervene, or some of the secondary diseases will manifest themselves, or the dropsy will appear, or the physician, alive to the insidious nature of the complaint, will institute an examination of the urine, and then the real nature of the case becomes apparent. "No single symptom," observes Professor Christison, "of the kind now alluded to has appeared to me so invariable, or of so much service for indi-

cating the commencement of the disease, as the fact of the patient being regularly awakened once or oftener in the night by the necessity of passing urine. I have scarcely ever known it wanting, where any other local symptom existed: frequently has it been present without any other for a great length of time; and it is so remarkable a deviation from the ordinary rule of health, that although it may have been neglected, no individual can fail to recal it when his memory is tasked on the subject by his physician."—(P. 30.)

A general misapprehension is very prevalent as to the amount of urine passed; even after the anasarca has supervened, I have known it rather above the healthy average in many cases, especially when the skin was in a very imperspirable state, and the great thirst from which the patient suffered led to the consumption of large quantities of fluids.

The remaining symptoms are furnished by the state of the urine, blood, or the dropsical effusion, the changes in which have already been so minutely detailed, that little need be added here. It cannot, however, be too much remembered, that the absence of albumen from the urine is no proof of the non-existence of Bright's disease. The following passage from Dr Bright explains some of the causes which tend to produce this effect.

"In the first place, it is quite certain, that if, from any cause, the urine becomes alkaline, the application of heat generally fails to produce coagulation; and, in the next place, there has appeared to me to be an occasional alternation in the secreting power of the kidney; so that a large quantity of the lithates, or of crystallized lithic sand, is deposited, and the albuminous matter is not thrown off. I have this winter had a case of this kind likewise under my care, in a man whose symptoms bear all the character of renal disease, complicated with the disease of other viscera. His urine for several weeks was found to be distinctly albuminous: it then became loaded with the lithates; and now throws down abundant crystals of lithic sand, and no longer affords any trace of albumen: and mentioning this case to Dr Addison, I was told, that very lately the converse of this had shown itself in a case to which he had been called. All the symptoms led him to suspect this peculiar form of renal disease; but the urine did not coagulate, and was loaded with lithates. After a short time, the lithates disappeared, and now the albumen is very decidedly perceived in the urine. That such facts as these tend, in some degree, to render the presence of albumen in the urine, or its absence, a less unerring test, cannot be doubted; but these anomalies are so few, as to interfere very little with the general fact: and after all, in the present state of our knowledge, how few of our diagnostic marks are not more or less under the influence of the casual complications of disease."—(Guy's Hosp. Rep., vol. i. p. 342.)

I have always felt that a mere dry detail of the symptoms of a disease, was far from conveying an adequate idea of the disease as actually met with; the materials of the picture may all be there, but they want to be combined into one harmonious whole. This has been so well done by Dr Bright, in the paper already quoted from, that I feel that I cannot do better than conclude this part of the subject with his graphic sketch:—

"The history of this disease, and its symptoms, is nearly as follows:

"A child, or an adult, is affected with scarlatina, or some other acute disease; or has indulged in the intemperate use of ardent spirits for a series of months or years: he is exposed to some casual cause or habitual source of suppressed perspiration: he finds the secretion of his urine greatly increased, or he discovers that it is tinged with blood; or, without having made any such observation, he awakes in the morning with his face swollen, or his ankles puffy, or his hands œdematous. If he happens, in this condition, to fall under the care of a practitioner who suspects the nature of his disease, it is found, that already his urine contains a notable quantity of albumen: his pulse is full and hard, his skin dry, he has often headache, and sometimes a sense of weight or pain across the loins. Under treatment more or less active, or sometimes without any treatment, the more obvious and distressing of these symptoms disappear; the swelling, whether casual or constant, is no longer observed; the urine ceases to evince any admixture of red particles; and, according to the degree of importance which has been attached to these symptoms, they are gradually lost sight of, or are absolutely forgotten. Nevertheless, from time to time the countenance becomes bloated; the skin is dry; headaches occur with unusual frequency; or the calls to micturition disturb the night's repose. After a time, the healthy colour of the countenance fades; a sense of weakness or pain in the loins increases; headaches, often accompanied by vomiting, add greatly to the general want of comfort; and a sense of lassitude, of weariness, and of depression, gradually steal over the bodily and mental frame. Again the assistance of medicine is sought. If the nature of the disease is suspected, the urine is carefully tested; and found, in almost every trial, to contain albumen, while the quantity of urea is gradually diminishing. If, in the attempt to give relief to the oppression of the system, blood is drawn, it is often buffed, or the serum is milky and opaque; and nice analysis will frequently detect a great deficiency of albumen, and sometimes manifest indications of the presence of urea. If the disease is not suspected, the liver, the stomach, or the brain, divide the care of the practitioner, sometimes drawing him away entirely from the more important seat of disease. The swelling increases and decreases; the mind grows cheerful, or is sad; the secretions of the kidney or the skin are augmented or diminished, sometimes in alternate ratio, sometimes without apparent relation. Again the patient is restored to tolerable health; again he enters on his active duties: or he is, perhaps, less fortunate;—the swelling increases, the urine becomes scanty, the powers of life seem to yield, the lungs become œdematous, and, in a state of asphyxia or coma, he sinks into the grave; or a sudden effusion of serum into the glottis closes the passages of the air, and brings on a more sudden dissolution. Should he, however, have resumed the avocations of life, he is usually subject to constant recurrence of his symptoms; or again, almost dismissing the recollection of his ailment, he is suddenly seized with an acute attack of pericarditis, or with a still more acute attack of peritonitis, which, without any renewed warning, deprives him, in eight-and-forty hours, of his life. Should he escape this danger likewise, other perils await him; his headaches have been observed to become more frequent; his stomach more deranged; his vision indistinct; his hearing depraved: he is suddenly seized with a convulsive fit, and becomes blind. He struggles through the attack; but again and again it returns; and before a day or a week has elapsed, worne out by convulsions, or overwhelmed by coma, the painful history of his disease is closed."—(Guy's Hosp. Rep., vol. i. p. 339—341.)

PART IV.—PROGRESS, DURATION AND TERMINATIONS OF THE DISEASE.

1. *Of the Acute Form.*—Death seldom takes place is this disease, unless from the supervention of one of the secondary affections, most usually some acute serous inflammation, or fatal coma, or effusion of fluid into the pleura or peritoneum. Recovery, however, often takes place; and if the disease be seen early, and treated judiciously, it may generally be hoped for, more especially in cases succeeding scarlatina. In such cases the febrile symptoms and anasarca disappear, the albumen decreases, and the urea increases in the urine; these changes being often accompanied by copious critical perspirations. But all the febrile and acute symptoms may subside, and the urine still continue albuminous, in such cases we may dread the passage of the acute into the chronic disease.

2. *Of the Chronic Variety.*—From the history already given of the progress of this disease, it is evident that its first invasion is seldom so well marked as to enable us to date its commencement with any thing like precision; in many cases, especially among the lower orders, the physician is only called upon to watch the closing scene. The disease, also, undergoes so many remissions and changes, that the same medical attendant has seldom an opportunity of observing it throughout its entire course. Dr Bright has done his best to determine with precision the duration of the disease, and has arrived at the following opinion:—

"Another very important question is, the length of time which this disease may exist in the constitution before it runs to its last fatal period: and although our experience in the hospital is great, the point of duration is yet undetermined; for, with all the advantages which an hospital affords for the multiplied accumulation of facts, there are some points on which the information derived in its wards is defective, and even apt to be erroneous; and amongst these may be reckoned one of great importance—the probable duration of life, under any disease. If a case is much relieved, the hospital physician loses sight of it, and in all probability sees it no more; knowing nothing of future relapses, or of the ultimate result. On the other hand, a very large proportion of his cases are arrived at the most advanced stages of the respective disorders: the circumstances of the patients have been such, as to render them inattentive to the earlier indications of disease; and it is only when they can no longer pursue their laborious occupations, that they are driven, too late, to seek relief. Hence the physician is liable to form a wrong estimate of the progress of the disease under favourable circumstances; and it is necessary to correct his views by a comparison with the history and results of private practice.

"There has not yet, perhaps, been sufficient time, since this disease of the kidneys first attracted attention, to say to what extent life may be prolonged while the body is under its influence; but I believe, with care, its fatal effects may be kept at bay, and a hazardous life may be protracted for many years. Should that care be neglected, the chance of life will be greatly diminished."—(Guy's Hosp. Rep., vol. i. p. 343.)

PART V.—DIAGNOSIS.

1. *Diagnosis of the Acute Form.*—Our diagnosis in this disease will mainly be founded on the changes in the urine, and the occurrence of dropsy.

In some few cases the dropsy is absent, but in these the urine is always albuminous, and usually accompanied by a febrile state of the system.

The absence of urea, and the uric acid salts, by reducing the specific gravity of the urine, enables us to distinguish this disease from those febrile affections before alluded to, in which the urine is temporarily albuminous, but in which, as the salts usually exist in normal proportion, the specific gravity is little altered.

2. *Of the Chronic Variety.*—The diagnosis of the chronic variety of the disease is to be founded on the same symptoms as that of the acute, and there can be little doubt of the existence of this disease in those cases in which dropsy is found to coexist with urine charged with albumen, and of low specific gravity. It is true, as has been already pointed out, that these may all be produced by disease of the heart; but in many cases this exists as a complication of the renal disease, and where it does not, the specific gravity of the urine is seldom much affected. The symptom of dropsy may also be absent, but a cachectic state of the system, with albuminous urine, of low specific gravity, may almost warrant the assumption, that the renal disease is present, even where there is no dropsy to confirm the suspicion.

PART VI.—PROGNOSIS.

1. *In the Acute Variety.*—The prognosis in cases seen early and uncomplicated, is favourable, more especially in that form which succeeds scarlatina, or occurs during pregnancy; in the latter, however, we must never forget the risk of the occurrence of convulsions. Where death does take place, it is usually from some of the secondary lesions, most commonly a serous inflammation.

2. *In the Chronic Variety.*—This form of the disease seems to be almost invariably fatal. Death, however, usually occurs in it, as in the acute form, from some one of the secondary lesions. These may be warded off with care and attention to treatment, so that although albumen may still be detected in the urine, the patient is kept free from any of the more troublesome symptoms.

When any of the intercurrent affections appear, the danger of the patient will of course be in proportion to the severity of the attack; and it must never be forgotten, that the coexistence of

the renal disease renders the prognosis more unfavourable than in affections of equal or greater severity occurring without complication.

PART VII.—ETIOLOGY.

This branch of the subject may be dismissed in a single sentence, as regards the chronic disease; for, as Dr Christison well observes, "since, in the generality of cases, the disorder establishes itself silently and very gradually, its exciting cause must obviously prove for the most part inappreciable."

In the acute form, the invasion is very generally to be attributed to the combined influence of cold and damp, more especially in certain states of the skin, as is partially observed after scarlatina. Intemperance is very generally regarded as a powerful predisponent cause of the chronic form.

PART VIII.—THERAPEUTICS.

1. *Of the Acute Variety.*—The indications for treatment in this variety of the disease are—

1*st*, Remove the congestion of the kidneys.
2*d*, Restore the function of the skin.
3*d*, Remove the dropsical effusion.

Almost all the authors who have written on this disease are agreed as to the propriety of *blood-letting*, and assign it the highest place as a therapeutic agent. The quantity of blood to be drawn must be decided by a consideration of the strength of the patient, the intensity and period of the disease, and the appearance of the blood drawn.

"In addition to the usual means of judging upon these points," observes Dr Christison, "the practitioner will find great advantage in taking also into account the composition of the blood. On every occasion where blood-letting is resorted to by him for the first time, it is advisable to examine the state of the blood, more especially with a view to discover the proportion of its colouring matter or hæmatosin, and so to determine the exact progress of the structural derangement of the kidneys. For, if it should thence appear that the disease is not in its early, but in its advanced stage, and that the acute symptoms are consequently not primary, but superinduced, depletory measures must be applied with much greater caution and reserve."—(Pp. 133, 134.)

It is generally recommended to follow up the venesection by *local depletion*, either by cupping or leeches. I have seldom found it necessary, at least in the variety occurring secondarily to scarlatina, the one most commonly met with, to have recourse to this, venesection alone accomplishing all that is necessary.

Should the patient, however, complain much of pain in the re-

gion of the kidneys, there can be no doubt of the propriety of having recourse to cupping or leeches, more especially if percussion can detect engorgement of one or both kidneys.

These vigorous means, besides fulfilling the first indication, will in a great measure have prepared the way for successfully accomplishing the second, the antiphlogistic treatment proving in this, as in most inflammatory affections, the best preparative at least for the diaphoretic.

The temperature of the patient's apartment should be elevated and kept at an equable standard, and the action of diaphoretic medicines, aided by the occasional employment of the *warm or vapour bath.*

The use of Dover's power, as a diaphoretic, is highly extolled by Professor Christison, and its operation may be aided by the occasional employment of the warm or vapour bath.

Tartar emetic is much recommended by Dr Barlow.

After stating that the recovery of patients treated by purgatives, diuretics, occasional bleedings, and diaphoretics, is for the most part tedious, and sometimes incomplete, and that depletion is in general not well borne, he continues :—" I was accordingly induced to seek for some other remedy, and regarding the affection to be essentially of an inflammatory character, as evinced by the increased frequency of the pulse, and the state of the blood when drawn ; and considering, moreover, the probably injurious effects of medicines, which act as direct stimulants to the kidneys, in the recent stages of this form of disease, and the importance, consequently, of promoting, if possible, the secretion from the skin, I was led to make trial of tartarized antimony, which I found fully to answer my expectations."—Guy's Hosp. Rep., vol. v. p. 168.) And again,—" It (tartar emetic) is a remedy suggested by the nature of the affection, and calculated to fulfil the most obvious and important indurations, namely, equalizing the circulation, subduing the inflammatory action, and restoring the functions of the skin."—(Ibid., p. 178.)

I confess that the trials I have been enabled to make of this medicine, have seldom fulfilled the expectations which such statements encourage, and that I have more than once seen all the symptoms advance with alarming rapidity under the active employment of tartar emetic.

For the purpose of removing the dropsical effusion, two classes of remedies recommend themselves—diuretics, and purgatives.

With regard to the employment of the first, considerable difference of opinion prevails. Diuretics, in order to act, cause determination of blood to the kidneys in this disease. These glands are already in a state of congestion, and therefore, by such remedies, that congestion must be increased.

Plausible as such reasoning may appear, I question if, in actual practice, the use of diuretics is ever really injurious ; it has

certainly been condemned both by Dr Bright and Dr Osborne; but, on the other side, we have the testimony of Dr Christison, who "has very seldom witnessed decided diminution of the dropsy, unless where diuresis or purging was either artificially induced at the time, or arose spontaneously," and has "even repeatedly seen the albumen disappear under diuretics."

I have found great benefit from the use of nitre in this disease, which has certainly a remarkable effect in removing the uneasiness in the loins, so often complained of; its diuretic effect may be amply secured by combination with digitalis and cream of tartar. To secure the full benefit of this remedy, however, it must be given in very large doses, which, if the salt be largely diluted, may very safely be done.*

In some cases I have observed very copious perspirations to accompany its employment, and it is singular that in these it seemed the least beneficial. Given in these large doses, it has a marked effect in lowering the pulse, without at the same time affecting the tone of the system so much as tartar emetic. Where it induces vomiting or purging, the addition of a few drops of laudanum to each dose will check these troublesome symptoms. It seems speedily to enter the urine, and very soon after it has been swallowed, it may be detected in that secretion.

There can be no doubt as to the advantage of free purgation in the acute form of the disease, and we should naturally select those purgatives which produces serous evacuations. Gamboge, elaterium, and the compound powder of jalap, are all powerful remedies of this kind.

The patient must of course be carefully preserved from cold and damp, and protected from all exposure during convalescence.

The following treatment is confidently recommended by Dr Golding Bird:—

"I may remark, that as a prophylactic remedy, the warm bath is invaluable; I scarcely recollect, even in a large experience, a case of dropsy after scarlet fever, occurring when the warm bath was daily used, as soon as the skin began to exfoliate, and continued until a perspiring healthy surface was obtained. When anasarca has occurred, strict confinement to bed, or at least to a warm room, must be enjoined, the warm bath used twice a-week, and a free action on the skin encouraged. The bowels should be kept acting by the pulvis jalapæ compositus, and the antimonii potassio-tartras, administered in doses varying from one-twelth to one-eighth of a grain, four or five times in the 24 hours, according to the age and strength of the patient. A bland and nearly fluid, but moderately nutritious diet should be enjoined.

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* In the Posological Table of Duncan's Dispensatory, the dose of this salt is set down as from gr. x. to ℥ss. In Dr Christison's, as gr. x. to ℈j. as a sedative refrigerant, and ℈ii. to ℥j. as a diuretic. It may, however, be safely given in much larger doses. Dr Brocklesby gave ℥ii. dissolved in a quart of gruel, three, four, or five times a-day, in acute rheumatism; and in the same disease, Martin-Solon has given from ℥ss. to ℥xv. in divided doses, in the 24 hours.—(Bull. de Therap. 1843.)

"The plan must be continued until all anasarca has vanished, a supple and perspiring surface obtained, and urine free from albumen.

"The remedies may then be gradually left off, and more nutritious diet allowed, and the ammonio-citrate of iron administered thrice daily, in doses of three to five grains, to remove the anemiated state of the patient.

"On leaving the bedroom, a flannel waistcoat extending to the loins should be worn for some time. This treatment has been almost invariably successful in every case I have employed it; and I may remark, that I have never in these cases witnessed the extensive prostration said by some to be the almost necessary result of the employment of antimony in the diseases of children."—(Urinary Deposits, &c., p. 235.)

2. *Treatment of the Chronic Form.*—However simple in its indications, and usually satisfactory in its results, the treatment of the acute form may be, it is far otherwise with the chronic. In it, one chief aim must be to ward off as long as possible those complications from which the suffering and danger of the patient chiefly arises.

Should there be any evidence of febrile movement in the system, depletion may be practised as in the acute form, or if active congestion of the kidneys should exist or supervene, leeches or cupping may be applied to the loins.

The functions of the skin should be particularly attended to; it should be preserved in a perspirable condition by warm clothing, and the occasional use of diaphoretics, and the warm or vapour bath.

We do not seem to possess any remedies which have the power of altering the morbid state of the kidneys. Mercurials, from their power of subduing inflammation, and removing glandular obstructions, might appear worthy of trial, but experience has decided as to their inutility; and in this disease not only is salivation easily excited, but is also liable to become violent and unmanageable.

Dr Bright has occasionally seen the character of the urine change, and the dropsical effusion disappear under the use of tincture of cantharides, given in doses of from four to twelve drops, in some emulsion. Dr Wells, in his paper already referred to, narrates five cases of dropsy with coagulable urine, treated with this remedy, in doses of from thirty to sixty drops in the twenty-four hours. In three of these the improvement was very decided; in one the albumen disappeared from the urine; in the remaining two no benefit seemed to result from its use.

M. Monneret has since strongly recommended the same medicine. (Gazette des Hopitaux, Oct. 13, 1842.)

M. Gutbrod tried the ioduret of iron in two well marked cases of the disease with success. (Ibid., Sept. 7, 1843.)

M. Alken has found benefit result from the employment of hydriodate of potass, and iodine ointment. (Oesterreich. Med. Wochens., Jan. 28, 1843.) M. Rayer has found no benefit to

result from the external application of mercurial or iodine ointment.

Dr Rees, following out his idea of the pathology of the disease, of which a summary has already been given, recommends the plan of treatment usually resorted to in anæmic diseases, viz. chalybeate tonics, saline purgatives, and nutritious diet, and strongly condemns depletion. (Med. Gazette, Aug. 16, 1844, p. 654.)

Dr Copland has given equal quantities of the tincture of cantharides, and the tincture of sesqui-chloride of iron with marked benefit in a few cases.

In the more advanced states of the disease, the same author has seen more advantage from the preparations of iron judiciously chosen and combined with other remedies, than from any other class of medicines.

3. *Treatment of the Complications.*—A. *Dropsy.*—We need scarcely recapitulate what has been already said of the means of removing this symptom. The diaphoretic plan, so strongly recommended by Dr Osborne, is not much esteemed by Dr Christison or Rayer, while the latter author agrees with Dr Bright in thinking that the importance of diuretics has been overrated by the former.

Dr Christison is disposed to place much reliance on the combined use of cream of tartar and digitalis.

From a drachm to a drachm and a half of the latter substance is given three times a-day, the patient taking at the same time a pill, containing one or two grains of the powder of digitalis, or 20 drops of the tincture may be given in a little cinnamon water. The diuretic effect of these medicines may be increased by the exhibition of a blue pill every night, until four or five have been taken. Occasionally diuresis may be established by the administration of an emetic of ipecacuanha and tartar emetic, and sometimes even by the action of a hydragogue cathartic.

Should these fail, we are recommended to have recourse to squills, infusion of broom tops, or spirit of nitric ether, or Hollands with water, or carbonate, nitrate, or acetate of potass.

Many of these are condemned by Dr Copland, as liable to disorder the stomach, and thereby farther impair digestion and assimilation, and thus accelerate the unfavourable progress of the disease.

M. Rayer prefers the decoction of the wild horse-radish to all other diuretics.

Dr Christison draws an admirable distinction between the mistaken employment of diuretics as a supposed cure for the disease, and their judicious use as a means of combating this particular symptom. He is not inclined to attach any value to the theoretical arguments of those who have supposed that diuretics may

act injuriously; he condemns them in the early stage, because, during the state of general reaction, they do not generally excite their proper action, and the urine is restored to its healthy amount with much greater certainty by subduing the reaction; that is, by antiphlogistic treatment, and also because there is no special indication for their employment, unless when dropsy is present.

There can be no question as to the efficacy of purgatives in removing dropsical effusion; and perhaps they are the best means we possess for the purpose, if we bear in mind the tendency to annoying diarrhœa as a complication of this disease. Little more need be added to what has been already said under the treatment of the acute disease.

Rayer has often seen a remarkable diminution, and often a total disappearance of the effusion under the use of Seidlitz or Pullna water. He also recommends cream of tartar, in half ounce doses. Dr Christison thinks favourably of gamboge, in doses of five, seven, or rarely nine grains, given once every two days. To prevent it griping, he recommends its minute division to be secured by trituration with the bitartrate of potash.

When all other remedies have failed, puncture of the limbs may be resorted to; but this operation, performed in the mildest way (acupuncture), is at all times dangerous, where the vital powers are enfeebled. Dr Christison relates two cases where it proved fatal.

B. *Head Affection.*—This very dangerous complication requires energetic treatment, blood-letting occasionally, and very active purging invariably are demanded. Rayer recommends purgative doses of calomel, cupping over the mastoid processes, and blisters to the nape of the neck.

"Diuretics, too," says Dr Christison, "have always appeared to me of undoubted service."

C. *Affections of the Chest.*—The inflammatory affections arising in the course of this disease require the same energetic treatment as when they occur idiopathically. Pleuritis, especially, is so exceedingly apt to end in sudden and copious effusion, that its earliest commencement must be watched and met with promptitude and vigour.

D. *Affections of the Digestive Organs.*—These are often the most annoying and tedious complications which we are called on to combat, and more may generally be effected by attention to diet and regimen, than by medicine.

Acidity and flatulence are usually complained of, and are to be treated by a combination of alkalies and bitters. Dr Sims' remedy for the heartburn of pregnancy is often successful.

℞. Magnes. ust ℥j.
Aq. ammon. pur. ℥j.
Aq. cinnamomi ℥iii.
Aq. purae ℥vss. M.

Of this two or three teaspoonfuls are to be taken when these symptoms are troublesome.

Where these symptoms are associated with constipation, the carbonate and sulphate of magnesia may be given in bitter infusion, with hydrocyanic acid.

℞. Magnesiæ sulph. ℥ss.
——— carbon. pond. ℥ii.
Acidi prussici med. gtt. x.
Infusi gentian comp. ℥xi.
Tr. hyoscyami ℥i. M.

Of this two tablespoonfuls may be taken three times a-day.

Or lime water and infusion of gentian may be prescribed in equal quantities, and the bowels solicited by gentle doses of the compound rhubarb pill.

When the violence of these symptoms are subdued, an attempt should be made to restore the tone of the stomach by the preparations of iron, or zinc, with or without the vegetable tonics.

Where chronic vomiting is present, remedies of the same kind, with or without opiates, will sometimes prove successful.

℞. Sodæ carbonatis ℥ii.
Tr. valerian. ammon.
Tr. cardamom. comp. ā. ā. ℥ss.
Acidi prussici med. gtt. gtt. viii.
Syrupi zingiberis ℥ss.
Aq. lauri cinnamomi ℥viss. M.

Of this an ounce may be given when the sickness is felt.

Creasote is strongly recommended by Dr Christison, who administers it twice, thrice, or oftener, in the course of 24 hours, dissolved in an ounce of some aromatic water. The taste is, however, so repugnant to some, that I have preferred prescribing it in the form of a pill; one drop of creasote, two grains of rhubarb, and one grain of extract of gentian, readily form a convenient pill.

Opium is also sometimes of service, especially the sedative solution. One case which had resisted all other treatment, yielded to the use of a pill containing half a grain of nitrate of silver, and the same quantity of extract of opium.

The operation of all these remedies will be much aided by the application of sinapisms, turpentine epithems, or a cantharides blister externally; in the latter case, the blistered surface may be sprinkled with the muriate of morphia.

Diarrhœa may be checked by chalk, astringents, and opiates; in severe cases the acetate of lead, with opium, may be given;

and, if all these fail, strychnine, in combination with opium, will sometimes succeed.

The other complications are to be treated precisely as we would do in cases where they occurred unassociated with kidney disease.

(*Finis.*)

Part III.—REVIEWS.

Elements of Materia Medica and Therapeutics. By Edward Ballard, M.D., Lond., Physician to the St Pancras Royal Dispensary, and Medical Tutor in University College, London; and Alfred Baring Garrod, M.D., Lond., Physician to the Fore Street Dispensary, and Lecturer on Materia Medica and Therapeutics in the Aldersgate School of Medicine. London, 1845, 8vo, pp. 447.

The book, the title of which is quoted above, is an elementary work on Materia Medica. It consists of a Therapeutical Introduction by Dr Ballard; a Chemical Introduction by Dr Garrod; an account of the Inorganic Materia Medica, drawn up in a chemical arrangement by Dr Garrod; the Vegetable Materia Medica delivered by Dr Ballard, according to the natural arrangement of plants; the Animal Materia Medica by the same, in an order borrowed from Cuvier's Animal Kingdom; and of an appendix containing the therapeutical means which could find no distinct place in the previous part of their plan, together with those articles of the Materia Medica which the authors deemed worthy of mention, though not made officinal by the London College.

The therapeutical introduction is short and judicious. It is in the main practical, while at times it is far from being devoid of intimations of the newest speculative views of therapeutic action, and on some occasions these are carried to the full as far as their foundations warrant. We quote the article on Stimulants entire:—

"*Stimulants*, when taken internally, produce an exaltation of one or more of the vital functions. The medicines included under the term may, therefore, be naturally supposed to vary much in the manner of their operation, as well as in the systems which they severally affect. And such is really the case: the class is a very wide one, and comprehends remedies of almost every kind of specific operation. The reason of this, if carefully sought, will be found in the very flimsy foundation on which the therapeutical classification of drugs has been made to rest. There is but little doubt, that as all kinds of disordered conditions in the human frame are resolvable into excess or defect of some essential element of health, so every thing capable of restoring the balance of the system will, in time, come to be distributed under two great divisions; namely,

those which increase defective action on the one hand, and diminish excessive action on the other. However, till our acquaintance with the physiological relation of the several animal functions is much more perfect than at present, we fear we must content ourselves with an incomplete arrangement, at the same time confessing our inability to confine individual medicines to their own distinct departments.

"The earliest effect of the internal administration of a stimulant is manifested upon the digestive system itself; its first operation appearing to be topically exerted upon the nerves and vessels of the parts with which it comes into immediate contact. A sensation of warmth or heat is thus commonly perceived in the mouth and throat, extending to the epigastrium, and not unfrequently accompanied by the expulsion of flatus by the mouth. The progress of digestion is accelerated, and the activity of the intestines sometimes increased. Thirst is a frequent consequence, accompanied or not with a dry or reddened tongue. Sooner or later, the circulation is affected, the pulse becomes more rapid, the animal temperature raised, the face may become flushed, and a sense of general warmth diffuses itself through the frame. Where the heart is palpitating with frequent but inefficient pulsations, its action may assume greater regularity, and be rendered more effectual in the uniform distribution of the blood. Connected with this, we may notice the operation of stimulants on the organs of secretion, especially the skin and kidneys. Many of the remedies classed under the head of diaphoretics or diuretics, are actually stimulant, not to these organs only, but also to others of similar office, and indeed to the system at large. *Ammonia* from among diaphoretics, and *Cantharides* or *Juniper* from among the diuretics, may be justly selected in illustration of this truth. The excitant action of stimulants upon the nervous system is most clearly seen, in the case of those phenomena which we are most accustomed to view as connected with its functional activity. The mind for the most part becomes exhilarated, its energies, if flagging, revived, the spirits elevated, and the temper more cheerful, these symptoms being often commensurate with the alteration in the force and frequency of the pulse.

"The *diffusible* stimulants, as they are termed, are those which chiefly manifest this extended operation; but there others whose action is more or less entirely confined to special systems; and these may, by way of distinction, be designated as *specific* stimulants. The *turpentines*, *gum resins* and *balsams*, for example, though increasing the general temperature of the body, as well as the force and velocity of the pulse, exert a specific operation upon the mucous membranes, especially those of the lungs and urinary canals; and it is this which constitutes their chief therapeutical value. Their remedial effects have been said to depend on a new action being set up in the mucous surface, incompatible with the coexistence of a morbid one; but if we might hazard another explanation, it would be, that they alter the nature of the secretions poured out, by the chemical influence which they exert in their own elimination. At all events, they universally diminish excessive secretion from the bronchial and genito-urinary membranes; though the power to do so is possessed by some in a much higher degree than by others; while the membrane influenced differs with the article selected for administration. We would adduce, in illustration, the action of *Copaiba* in the cure of Gonorrhœa, and that of *Benzoic acid* or the *balsams*, in lessening the excessive expectoration of Chronic Bronchitis.

"But of all the remedies which can be denominated stimulant, *Strychnia* and *Brucia* are the most decidedly specific in their action; for while their excitant influence is most powerfully exerted upon the excitomotory function of the spinal cord, we are not aware of their manifesting any operation at all either upon the rapidity of the pulse, the energy of the mental functions, or the general temperature of the body. There are, doubtless, some who would look upon this as sufficient ground for denying them a place in the class of stimulants at all; but so far from agreeing with them in this respect, we

regard the alkaloids of *Nux Vomica* as presenting the very smallest type of an excitant drug; and we do not hesitate to express our deliberate conviction, that every stimulant which augments the activity of the general functions of the body, does so by the influence, primary or secondary, which it exerts upon the cerebro-spinal centres. We would even be disposed to go a step further, and to hope that the time is not far distant, when Tonics and some of the Diaphoretics, Purgatives, Diuretics and Emmenagogues will be removed from their present unnatural connexions, and put side by side with *Strychnia* in the class under our notice.

"The therapeutical employment of stimulants is governed by very simple and obvious indications. There are two classes of cases characterised by defective action in the vital functions, which call for their use; the one, where the departure from the healthy condition is merely temporary; the other, where symptoms are present which point out a loss of tone in the muscular system, and a deeply debilitated condition of the entire frame. Under the former head are included Syncope, and various local nervous affections, as headache, palpitations, etc.; for the relief of which, the diffusible stimulants, such as *Ammonia*, *Wine*, *Camphor*, *etc.*, are particularly effectual. The latter head embraces the more severe derangements of the constitution, in which there is a permanent and decisive depression of vital energy, a condition which is observed in a most marked degree in the prevailing type of Continued Fever. Even in the course of inflammatory diseases, when the local affection is accompanied by typhoid fever and langour of the general circulation, or depends remotely on the influence of debilitating causes, it frequently becomes necessary, while combating the local complaint by topical depletion, to augment the general activity of the heart's action by the frequent administration of stimulant medicines. It is in such cases, where the circulation is depressed, the functions of the mind perverted and the powers of life distinctly giving way, that the mere *name* of a disease should have no weight in determining the line of treatment which the judicious practitioner should pursue; and it is in these circumstances, that his superiority over the mere empiric is most clearly perceptible.

"We shall postpone the indications for the use of the Turpentines, Gum resins and Balsams, in diseased conditions of the mucous membranes, to the head of Expectorants and to the special drugs as they severally come under review. The employment of the specific stimulants of the spinal cord will be advantageously postponed in a similar manner." (Pp. 6—10.)

The chemical introduction exhibits a brief survey of the present state of chemistry, as applicable to materia medica—quite "au courant du jour."

From the section on the Inorganic Materia Medica, we cite the entire article on Iodine.

"IODINIUM.—Eq.=126·57.

"*Phys. Prop.*—A solid, occurring in the form of small scales of a black colour and metallic lustre. *Consistence*, brittle and pulverisable. *Density*, very great, nearly nine times that of water. *Odour*, powerful and irritating. *Taste*, hot and acrid.

Prep.—*Kelp*, prepared by the incineration of sea-wrack, is lixiviated; and, after the removal of the greater part of its salts by crystallisation, the mother liquor contains iodides of sodium and potassium. The potassium or sodium is removed by distillation with sulphuric acid and peroxide of manganese, which last is required to supply oxygen for the formation of potash or soda, with which the acid may combine.—The results, then, of the decomposition are, iodine, sulphate of potash, and sulphate of manganese;

the former comes over and is condensed. The following formula explains the changes which takes place :—

" KI and MN O_2 and 2 SO_3=KO, SO_3 and MnO, Q SO_3 and I.

" *Chem. Rel.*—It is easily volatilised, forming a deep violet-vapour. It is soluble in water, alcohol and ether. A solution of iodide of potassium is a much better solvent than water alone. It combines with metals to form iodides.—Its test, when free, is a cold decoction of starch, which forms with it a deep blue compound, iodide of amidine. A solution of an iodide gives a yellow precipitate with nitrate of silver and with acetate of lead, and a scarlet precipitate with the persalts of mercury.

" *Adulteration.*—The chief adulteration of iodine is the presence of a large quantity of water, often so considerable as to render the inside of the bottle containing it visibly wet. Other fixed impurities, as plumbago, peroxide of manganese, charcoal, &c. are not so common ; and are readily detected by volatilising a small quantity on the end of a spatula.

" *Operation.*—When taken internally, it is absorbed, and in an exceedingly short time can be detected in the urine and other secretions. It stimulates into activity all the secreting organs, and modifies the function of nutrition. Under its moderate and continued use, chronic tumours disappear, especially those arising from strumous or chronic inflammation, and the disposition to their formation appears to be in some degree checked.—If its use be too long continued, it causes irritation of the mucous membranes ; especially of the air passages and alimentary canal, causing headache, coryza, heartburn, giddiness, and sometimes a state which has been termed *iodism*, characterised by fever, thirst, intense prostration, &c. Sometimes, under its use, the secreting organs themselves become absorbed, as the mammæ and testes. Its effects on nutrition vary much in different individuals ; some gaining flesh, while others suffer considerable emaciation.—Externally applied, it acts as a powerful irritant and vesicant, staining the skin dark yellow.—When administered in large doses, it acts as an irritant on the *primæ viæ*.

" *Uses.*—The class of cases for which iodine has been administered with the greatest success, are chronic diseases occurring in scrofulous habits ; especially enlargements and indurations of various organs, as in bronchocele, for which burnt sponge was previously successfully administered, its beneficial effects appearing to depend on a small quantity of iodine contained in it. It has been used with great success in all the forms of scrofula, as scrofulous ophthalmia, diseases of the bones and enlargement of the lymphatic glands ; also an enlargement and induration of any part from chronic inflammation, as of the liver, spleen, uterus, &c. ; also in nodes. Its employment has been attended with benefit in subacute and chronic rheumatism, especially when the pain is increased by heat ; in syphilis, more particularly in the secondary affections arising from that disease ; and in chronic skin diseases. From its causing increased activity of all the secreting organs, it has been used, combined with other medicines, in almost every disease ; as a diuretic, emmenagogue, cholagogue, &c. As an alterative it has been given to improve the secretion from unhealthy ulcers, in various chronic discharges, as leucorrhœa, &c.

" *Dose.*—Gr. $\frac{1}{2}$ upwards. It is usually given dissolved in a solution of iodide of potassium, or as iodide of starch.

" *Off. Preps.—Tinctura Iodinii Comp.* (Iodine and iodide of potassium dissolved in rectified spirit.) *Dose.*—℥ v—xv.

" *Unguentum Iodinii Comp.* (Iodine, iodide of potassium, a little rectified spirit, and lard.") (Pp. 53—55.)

The following also is the entire article, on Valerian from the Vegetable Materia Medica:—

"VALERIANA (*Radix*).

"*Description.—Form*, a short tuberose rhizome, from which radical fibres come off, three or four inches in length, which are the officinal part. *Colour*, yellowish-brown, when dry. *Odour*, fœtid and peculiar, and not disagreeable in the fresh plant. *Taste*, warm, camphoraceous, and nauseous.

"*Chem. Comp.*—Its most important ingredients are, volatile oil, valerianic acid, resinous and gummy matters.

"The volatile oil is obtained by distillation of the root with magnesia, in order to fix the valerianic acid. It is of a light-green colour, and lighter than water, having the odour of the valerian.

"The valerianic acid, when set free from the magnesia by sulphuric acid, occurs as an oily liquid, having an odour similar to the oil, but an acrid acid taste. It is probably formed by oxidation of the oil. It can be procured artificially by oxidation of the oil of potatoes or grain spirit, to which it stands in the same relation as acetic acid does to alcohol. It forms soluble salts, with bases, as oxide of zinc and quinine, which have lately been introduced into medicine. Formula, $HO+C_{10}H_9O_3$

"*Oper. and Uses.*—Valerian is stimulant and antispasmodic. We have found it of some value in removing the paroxysms of headache, which occur in atonic dyspepsia and anæmia. It has obtained a reputation in convulsive affections, as epilepsy, hysteria, and chorea. We have seen it of service in hysteria, but never in epilepsy.

"*Dose*—℈j—ij.

"*Off. Preps.—Infusum Valerianæ.* Valerian macerated in boiling distilled water and strained.) *Dose*, f℥j—ij.

"*Tinctura Valerianæ.* (Bruised valerian macerated in proof spirit, and strained. *Dose*, f℥j—iv.

"*Tinctura Valerianæ Composita.* (Bruised valerian macerated in aromatic spirit of ammonia, and strained. *Dose*, f℥fs—ij. More stimulant than the two former preparations." (Pp. 264, 265.)

Though the work professes to be founded exclusively on the London Pharmacopœia, we are glad to see the authors have not scrupled to correct many of the errors and oversights of the edition of 1836. For example, we find Hebradendron Cambogioides, the plant affording gamboge, as shown by the late Professor of Botany in the University of Edinburgh, substituted for the visionary stalagmitis, then clung to by the London College; Aconite, as of old, referred to the Aconitum Napellus, instead of the Aconitum Paniculatum; the Buchu referred to the genus Barosma, instead of Diosma, the species affording senna leaves, taken from the Edinburgh Pharmacopœia and Dr Christison's account; the root of the Punica Granatum, introduced as a far more appropriate article than the bark of the fruit; the species of Cinchona, modelled on those of the Edinburgh Pharmacopœia; Ipomæa Purga, adopted as the name of the jalap plant, instead of Ipomæa Jalapa, as given erroneously by the London College, &c. &c.

In the chemical department, under Liquor Potassæ, the plan

adopted by the Edinburgh College, on the recommendation, if we remember right, of Berzelius, of boiling the carbonate of potass with the lime, is pointed out as preferable to the London process. But an essential part of the plan is omitted, namely, the addition of the lime in small portions at a time, in the form of milk of lime, and boiling for a short time after each addition—the advantage of this method being, that the precipitate assumes a granular state, so as to be much more readily separated. We are glad to see our authors denounce the term "sesquicarbonate," applied by the London College to the bicarbonate of soda. Our time does not permit us to search for farther instances, in which our authors dissent, in the chemical department, from the London Pharmacopœia.

In the appendix, besides mineral waters, baths, and detraction of blood, local and general, we find some of the newer medicines of the day—the citrates of iron, the ammonio, sodio, and potassio-citrates of iron, the citrate of iron and quinine, the ammonio-tartrate of iron, the argenti oxidum, naphtha, the sulphate of morphia, the valerianic acid and the valeriantes, the sulphate of bebeerine, matico, Indian hemp, tannic and gallic acids, cod liver oil, and the like.

The book would have been more extensively useful had some means been taken to indicate the additional articles and preparations admitted by the two sister Colleges. They indeed have almost cause to complain of a work in English, on Materia Medica, in which their existence is hardly adverted to. Students, however, in the schools in which the authority of the London Pharmacopœia is paramount, will feel grateful for this omission, though we fear the publishers may not discover that this omission will tell favourably on their gains.

The work is, on the whole, a good compendium of the subject. Their task appears to be executed with no small ability on the part of both authors. We have not sought for faults, but we have not met with any of material consequence in the somewhat cursory examination which we have given to the work, whence we infer, that it is not deficient in those essential qualities of a work on Materia Medica—exactness and accuracy.

De La Puberté et de l'Age Critique chez la Femme au point de vue Physiologique, Hygiénique et Médical, et de la Ponte Periodique chez la Femme et les Mammiferes (d'apres un ouvrage couronné par l'Academie Royale de Medecine). Par M. A. Raciborski, M.D., Ex-chef de Clinique de la Faculté de Medecine de Paris, &c. 12mo, pp. 520. Paris, 1844.

On the subject of puberty, menstruation, and the critical age in females, the work above quoted contains no inconsiderable amount

of valuable observation, as well practical as speculative. On these points, however, it is not our intention to enter at present. We shall limit our attention to that part of M. A. Raciborski's work which treats of the periodical exclusion of the ovum in females of the human race and mammiferous animals, independently of the influence of the male.

The following passages, which we translate from our author's preface, will show that he claims for himself the discovery of this fact in the physiology of the function of reproduction :—

" Fifteen months since (summer of 1842) we presented to the Academy of Sciences, a memoir on the anatomical relation of the Fallopian tubes to the ovaries. In this paper we made known the true character of the Fallopian tubes in the canine race, in which perhaps have been performed most frequently the experiments designed to throw light on the mechanism of fecundation. We proved that the anatomy of the Fallopian tubes in the female of the dog-kind was generally unknown, and that in all the experiments in which it was believed that ligatures had been applied to these tubes, it was the horns of the uterus that had been tied ! This discovery necessarily made those experiments of no avail, to which the highest importance had been attached in physiology, and already prepared for the overthrow of the most prevalent theories on fecundation, and the reproduction of species, an overthrow which our second memoir was to complete."

" It was in the month of July last (1843), that we presented to the same learned society this second memoir, in which our aim was to prove the existence of a spontaneous exclusion of the ovum (ponte spontanée) taking place in all mammiferous animals at the period of heat, and in women at the menstrual terms."—Preface, p. vi. vii.

" Struck with the fact, that in almost all the inferior animals, the ova at fixed periods quit the ovaries before being subjected to the influence of the fecundating secretion of the male, some distinguished naturalists, among whom we will in particular cite Duvernoy and Pouchet, had thought that the same should hold in the case of mammiferous animals. M. Pouchet, about all, laid down this idea as a general law, with a vigour and energy little witnessed as yet in the sciences."

" Nevertheless this brilliant thought still stood in need of demonstration to become a part of science ; and we are proud to declare that no one had demonstrated anatomically the pre-existence of such an exclusion to fecundity, and even to characters of sex, before our memoir was presented to the Academies of Medicine and of Sciences."—Preface, p. ix.

Before throwing any doubts on the originality of our author's account of this matter, we shall refer to some passages in the body of the work, that our readers may first understand better the general tenor of his views.

After pointing out the evidence of the identity of character between the menstrual period in women, and the heat of other mammiferous animals, he goes on to say:—"When a female pig is on the point of becoming fit for reproduction, the most superficial vesicles of the ovary increase considerably in volume, so as to attain often near two centimetres (4-5ths of an inch nearly) in diameter. In this state of things, they lose their transparency, owing to the thickening of the proper membrane, which sometimes acquires the thickness of one millemetre (nearly 1-25th of an inch.) At the same time the liquid contained in the vesicle becomes more viscid, and, under the microscope, presents a great many more granulations than before. On the approach of heat, a great congestion and some hemorrhage are manifested within the vesicles. On being cut into at this period, the Graafian vesicles discharge a very sanguineous fluid, in the midst of which the ovum of the size of a poppy seed, and therefore larger than at any other period, can sometimes be distinguished. For at a less advanced stage, the membranes which form the walls of the vesicles, are not separated by any liquid, and they remain always in contact. At the end of a few days, if the female be kept completely apart from the male, the vesicles, already in this state of advancement, undergo a spontaneous rupture, and empty themselves of their contents. Examined a few days after the rupture, the follicles are collapsed, and at their surface present a fissure from three to four millemetres (between 1-6th and 1-7th part of an inch nearly) in diameter, the tips of which in most cases are already in union. The pouch of each follicle is then sensibly diminished, and almost always contains little clots of blood still soft."—P. 369.

Again he says, after some farther particulars of the changes at this period in the ovary of the pig—"What we have observed in the female pig, takes place in nearly the same manner in females of other mammiferous animals, and in particular in cows, sheep, mares, she-asses, hares, rabbits," &c. &c.—P. 375.

In another chapter, our author goes on to speak of the same process in females at the period of menstruation. "The cause," he says, "which has kept this subject so long in a state of obscurity, is the extreme smallness of the ovum, which does not exceed the twenty-thousand part of the bulk of the body."

Speaking of the progressive development of the vesicles of De Graaf, he says,—"This process, far from ceasing, as was believed, after puberty, continues until the extinction of the reproductive function. The follicles which come first to maturity disappear, but on their traces follow new generations of follicles destined to pursue a march in every respect like that of the first. It has been, then, a general error to regard the Graafian vesicles present at puberty as being designed to remain for the rest of life in the same state, unless they came to be subservient to the

reproduction of the species. Once for all, the Graafian vesicles, present at puberty, exist no longer at the end of a certain number of years, but have become replaced by others. The ovaries, as may be seen, form no exception to the rule which governs the anatomical composition of all the other organs, and which demands a perpetual renewal of molecular parts; for in the organic world nothing can be in a state of rest."

In proportion as the ova ripen, the follicles of De Graaf, in which they are contained, increase in volume. Ten or twelve days before the exclusion (*la ponte*), these are already prominent on the surface of the ovary, sometimes in the form of a nipple, sometimes under that of a large protuberance, having still half-transparent walls, and containing a whitish-yellow, viscid liquid, rich in granulations, visible under the microscope, and coagulating with alcohol, boiling water, or nitric acid. At this time, when the body is opened soon after death, the ovule may be distinguished easily enough in the midst of the granulations. The whole ovary becomes the seat of much congestion, and is sensibly augmented in volume."

"Even with the most attentive examination, we have never found any thing interposed between the membranes of the dilated vesicle—these remain always in contact, and the distension of the vesicle is produced solely by the augmentation of the quantity of liquid contained in its cavity."

"In proportion as the development of the follicles of De Graaf makes progress—in proportion as the period of exclusion approaches, the walls of the vesicle, though more and more distended, begin to become a little less transparent, owing as well to the thickening of the internal membrane as to the hemorrhage, which, towards the completion of the period, establishes itself within the vesicle. At last, we begin to distinguish the point at which the rupture is to take place, namely, at the most salient spot of the swelling. This spot usually assumes the form of a red mark of several millemetres (several 25th parts of an inch) in extent, produced by a marked injection, or even due in part to a slight effusion of blood in the substance of the tunics of the vesicle."—(Pp. 420—425.)

We pass by several details which follow, and take up the rest of our author's description. "As soon as the vesicle is ruptured, the walls tend immediately to return upon themselves. But this retreat of the parts is quickly arrested by the resistance of the clot. Then the folds, which form on the inner membrane on the retraction of the exterior tunics, disappear, in consequence of their mutual adhesions, and the cavity diminishes. Nevertheless, the more soluble portions of the clot are reabsorbed, and the clot becomes less than before. Then arises a new retraction of the external tunics; the internal membrane forced unceasingly to follow the retreat of the clot and to mould itself upon it, forms anew

a certain number of folds, which come at last to adhere to each other, and thus diminishing the surface of the internal membrane; then, again, a new absorption of the soluble parts, and a new retreat of the tunics, a new diminution of the cavity, and so forth."

"This process having gone on, it happens most frequently, that at the end of a month, there remains no more of a sac, which at first could have contained a large cherry, than a small cell hardly sufficient to receive the stone of that fruit. This was to be observed in the female, whose case is first reported. It was but a month before that this female had menstruated, and yet the excavation, corresponding to the most recent cicatrice, surrounded with a well-marked red areola, would hardly have contained a hempseed."

"Lastly, the absorption of the clot, and the retraction of the cavity which contains it, going on in this manner for a while, there arrives a time when the two opposite walls of the pouch come into contact—it forms merely a single stria of yellow or slate grey colour, or a small yellow mark of this form <."

"In many cases we may resolve the striæ with a pointed instrument, into two distinct plates, and thus recover the traces of the former cavity."

"The period of from four to six months suffices, in general, to bring these vesicular cavities to this degree of reduction; and we cannot by any means understand on what the major part of accoucheurs and medical jurists found their opinion, when they lay down the presence of corpora lutea in one of the ovaries, as the sign of recent delivery. The exclusion of the ova (la ponte) being suppressed during the term of pregnancy, the so called corpora lutea, which are no other than the different forms of the anatomical characters of the preceding processes of exclusion (pontes), have more than time to be entirely effaced, and in females cut off just after delivery, but the faintest traces of them are met with. At the same time that all these modifications are produced in the interior of the ovaries, the cicatrices of the external slits undergo successive changes of aspect. At the end of six weeks there is no longer a red areola around the slit, it is replaced by another of slate grey. At a later period, the areola entirely disappears, and nothing but superficial depressions are seen in the place of the old rents. These superficial depressions do not always preserve their position relatively to the internal cicatrices of the old vesicles; it often happens that these last, in the end, undergo a degree of displacement, owing to the development of new follicles."

"The progressive diminution of the internal membrane of the ruptured vesicles, it is easy to see, explains the secret of the disappearance of the vesicular pouches. As long as one can discover any trace of yellow colour, it is certain that there are still some remains of the internal membrane, for that colour belongs to it." Pp. 434—438.

One or two farther extracts from this part of our author's work must suffice.

"As often as an opportunity offers of examining the ovaries of a female cut off by an acute disease, and previously free from menstrual obstruction, one is sure to find in her follicles all the degrees of development which we have passed under review. Here we shall see old cicatrices having the appearance of yellow or slate grey spots; there a large pouch filled with clots of blood; elsewhere a transparent vesicle, already prominent on the surface of the ovary," &c. &c.—P. 438.

"The menstrual flux is evidently therefore nothing else but the critical termination of the congestion which accompanies the highest degree of development of the follicles of De Graaf. The plain conclusion from the whole of the preceding description is, that it coincides with the hemorrhage which takes place in the interior of the vesicle some days before the exclusion of the ovum."—P. 446.

The preceding extracts include the most important points taught by our author on this highly interesting subject. The chapter, however, from which we have taken these, contains many illustrations, proofs, and explanations, which cannot be included within the limits of a review.

One point of importance our readers will expect us to advert to, before closing this article, namely, how far M. A. Raciborski deserves the praise of that originality on this subject, to the award of which, we have seen, he lays almost exclusive claim.

We are far from any purpose of depreciating the value of M. Raciborski's labours, but we cannot help thinking that he has a mind, if permitted, to take the lion's share of the credit on this occasion. That a discovery has been made, is what is beyond dispute—a discovery, under the most limited view of it, second to none of those really great advances, which the last quarter of a century has seen established in the physiology of generation. A great law in the animal economy has been brought to light, and what we are called on to pronounce is, to whose penetration is the world indebted for this new insight into the mysteries of Nature.

M. Raciborski seems to have persuaded himself, that on the occasion of a discovery in the laws of nature, the chief merit is due rather to him who completes the proofs of its truth, than to him who first pronounced on its existence. There are doubtless cases in which his is the right mode of thinking; where, for example, the law lies so much on the surface of things, that a random guess may reach it, but where the proofs may not be accessible without great efforts, both of invention and labour. But such is not the character of the case before us. Here is a set of phenomena manifestly connected with the function of generation, apparently peculiar to the females of the human race, or having

no distinct parallel in the rest of mammiferous animals, and so remarkable as to make it impossible they could have escaped the attention of every physiologist from the time of Hippocrates downwards, on the precise connection of which, with the origin of the embryo, no one in all that period has been able to hit the truth till within these few years. In such a case, we must think the chief merit to be due to him who first lays down the law in terms so definite as to fix public attention upon it. Here the proofs lie within reach—the law itself is so much a matter of fact, that hardly any thing but diligence is requisite to be the first with the proofs, and most obvious corrections. M. Raciborski confesses that he was not the first to lay down the law.

But M. Raciborski's priority as regards the proofs is disputed. And many pages of this work are bestowed on the vindication of his claim to this merit. Here our author, in support of this claim against that of Bischoff of Heidelberg, like a true Frenchman, regardless of the unfrenchness of his name, seems to assume France to be the sole theatre of fame, and takes to himself the merit of priority—because Bischoff's observations were unknown in France till Professor Breschet made them known to the Academy of Sciences at the same sitting at which Raciborski's memoir was read! Our English claimants to some share in this discovery, he sets aside with still less ceremony,—saying that it is not his intention to give much extent to the historical notice of his subject. On the French claimants, to the same credit, he bestows a somewhat larger attention. Among his most dangerous French rivals, are Negrier,* Gendrin,† Pouchet,‡ Duvernoy.§

It would be a difficult task to estimate the several degrees of merit to be assigned to each of these gentlemen; but all of them have contributed towards the proof, elucidation, or correction of this law.

All these and many more are contributors towards the establishment of an important law; but let us for a few moments take a somewhat larger view of the subject—who first distinctly pointed out this path of investigation?—who, in short, had the genius or good fortune to carry his conjectures before others into a new line of discovery?

Till Fallopius, in the sixteenth century, discovered the tubes

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* Recherches Anatomiques et Physiologiques sur les ovaires de l'especè humaine, considérés specialement sous le rapport de leur influence dans la Menstruation. Paris, 1840.

† Traité Philosophique de Medecine Pratique. Paris, 1839, vol. ii. p. 28, et seqq.

‡ Théorie positive de la fécundation des mammiferès basé sur l'observation de toute la série animale. Paris, Librairie Encyclopédique de Roret, 1842.

§ Memoire lû au Congrès Scientifique de France à Strasbourg, 1843.

which bear his name, nothing could be known of the connection between the uterus and ovaries, and though it is now not far from two hundred years since De Graaf described the vesicles in the ovaries, which take their name from him, the changes of which these are susceptible, independently of fecundation, had hardly attracted attention up to the present century. Haller describes these "particulæ memorabiles," so he terms them, as being of different sizes; and yet we find authors of note, still alive, on the subjects of anatomy and physiology, though avowedly following his description, omitting this important circumstance in their history. Thus, it appears to have become the prevailing opinion, that from fifteen to twenty such vesicles became developed at the time of puberty, to remain stationary, or nearly stationary, for the rest of reproductive life, unless in the case of conception by the influence of the male. The first step towards more just notions on the subject, appears to have sprung out of the apparent evidence of the existence of corpora lutea—produced independently of the influence of the male. This view was first advanced by Blumenbach, and afterwards by Sir E. Home. It is only of late, however, that the belief has arisen in the successive production and maturation of ova throughout reproductive life. Instead, therefore, of each ovarium being provided with a complement of fifteen or twenty to serve for the whole of this part of life—their number is to be counted by hundreds. According to Dr Barry's calculation, the stroma of the ovary in the cow is so crowded, at puberty, with ovisacs, that a cubic inch would contain two millions of them.

The discovery of the succession of ova in different stages of progress throughout reproductive life, and, independently of intercourse with the other sex, necessarily leads to the question, what becomes of each as it arrives at maturity? And the answer now brought out is, that it is destined to be excluded, or "laid," at the time of menstruation. The dependance of menstruation on this act, or at least their intimate connection with it, then becomes a self-evident proposition.

We see it remarked, that Dr Freind, in his Emmenologia, first pointed to the dependance of menstruation on the function of the ovary. We have not been able to fall on the passage, unless it be that in which he refers to what Platerus says of a woman having menstruated after the removal of the uterus. Cullen distinctly states his belief, "that the state of the ovaria has a great share in exciting the action of the uterine vessels, and producing the menstrual flux." And there is a case, related by Pott, in which menstruation terminated on the removal of the ovaries. Another case was published by Pears, in 1805, that of a young woman who died at 29, without having menstruated, and in her the ovaries were found to be absent. Cruickshanks, in 1797, remarked the ovarium perforated in a young woman who died at the men-

strual period. Many cases of this kind have been since published, particularly by Dr Lee, partly met with by himself, partly supplied by Sir Astley Cooper, Mr Girdwood, and others. But as far as we can discover, Dr Power was the first who had the boldness to affirm, that an ovum escaping from the ovarium at every monthly period is the cause of menstruation. To the merit of this conjecture, it was not necessary to say that the throwing off of an ovum is the *cause* of menstruation—it is enough that the coincidence between menstruation and such an act should be pointed to. If the evidence brought forward by Raciborski and his rivals be of any value, Dr Power's conjecture was true, as far as regards the coincidence. No one is entitled to say, that Dr Power's conjecture was a random thought—there were facts already reported, with which doubtless Dr P. was acquainted, which, but for their limited number, would have led any physiologist of ordinary penetration to this view. Dr P.'s merit, on assumption that he really took the lead in this matter, is that of having anticipated the time when this discovery must have flowed directly from accumulated facts, and that by an effort of mind of the same character, however much inferior, with that by which Newton reached the idea of universal gravitation, long before the state of physical science had brought that subline conception near to the level of common minds.

Dr C. Ritchie of Glasgow denies that the bodies thrown off at menstruation are true ova. He terms them corpora periodica, corpora menstrualia. His view does not accord with the ordinary simplicity of the operations of nature. But even he must admit, that twenty or twenty-five years ago, no such idea as the uniform or frequent rupture of the ovaria at menstruation was entertained, and therefore that Dr Power, or who ever else first drew attention to the kind of change which the ovary undergoes at menstruation, has pointed out a new and fertile course of investigation. We have read Dr Ritchie's papers but cursorily. He is too eloquent—he sweeps along without giving the reader time to distinguish his imaginings from his facts. We trust when he collects his papers for separate publication, he will put them into a more physiological form. For we are sure there is much in them that deserves to be understood and reflected on.

In the meantime, we recommend our readers to peruse Raciborski's work, as a book which cannot be overlooked by any one who wishes to make himself acquainted with the present state of our knowledge of the part which women support in the function of reproduction.

PART IV.—PERISCOPE.

PHYSIOLOGY.

Cause of the Colour of the Dark Races of Men.

"The opinion which refers the blackness of the negro to the power of the sun, is of ancient date: it is taken notice of by Pliny; it is insisted on in modern times by Buffon, Smith, and Blumenbach. The two last named authors consider the blackness of the skin as a sort of perpetual jaundice, kept up by the intertropical heat. There is, according to Blumenbach, a copious deposition of carbon in the mucous body, connected with the excited activity of the biliary system, always observable in warm climates. To consider the negro, whose bodily health is certainly not inferior to that of an European, as labouring under a perpetual disease, has been justly regarded as an absurd hypothesis. But this is far from a just representation of Blumenbach's opinion. It is certain that the functions of life are very much influenced by external agents, and by none more than by the external warmth of the atmosphere. It is equally certain, that there is a strong disposition to an equilibrium among the functions, particularly among the excretory functions; so that the torpidity of one is compensated for by an increased activity of others, and that without any deviation from the state of health. Why, then, should we be called on to measure the healthy secretion of the liver in a warm climate, by the standard of its secretion in a temperate country? That which would be a jaundice in Britain, may be a state of health on the coast of Guinea. Although, however, Blumenbach's theory is not at once to be rejected, on the false imputation of ascribing the colour of the negro to a perpetual disease, it cannot, in its present state, be said to be of a very probable nature; and yet it, very possibly, points to the real character of the difference of colour, in the original inhabitants of tropical countries, namely, to a modification of the great excretory functions of the body, particularly of the respiration, the excretion of bile, and the action of the skin, produced by the influence of the heat and light of the sun, and of a warm atmosphere operating on naked tribes for a course of ages. For it is not inconsistent with the laws of the animal kingdom to suppose, that such a modification, at first limited, should be accumulative through successive generations, until it reached a maximum; and, that it should not be lost, by the removal of a tribe to a temperate country, and by the use of clothes, unless where these circumstances shall have operated through as many generations as had been required, under the opposite circumstances, to produce the maximum effect.

"It may be imagined, that one argument in favour of the power of the sun to change the colour of the surface has been omitted, namely, the tanning power which it possesses over the skin of the whites; but it does not appear that this change is of the same character with the negro blackness, as it has its seat, not in the mucous body, but in the external layer or scarf-skin.

"On the hypothesis, then, that the original pair was white, the sum of the argument in favour of climate, as the cause of the difference of colour, is, that the aboriginal inhabitants of tropical countries are black; that the dark tribes found in cold or temperate countries are probably sprung from them; and that the influence of the heat and light of the sun, and of a warm atmosphere, acting with accumulative effect, on the skin of naked tribes, for ages, must so alter its secretion, and the original relations of

all the excretory functions, that there is no difficulty in the supposition, that the colouring matter produced from it, in all the healthy individuals of mankind, should become so copious in them, as to be capable of communicating the most perfect blackness.

"I have still to add a few observations on the hypothesis, which assumes black to have been the colour of the original pair. On this assumption, one very compendious hypothesis has been started, which is, that the white races have originated from the accidental albino progeny of the blacks. So little probability, however, attends this hypothesis, that it would be a waste of time to enter on the refutation of it.

"Among the writers who have been led to the conclusion that black is the original colour of the human race, Dr Pritchard is pre-eminent. The great object of his work is to prove, by historical documents, that savage tribes have always been of dark colours, and that advancement to civilization has always been accompanied with a change to the lighter hues. The evidence adduced appears to bear him out in this statement. He exhibits also many points of analogy between domestication, in the inferior animals, and civilization in man, and endeavours to show that the effects of domestication are parallel to those of civilization; inasmuch as many animals of dark colours in the wild state, as horses, oxen, sheep, and poultry, acquire light colours in the domesticated state. As a change to civilization from the savage state includes the growth of many circumstances, which cannot but alter the original, or the previous relations of the functions of the body, this view corresponds, in a great measure, with what was stated above in speaking of the origin of the several varieties from a white pair. Nor is it essential to this view of the subject, that the original pair should be assumed as black. If certain causes are capable of so modifying the actions of the body, as to convert the black colour of the skin to white, it is as easy, or almost as easy, to suppose the opposite causes adequate to the change of the white colour into black, or that the black colour of the negro is a deviation from the original model, produced by the degeneration from civilization to a savage state of life. It may indeed, at first view, appear less difficult of conception, that the thick and dark-coloured mucous body of the negro should become gradually thinner, under the influence of protection from the sun and weather, more regular habits of life, a better diet, and the other circumstances constituting civilization, until it passed at last into the slender colouring matter of the whites, than that this slender substance should, under the opposite circumstances, increase to such a thickness as it is found to possess in the negro. And further, we may feel more ready to believe that the other differences, more particularly the development of the brain and the expansion of the intellect, should be brought about gradually, in the transition of men, from subjection to instincts, forward to the command of reason, than that, having possessed reason, they should suffer a diminution of the physical organ of intellect, and again fall under the control of instinct.

"Still there is one great obstacle in the way of this supposition: if the negro were the original type of the human race, the parent of the most intellectual races known on the earth, whence has it happened, that the negro inhabitants of Africa have stood still, for so many thousand years, without any tendency to that advancement, which has wrought such signal changes on their brethren of Europe? Geographical position, and a few other causes, of their mental inactivity, may indeed be suggested. Yet these are far from satisfactory. So that, notwithstanding the somewhat more easy solution of the difficulty as to colour, on the supposition that the negro was the original model, I think it will be admitted, on a review of the entire case, that the whole circumstances correspond better with the idea, that the negro is a degenerate caste of a more perfect original standard. Or the truth may, in this case, as in so many others, lie between the two assumptions: the original pair may have been intermediate, as well in colour as in all other peculiarities, between the Negro and the Caucasian race; from which, on the one

hand, the negro has degenerated under the influence of barbarism, while, on the other, the Caucasian has grown up to perfection under the improving effects of civilization. I need not repeat, that the whole of this second branch of the subject has not yet advanced beyond the state of rational conjecture, and hence, that it would be unphilosophical to fix any opinion. If pains are taken to restrain our conjectures within the boundaries set by the laws and analogies of the animal kingdom, and to alter and remodel them, as the knowledge of facts accumulates, there is little reason for doubt of our final arrival at the truth. It cannot indeed be predicted, that the light of nature will ever enable us to ascertain whether our first parents were black or white. Yet we may hope confidently to discover the conditions on which colour, and the other remarkable differences of the several races, depend, so as to obtain from this second branch of the inquiry, as distinctly as from the first, an evidence of the unity of mankind."—Wood on the Skin.

SURGERY.

Strabismus, as a remedy for several forms of Blindness, instead of the formation of Artificial Pupil.

" The author states that he has employed the process of Petrequin in opacity of the central part of the cornea, with the desired effect. By myotomy, he places a lateral part of the cornea in front of the pupil. In three cases he restored as strong a degree of visual power as could have been expected from the formation of artificial pupils. In one of the cases communicated, he cut through the rect. sup. and the caps. aponeurot. of the eye, thus producing strabismus inferior; and that part of the cornea, which had remained transparent, came opposite the pupil. In the two other cases, by cutting through the rect. extern. and intern., an internal and an external strabismus were produced with an equally successful result."—Dr Sperino in Schmidt's Jahrbücher.—From Med. Times.

Amputation of the Finger by a New Method.

M. Robert recommends the following operation for the removal of the second or middle fingers, at the phalango-carpal articulation.

A longitudinal incision is made along the dorsal aspect of the articulation, extending from the prominence of the joint to about the middle of the first phalanx in the direction of the axis of the finger: then, turning the bistoury towards the radial side, a lateral flap is cut with a single sweep from below upwards to the articulation, which is opened: the phalanx is then disarticulated, the knife passed behind it, and the other flap cut in the usual manner. M. Robert conceives that the advantages, which accrue from this method of operating are, that, two very long flaps being thus formed, the head of the metacarpal bone is covered by the thickest possible cushion, the stump having a fuller and softer covering than by the ordinary mode of operating.—Annales Therapeut. de Med. et Chirurg.

The usual method, it will be remembered, is to remove the digit by an oval incision, the line of which passes through the skin at the exact angle of commissure between the fingers.

We have never in any instance found, that, by this method, the soft parts left were by any means insufficient to cover the head of the metacarpal bone. The smallest amount of deformity, we are convinced, results from this line of incision, while in the method recommended by M. Robert, an unseemly projection will result from the redundancy of soft parts left between the remaining fingers. By extending the incision a

little higher up on the dorsum of the hand, and removing the head of the metacarpal bone, the deformity is greatly diminished, although probably at a slight sacrifice of power in the hand.

On Amputation above the Malleoli, and Chopart's Operation.

In cases of disease of the second row of the tarsus, viz. the navicular and cuboid bones, M. Michel, in the Annales de la Chirurgie of April 1845, recommends amputation above the malleoli, as being preferable to that through the tarsus, as recommended by Chopart, and for the following reasons:—

1st, He considers, from the smaller amount of cut surface in the former operation, that it is less dangerous than Chopart's operation: 2d, The wound heals more quickly: 3d, The patient walks more easily when the heel has not been preserved: and, 4th, He remarks that, from the reaction caused by the Tendo Achillis, the cicatrix is brought in contact with the ground, in consequence of which abscesses form, and a multitude of other evils, which terminate in the stump being useless.

We have seldom seen such an admirable operation as that introduced by Chopart, so summarily dismissed, and upon such an untenable ground. As to the danger of the operation, M. Michel quotes eight cases, of which three terminated fatally. We know that unfortunate results occasionally follow the most trifling operations, and this we have observed to take place much more frequently in the Parisian hospitals than in England; and eight cases are surely far too small a number, from which to draw any conclusion. In a much larger number of cases, which have come under our own observation, we have never seen a fatal result. The healing of the wound is not rapid in the case of either operation; the parts cut, from their tendinous structure, being in each peculiarly unfavourable to primary union. We feel assured that an unnecessary prejudice exists against this operation, from the fear of retraction of the heel bringing the cicatrix in contact with the ground in progression. Mr Fergusson remarks on this subject:—"It has been asserted, that the heel is drawn so much backwards and upwards, particularly in the case of Chopart's operation, that the weight of the body will be thrown on the cicatrix and the anterior ends of the bones; but, if the stump be kept in good position during the dressing, I do not think there is much cause for anxiety on this score."

In every case, which we have seen, the patient has ultimately been able to rest the whole weight of the body on the stump; and in one case, when Chopart's operation was performed on both feet, the patient now walks well with only the aid of a stick in his hand.

But, if M. Michel has such strong objections to Chopart's operation, we would recommend to his particular attention the amputation at the ankle-joint, or rather through the malleoli, which has been lately practised with so much success. In it, there is no possibility of the cicatrix being so retracted as to have the weight of the body thrown on it in walking, and the stump, formed from the thick and fleshy integuments of the heel, forms a most admirable cushion, on which to rest the weight of the body. The danger of the operation too, as far as has yet been observed, is very small. It has already been performed upwards of twenty times in Edinburgh, and, with the exception of one case, when the patient died from another disease, subsequently to the operation, the results in all have been most successful.

Foreign Body in the Tongue for Thirty-Two Years.

A German soldier was wounded in the battle of Gross-Görschen (2d May 1813) by a musket ball, which penetrated the left cheek, carrying away the four last molars of the upper jaw, and, passing through the tongue, made its exit through the left cheek,

carrying away several teeth of the left side of the under jaw. The wounds healed in six weeks, and, except the loss of the teeth, no other deformity remained but the cicatrix of the tongue, which did not impede his speaking or chewing. During the spring of the year, at which time the patient was subject to pulmonary and cerebral congestion, severe pains, with slight swelling of the tongue, came on, to which was added, in the year 1829, a small swelling of its right side, which suppurated and discharged thin matter, after which it gradually healed. On the 2d of May 1845, a similar swelling made its appearance in the same place, which opened without discharging any matter, and, after some days, what appeared to be a small piece of bone presented itself in the opening, which on being removed, proved to be the second molar tooth, which had penetrated the tongue from the musket shot thirty-two years previously, and had during the whole time caused no great inconvenience. The roots of the tooth were broken off by the neck, and the whole surface covered by calcareous deposit.—Reported by Dr Krähe in Medic. Zeit. v. d. Verein für Heilk. in Preussen, xiv. Jahrg. 1845, No. 32.

Operation for Harelip at an early period.

Professor Paul Dubois strongly recommends the operation for the cure of harelip to be performed as soon as possible after birth, thinking that the earlier it is performed, the less the cicatrix will be visible. He has operated on six cases between the first and eighth days after birth, and mentions a seventh similar case, in all of which the result was most successful. Professor Dieffenbach also has been for some time in the habit of operating on these patients at a very early age, and we have heard him express himself very favourably on the practice, the results of the operations being, from our own observation, as good as could be wished. There seems to be some danger in the performance of the operation from a quantity of blood being drawn into the air-tubes during the screaming and struggling of the child, but we are not aware that this has in any case caused a fatal result. One point we have observed in these cases, which appeared to be of importance, viz. the great improvement which soon manifested itself in the appearance and bulk of the child subsequently to the operation, which, we have no doubt, was caused by the powers of suction being given to the infant, which, we can easily suppose, are much impaired by the existence of the cleft. We are not aware that the operation has ever been followed by convulsions. We believe, however, that one case, operated on at the age of three days, terminated fatally, but from what immediate cause we are ignorant.

MATERIA MEDICA.

Fallacy of Dr Birkbeck Nevins' Test for ascertaining the Purity of Disulphate of Quinine. By G. M. Mowbray, Fellow of the Royal Medico-Botanical Society, Member of the Chemical Society, M. P. S., &c.

The following test has been suggested by Dr Birkbeck Nevins, as appropriate for readily ascertaining the purity of disulphate of quinine. "To one or two grains of the suspected salt,[1] add three or four drops of sulphuric acid, in a white evaporating dish, and twice as many drops of water; if the salt contains either starch or fatty matters they will remain, whilst if they are absent, the whole will be dissolved. Let heat be next ap-

[1] If the acid be added first, quinine will not be dissolved by the subsequent addition of water; the water should first be added, and then the acid, as many dispensing chemists have found to their cost.

plied to the solution, and as it becomes concentrated the acid will char any sugar which may be present, which will be indicated by a black stain round the edge of the solution, and the whole will speedily assume the same colour."

Allow me to submit that this test is perfectly valueless, and for the following reasons:—Dr Nevins appears to have overlooked a fact well known to chemists whose investigations have been directed to organic compounds, that salts may be readily recognized as belonging either to the organic or inorganic class, by heating on platina; if the compound under examination, after heating, yields a carbonaceous residue, then it belongs to the former class; if a whitish wash be left after ignition, then an inorganic compound has been operated upon. Now, Dr Nevins directs us to add sulphuric acid to the disulphate; the effect of this is to convert the salt into the soluble sulphate; and on the application of heat, this soluble sulphate in common with all organic salts is decomposed, yielding a carbonaceous residue. Could Dr Nevins have shown, what is opposed to all experimental results in the organic compounds, that in the presence of sulphuric acid quinine is not readily carbonised, and that the reverse of this is the fact, as may readily be ascertained by heating a crystal of the soluble sulphate by the side of a sample of quinine purposely adulterated with sugar or gum, his test might be so far admissible; but as Dr Nevins has not shown this, and it cannot be shown withal, therefore his test is fallacious.—Medical Times, Sat. Oct. 4, 1845.

36 Paternoster Row.

Reaction of Alkaline Bicarbonates on Salts of Morphia, Narcotine, Strychnia, and Brucine—Oppermann.

The experiments of Lassonne have demonstrated that several organic substances, such as sugar, tartaric acid, albumen, interfere with the precipitation of an oxyd, and prevent its detection by a large number of reagents. M. Perroz having further observed that a certain number of bases are thus *masked* by tartaric acid, M. Oppermann has endeavoured to ascertain if the separation of vegetable alkalies is, in a similar manner, prevented by albumen, tartaric acid, and other fixed organic bodies. The chief results of his researches are, 1st, That salts of morphia, in combination with tartaric acid, are *not* precipitated by the alkaline bicarbonates, whereas narcotine is, under their influences, immediately deposited in the shape of a thick white cloud. 2d, Salts of Strychnia are also precipitated by the same reagents, which remain without action on solutions containing brucine.—French Academy of Sciences Oct. 6, 1845.

Treatment of Hemorrhoids with Chromic Acid.

Alexander Ure, Esq., reports in the Lond. Med. Gaz. (March 1845), two cases of hemorrhoids successfully treated with chromic acid. This substance is a most powerful oxidizing agent, and is exceedingly convenient of application, inasmuch as it consists of a thick crystalline pap, which, when rightly managed, does not spread beyond the prescribed limits; and so soon as its erosive operation is finished, it passes into the state of inert pulverulent sesquioxide.

The first case was a tailor, 31 years of age, who had, at the verge of the anus, a dark hemorrhoidal tumour, the bigness of half a walnut, of which the surface is ulcerated and extremely painful. The tumour had been extruded several days, and various attempts at reduction proved of no avail. The patient seemed in a most deplorable state, haggard, and worn out by suffering, from which he could only obtain a brief respite by observing a half bent posture. He had been subject to piles for some years. The bowels were open. Mr U. applied the chromic acid freely over the whole of the diseased surface.

April 29th.—Patient says that he felt considerable uneasiness in the part during the whole afternoon following the application. He is now quite comfortable in all respects. A considerable slough has been detached, and the excrescence is withered and shrunk, to the bulk of a raisin. Bowels confined. Half an ounce of castor-oil.

May 1.—Complains of a feeling of aching referred to the sacral region; bowels torpid; inappetence for food; sense of langor and listlessness. To take an ounce of compound infusion of gentian, with a drachm of Epsom salts, every morning.

May 13.—Perfectly cured. The trifling remains of the pile are wholly insensible, and create no inconvenience whatever; his bowels act naturally.

The second case was a married woman, aged 50. For a month previously she had been suffering much from two hemorrhoids situate upon the right side of the verge of the anus, each about the size of a kidney bean, and was anxious to obtain alleviation. Various external and internal means had been already employed, but in vain. She had been troubled with piles at different times during the preceding eight years. Her general health is tolerably good, and the bowels usually regular. Since her last confinement, ten weeks ago, she has complained of shooting darting pain referred to the anus. It was determined to apply chromic acid, which was accordingly done May 30th. It was found necessary to repeat the application on the 1st of June. This caused acute burning pain both times, destruction to a considerable amount of the diseased texture, consolidation of the remainder, and permanent relief from the distressing ailment.—London Med. Gaz.

Experiments to determine the Physiological effects of Conium Maculatum. By PLINY EARLE, M.D., Physician to Bloomingdale Asylum for the Insane, New York.

The conium maculatum, in the form of extract or inspissated juice, is somewhat extensively used in general practice; and, being considered, as it unquestionably is, a narcotic, is not unfrequently prescribed as a *soporific.* Having for several years been accustomed to the free use of this preparation in the treatment of insanity, without ever procuring sleep as its effect, even in doses gradually raised to sixty, eighty, and ninety grains, three times in the day—and having not long since heard an eminent physician, who prescribes for his patients "nearly a hundred dollars worth annually," express a doubt that this extract has "any medicinal virtues whatever," I determined to ascertain, by self experience, the nature of its immediate effects upon the human system.

On the 1st of January last, I commenced taking an extract prepared by Lee and Butler, of Hartford, Connecticut. The following schedule exhibits the results of the experiment:—

Jan. 1st—Took 1 grain 3 times; morning, noon, and evening.
" 2d—Took 2 grains 3 times; " " "
" 3d—Took 3 grains 3 times; " " "
Had some headache in the region of the temples, attributed to a slight cold.
Jan. 4th—Took 4 grains 3 times; morning, noon, and evening.
" 5th—Took 5 grains 3 times; " " " Slept 7½ hours.
" 6th—Took 6 grains 3 times; " " " Slept 8 hours.
" 7th—Took 7 grains 3 times; " " " Slept 6½ hours.
" 8th—Took 8 grains 3 times; " " " Slept 8 hours.
Had a slight pain from temple to temple several times during the day.
Jan. 9th—Took 9 grains 3 times; morning, noon, and evening. Slept 8¾ hours.
" 10th—Took 10 grains 3 times; " " " Slept 7½ hours.
" 11th—Took 12 grains 3 times; " " " Slept 8 hours.

A slight, dull pain through the anterior portion of the head, with "ringing in the ears," probably caused by temporary indigestion.

Jan. 12th—Took 14 grains, morning, noon, and evening. Had a headache in the forenoon, which, upon taking soda bicarb. ℥ss. was relieved. Slept 7¾ hours.

Jan. 13th—Took 16 grains, morning, noon, and evening. Slept 7½ hours.

" 14th—Took 20 grains, " " " Slept 7½ hours.

" 15th—Took 25 grains, " " " Slept 7½ hours.

The morning dose was taken as usual, before eating. While at the breakfast table, I felt a disagreeable sensation, like the "fulness of the head," occasioned by a ligature around the neck. This was accompanied by a very slight vertigo.

These effects were not perceived after either of the subsequent doses taken this day. Slept 7½ hours.

16th—Morning; took 30 grains; effects not so great as yesterday morning. 10 o'clock P.M., took 40 grains, upon an empty stomach. It was followed by a greater tendency to vertigo than before, with a sensation as if the eyes were swollen and unnaturally protuberant. Evening, took 40 grains two hours after supper. Similar effects, but in a slight degree, and less than on the morning of the 15th, with 25 grains taken fasting. Slept 7½ hours.

17th—Morning; 15 minutes before sitting to breakfast, took 45 grains. While at the table, the sensations of fulness of the head and tumefaction, or enlargement of the eyes, were uncomfortable and oppressive. The eyesight slightly dim, became more so upon rising from the table, and the tendency to vertigo was at the same time increased. There was a feeling of mingled weariness and weakness in the knees, and the gait was not so firm as usual. Pupils of the eyes apparently somewhat dilated. 1 o'clock P.M., took 45 grains soon after eating an apple. In 15 minutes there was a sensation of heat in the gastric region, followed by symptoms similar to those just described, though not of nearly so great severity.

Evening—Took 45 grains. Effects much the same as at 1 o'clock. Slept 7¾ hours.

18th—Morning; took 50 grains; vertigo commenced in 20 minutes, and in 30 minutes the dimness of vision and peculiar sensation in the knees already noticed. I now felt, for the first time, the sensation last mentioned, in the lower part of the *biceps brachii* muscle. I particularly studied this feeling, and can give no idea of it except by comparing it, as already done, to a mixture of weariness and feebleness or debility. It was not unpleasant, and there was a constant disposition to flex and extend the forearm. Pupils apparently dilated. 10 o'clock P.M., took 60 grains. 10 minutes afterwards, the warmth in the gastric regions was perceived, and in 15 minutes cerebral symptoms commenced. In 35 minutes the action of the medicine appeared to have reached its maximum, which it maintained about 15 minutes, with the sensations in the head, elbows, and knees already described, and to a greater degree than after any dose previously taken. In 1½ hours from the time of taking it, its apparent effects had entirely disappeared. 9½ o'clock P.M., took 60 grains after eating apples. The action was less powerful than in the middle of the day. Slept 6½ hours.

19th—Took 60 grains 12 minutes before breakfast. In 35 minutes all the symptoms before mentioned were felt, to a greater extent than at any previous time. Vision was, for the first time, double. Directing the eye to an object at the distance of 15 feet, that object, for a moment would appear single. Immediately, however, two images became visible and slowly receded from each other to the apparent distance of about 6 inches. Here they generally became stationary, but at times would continue alternately to approach and recede from each other. Upon going up stairs, the knees were so weak as to render the ascent very difficult without assistance by taking hold of the balustrade.

Pupil apparently dilated. 2¾ o'clock, P.M., took 60 grains immediately after dinner. The influence of the dose was far less than of that taken in the morning. 10½ P.M., took 60 grains just before going to bed. The effect was greater than in the middle of the day, but less than in the morning. The recumbent position might have had some influence in diminishing the appreciation of this effect. Slept 7½ hours.

20th—Took 60 grains immediately after breakfast. Less affected by it than yesterday morning, although a slight degree of double vision was experienced, together with all the other symptoms heretofore mentioned. One o'clock, P.M., took 60 grains after a "lunch." Effects about the same as in the morning.

Seven successive doses, of 60 grains each, had now been taken, with the intention of farther increasing the quantity. Having, however, satisfied myself of the properties of the medicine, and believing the experiment to have been carried as far as prudence would dictate, I determined forthwith to stop. In the evening, a glass of current wine was substituted for the medicine, and I did not feel either at that time or subsequently, any unpleasant effects from the immediate suspension of the latter. Aware of the fact that the extract of conium imported from Great Britain, is generally (though with many exceptions) believed to be superior to that of American production, I resolved upon testing its strength.

Having procured a quantity of the latest importation bearing the mark of Mander, Weaver & Co., Wolverhampton, I commenced taking it on the 1st of February, ten days after the termination of the trial of the American extract.

Commencing with one grain, three times in the day, the dose was increased by one grain every morning, as in the former case, until the 10th of the month, and, subsequently by two grains, until the 13th, when it amounted to 16 grains *ter in die*. At that time no sensible effects were, or had been perceived. From the 8th to the 13th, the daily time of sleep was 7¾, 8, 7½, 7, 8, and 7½ hours successively.

14th—Took 20 grains, three times. Slept 5 hours.

15th—Took 25 grains, three times. No sensible effect. Slept 7 hours.

16th—Morning, took 30 grains; mid-day and evening, 40 grains each. Slept 8¾ hours, "making up" for the loss of sleep on the 15th.

17th—Took 45 grains, three times. Slept 7½ hours.

18th—Took 60 grains in the morning, and 70 each at mid-day and evening. The first apparent effect was at noon, this day, and was to about the same degree, and of precisely the same character of that of the American extract, on the 15th of January, in a dose of 25 grains. Slept 7½ hours.

19th—Took 80 grains in the morning, 90 grains at noon, and 100 grains in the evening. I had some headache, with diminution of appetite, throughout the day, and consequently ate very little at supper.

The evening dose, taken after several hours fasting, and its influence augmented by the cephalalgia, affected me more unpleasantly than any former portion during either trial. There was double vision, but not to the same extent, nor of so long duration as with the last doses of the American extract. The same remark is applicable to the sensation in the elbows and knees. The cerebral oppression, however, was extremely unpleasant and oppressive. The pulse, during the period of greatest influence, and while I was sitting, beat with undeviating precision, 60 strokes in a minute. This is, perhaps, two or three beats below its natural velocity when the body is at rest. It was also fuller and stronger than usual. It might have been modified by the general condition of the system on that day, but this influence would probably have increased its rapidity.

Some writers attribute diuretic properties to the conium. There was no perceptible augmentation or diminution of the urine during the course of these experiments. On two occasions, once after taking one of the largest doses of the American, and once after

one of the largest doses of the British extract, I felt an acute, lancinating, and transient pain in the region of the neck of the bladder, similar, as I suppose to strangury. Having never experienced a sensation of the kind, either before or since, I believe it to have been caused by the medicine.

The size of the pupils was judged of only by comparison with those of the eyes of other persons at the time. This criterion not being altogether accurate, it is impossible to determine whether actual dilatation was produced by the medicine. Even if it were, this effect was very slight.

The phrase " tendency to vertigo " has here been used, in preference to the word vertigo, simply because this effect, thus described, was not sufficient at any time to destroy the ability to walk straight. The instability of the gait was, or appeared to be principally owing to the effect upon the muscles in the vicinity of the knees.

On the Efficacy of Tannate of Quinine in Typic Neuralgia.

In 1831, Ronander cured several obstinate intermittent fevers, which had resisted the sulphate of quinine, and other powerful febrifuges, with this remedy. In 1833, Buchner repeated the proposal to substitute tannate for the sulphate and muriate of quinine. The author tried the tannate in intermittent neuralgia and intermittent fever, in cases where the sulphate of quinine had no effect, or only caused some trifling improvement, and he invariably found the above recommendations confirmed. The dose is about the same as that of the other salts of quinine.—*Dr Hauff, of Kirckheim, in Oesterlen's Jahrb.*

Beneficial Effect of the Dried Bark of Rhamnus Frangula in Abdominal Plethora.

The author's experience with this remedy, in more than thirty cases, since its recommendation by Dr Gumprecht, induces him to propose it as a substitute for rhubarb and senna-leaves; it is even preferable to them, because its action is safer, and it does not cause colic. It has a tonic and laxative, but not a drastic effect, and is particularly indicated in abdominal and hemorrhoidal complaints, especially in venous plethora and habitual obstruction, in blind piles with passive congestion; it agrees best with individuals of torpid habit; fluent piles and hypersthenic congestions, contra-indicate its use. It is also useful if piles have appeared and been checked. (For its manner of preparation, see Schmidt's Jahrbuch. 41, 162.) The first effect consists in two or three pultaceous stools, with the discharge of much flatus. In severe abdominal obstruction, the addition of an ounce to an ounce and a half of Epsom salts is required. In patients with an irritable abdominal system, the first dose ought not to exceed three tablespoonfuls. In sanguineous constipation, caused by imperfect or suppressed piles, an addition of from 30 to 40 drops of Aq. laurocer. proves very serviceable. In a disposition to hypersthenic congestions, an ounce and a half to two ounces of sulphate of soda ought to be added to the decoction of rhamnus instead of the orange peel. A proper diet, much exercise in the open air, cold water dashed on the abdomen and back, and moderate sleep, must of course increase the efficacy of the remedy. Besides the above advantages, rhamnus is a very cheap remedy. In conclusion, the author communicates a case where piles, suppressed by the action of cold water, were restored, and a simultaneous attack of melancholy cured by the use of a decoction of rhamnus frangula.—*Dr Helmbrecht, of Braunschweig, in Casper's Wochenschrift.*

Clinical Remarks on the Valerianate of Quinine.

The author communicates the results of eighteen cases. The remedy was employed nine times in intermittent fever (quotidian, tertian, and quartan), twice in cephalalgia,

twice in rheumatic pains, once in hemicrania, twice in epilepsy, and twice in supra-orbital neuralgia. Fifteen patients were cured within a space of two to eight days; three were only relieved (the case of hemicrania and the two epileptic patients.) The dose was half a grain every two hours, with sugar. The smallest quantity required to produce a cure was six grains, the largest thirty-five grains. No remarkable symptom was occasioned by the remedy in the generality of cases; three times it caused burning in the throat and stomach, sickness, and vomiting. The author observed that those only were affected with disagreeable symptoms for whom the remedy was prepared from valerianate of lime and sulphate of quinine, thus probably containing some sulphate of lime, whilst those for whom the remedy was prepared directly from quinine and valerianic acid remained free from all unpleasant symptoms. The remedy produces no local irritation, but only acts as a contra-stimulant, removing the exalted sensibility, and acting as a powerful febrifuge.—*Dr Castiglioni, in Schmidt's Jahrbuch.*

(The three last articles from Med. Times, 27th September 1845.)

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

On the Treatment of Menorrhagia. By Dr Ditterich of Munich.

Dr D. recommends the internal use of nitrate of silver as a remedy for this troublesome and obstinate complaint, as well as for the leucorrhœa which is present during the intervals and the nervous symptoms. This prescription is

℞. Nit argenti, gr. iij.
Aquæ distill. ℥ij. solve.

Of this solution ten drops are to be taken two or three times daily, and gradually increased to fifteen drops. The author affirms, that the use of this solution, for a period of from four to six weeks, will perform a certain cure. After the lapse of about ten days, the leucorrhœa diminishes, and by the second menstrual period, the catamenial secretion is reduced to the proper quantity, and the nervous symptoms disappear. Koph has also recommended the nitrate of silver for the same disease in doses of 1-10th to 1-12th of a grain every two hours.—*Neues Repertorium*, 1845. *S.* 60.

Closure of the Fontanelles and Sutures previous to Birth, with subsequent Disunion.

The author delivered, on the 26th June 1844, a lady in her first pregnancy, of a still-born boy, in whom all the fontanelles and sutures of the skull were firmly united together. The child was restored to life. In the third week the fontanelles and sutures became disunited, and on the 26th July they could all be felt open and wide, even to the frontal sutures. On the 26th October the small frontal was completely closed; the large one partly. The author supposes, that in this case, the increased development of the brain produced the gradual absorption of part of the bones of the skull, which had been previously unusually developed by a longer sojourn in the uterus, inasmuch as the mother was delivered a fortnight after the ninth month had been completed, according to her calculation. No similar case is known to him. He adds the question, whether similar observations have been made, and whether reopening of the fontanelles and suture be necessary for the development of the brain?—*Dr Lœwenhardt in Froriep's Notitzen.*

Aphorisms concerning the Treatment of Hydrocephalus.

Local detractions of blood are of little or no service in acute hydrocephalus appear-

ing suddenly after cold; but the application of ice to the head, blisters to the neck, mustard poultices to the calves of the legs and soles of the feet, with cooling laxatives, produce the best effects. The same treatment is to be adopted in acute hydrocephalus from dentition and thoracic inflammation. If caused by metastasis of acute exanthemata, blisters, mustard poultices, and cold lotions are recommended; warm fomentations, as advised by Romberg, are injurious. The author treated chronic hydrocephalus with antiscrofulous remedies, and checked the disease on several occasions.—*Dr Melion, of Treudenthal, in Oesterr. Wochenschrift.*

A Remarkable Case of Vicarious Menstruation.

The author delivered a woman, in 1841, at Würzburg, from whom he learned the following:—Three years ago she received an injury on the right arm, under the deltoid muscle, on which a yellowish crust was formed; when she scratched it the crust fell off, and hemorrhage occurred, which she could not stop for a whole day. A surgeon was called, who arrested it by a tight bandage. Soon afterwards she tore off the bandage; the bleeding recommenced, and continued as long as the menstruation lasted, which she had at the same time. Then a dark-brown solid crust formed, of the breadth of an inch, and the length of an inch and a half. Every four weeks the crust fell off on the appearance of menstruation, and the bleeding began and lasted till the menstruation ceased. The hemorrhage from the arm and the catamenial flux amounted to a greater quantity of blood than that previously discharged. This state continued for two years and a half without any disturbance of the health, till she again became pregnant, at the end of 1840. During pregnancy, menstruation and monthly bleeding from the arm discontinued. The crust became larger and larger, and attained the size of an egg. The woman felt no other complaint during pregnancy, but being unable to lie on the right arm. In the eighth month, in consequence of severe bodily exertion, she was seized with hemorrhage, and labour soon followed. The author was obliged to turn and extract the child. Lactation appeared on the third day. The child was weakly, did not suck, and died. The secretion of milk only lasted three days, and the lochia four weeks. Three months after birth, menstruation appeared, and with it the large crust fell off from the arm, hemorrhage recommenced, and lasted as long as the catamenia. The patient has perceptibly lost flesh, and has not since conceived.—*Professor L'Outrepont, of Würzburg, in neue Zeitschrift für Geburtskunde.*

Pathological conditions of the Milk as a cause of Disease in Infants. By M. Donne.

M. Donné was consulted in the case of a child on the breast suffering under the ordinary symptoms, indicating a severe degree of gastric derangement.

"The nurse's milk was examined microscopically by M. Duforsé, and the following results obtained:—There was nothing peculiar in its colour; its consistence was that of milk containing much cream; treated with ammonia it became slightly viscous; it was neither acid nor alkaline. When a drop of this milk was examined with a microscope magnifying 300 diameters, it was observed, 1st, that the milk globules were in great abundance, such as is found to be the case in very rich milk; they were generally of a considerable size, and the largest resembled small bladders half filled with liquid, and collapsed. Instead of having a pearl-like brilliancy, most of them, especially the large ones, were of a dull white colour, somewhat resembling opal; some of them, aggregated together, formed small groups, which could be moved about in all directions, without a single globule being detached. When submitted to slight pressure, these several groups spread out so as to occupy a surface five or six times greater than they presented at first, and they assumed various forms. The smallest quantity of sulphuric

ether introduced between the plates of glass dissolved a large quantity of them very rapidly. 2d, The field of the microscope was beset with roundish granular particles, perfectly colourless, and presenting all the characters described by J. Henlé, Donné, Mandl, Gütterbrok, and other micographers.

[To these particles Donné first applied the name of *corps granuleux*, and describes them as invariably existing in colostrum, but disappearing gradually as the milk becomes older; so that after about the twentieth day, and usually much sooner, not a trace of them is to be found. They differ from ordinary milk globules (with which they coexist) in form, size, general aspect, and internal composition. They are not always globular, but present all possible varieties of form, and also of size, the smallest being about one-hundredth of a millimetre, the largest many times this size; they are slightly transparent, usually of a yellowish colour, and of a granular aspect, appearing as if composed of a number of small granules aggregated together, or enclosed within a transparent envelope. Very often there exists in the centre or some other point of these little heaps a single globule, which is apparently nothing but a true milk globule imprisoned within the granular matter. The nature of these granular bodies is unknown; Donné supposes that they consist of fatty matter, and a peculiar mucous substance: they are not soluble in alkalies, but like true milk globules dissolve in ether, and after the evaporation of this reagent small heaps of acicular crystals remain on the glass.* Although the existence of these granular bodies is commonly peculiar to colostrum alone, yet Donné† observes that they and the other peculiarities of the colostrum (as the large irregular size of the milk globules, which instead of floating free are agglomerated together into small masses), may persist for many months, or even to the end of suckling. The existence of this condition can only be discovered by the microscope, for the ordinary physical properties of milk, such as its whiteness, consistence, and other characters, are preserved; and the nurse may continue in perfect health: the child, however, usually grows thin, although it is continually at the breast, and it commonly becomes attacked with diarrhœa. The milk in this case of M. Girard seems to have retained many of the characters peculiar to colostrum.]—Med. Gazette, Oct. 3, 1845.

FORENSIC MEDICINE AND MEDICAL POLICE.

Poisoning by Aconite. By George Sayle, M.R.C.S., King's Lynn, Norfolk, formerly Curator of the Anatomical Museum in the St George's Hospital School.

"I was called on the morning of Sunday, April 27, 1845, to see John Wickham, aged thirty-nine, a slater, and found him in bed, rolling his arms about and foaming at the mouth; the pupils widely dilated; lower extremities apparently paralysed; surface cold and clammy; great nausea; pulse scarcely perceptible; perfectly insensible; I ascertained that he had, an hour previously, taken a solution of aconite; I gave him a teacupful of neat brandy, which, after the lapse of a few seconds, brought him sufficiently round to resist the application of the stomach pump, at the same time telling me he was better, and should "do now." I determined on emptying the stomach to remove as much of the poison as might remain, but had scarcely withdrawn the contents of the pump twice before he again sank. I immediately introduced the same quantity of brandy by the pump, but it was evident, before it had all entered the stomach, he was dead. Half the decoction was left in a bottle, and also some of the plant from which it was extracted. I now ascertained that he obtained this medicine, under some ignorant person's advice, and prepared it after his directions, for disease of the rectum, or

* Cours de Microscopie, par Alb. Donné, p. 400. † Page 421.

urinary organs, which had baffled numberless medical men to cure or palliate. It will be seen, by the post-mortem examination, nothing here presented itself worthy of notice.

The plant was the aconitum napellus, stalks and leaves quite fresh.

Of these, six were cut up and boiled in half a pint of beer down to a quarter, half of which he drank. Upon adding a solution of nitrate of silver, an abundant deposit followed, both in the decoction and the contents drawn from the stomach. The solution of the diacetate of lead produced the same results in larger quantity.

Post-mortem examination forty-eight hours after death—Abdomen.—The liver, spleen, and kidneys distended with dark blood; veins generally congested; the stomach presented a slight blush near the cardiac extremity; the whole alimentary canal emptied of foecal matter and distended with air; the valvulæ conniventes distinctly seen from without, owing to the congested state of the blood-vessels; pelvic viscera healthy. Remaining part of the body not examined.

Remarks.—The case in itself presents nothing remarkable; but as they are rarely met with, I think it behoves the medical man to publish these symptoms carefully for the information of others.

Dr Fleming, in his prize dissertation, speaks of four *degrees* of operation in man, and finishes his remarks on the fourth degree with these words:—"When the action of the drug is carried to a fatal extent, the individual becomes entirely blind, deaf, and speechless. He either retains his consciousness to the last, or is affected with slight wandering delirium; the pupils are dilated; general muscular tremors, or even slight convulsions supervene; the pulse becomes imperceptible both at the wrist and heart; the temperature of the surface sinks still lower than before, and at length, after a few hurried gasps, death by *syncope* takes place." It will be seen that this case and Dr Fleming's description admirably agree, and that death takes place by syncope is proved by all the organs examined being enormously distended with blood. The *quick* action of the stimulus was very remarkable, and I imagine if he had been seen earlier, and the same plan adopted, although the dose was very large, it would have been attended with success.—Med. Times, Oct. 18, 1845.

Researches on Infanticide. By Orfila.

Orfila states, that he was asked whether or not it was possible to distinguish among the ashes of a stove the cinders produced by the combustion of a foetus, from those produced by the burning of wood. He answered, that that the ashes of a foetus, if calcined with potass, ought to furnish cyanide of potassium, whereas the ashes of wood would yield no such material. To confirm his opinion, he performed a series of experiments, from which his conclusions are as follows:—1. If the ashes of the foetus do not contain fragments of bone, such as will enable the ashes to be identified at first sight, they may be recognised in the following manner:—A. Calcine the ashes with potass in a porcelain crucible, open or closed. Cyanide of potassium is thus obtained; treat the calcined mass with boiling water, filter, and from the filtered fluid, cyanuret of iron or Prussian blue may be obtained on the addition of a solution of the sulphate of iron, with a drop or two of muriatic acid. B. If a portion of the ashes of a foetus be treated with two-fifths of its weight of pure and concentrated sulphuric acid, the evolution of sulphureted hydrogen gas takes place. C. After allowing the sulphuric acid to act upon the ashes for two or three days, if the mixture is treated with distilled boiling water, for a quarter of an hour or so, the mixture still remains acid. D. This solution contains some biphosphate of lime, and, accordingly, if ammonia, not carbonated, is dropped into it, a small quantity of phosphate of lime is precipitated.—*Annales d'Hygiene. Juillet* 1845, p. 138.

Bright's Disease simulating Poisoning by Opium.

"Mr Moore narrates a case of Bright's disease, which, after the exhibition of a dose of laudanum by a druggist, presented symptoms which gave rise to the suspicion of poisoning by an overdose of that medicine. The man, a pensioner, thirty-nine years of age, was admitted into the hospital in a state of somnolency, from which he could be occasionally roused. A mustard emetic, coffee, strong tea, galvanism, ether, and ammonia, &c., were employed, but with the exception of an occasional attempt at a rally, the man continued to sink, and died forty-four hours after admission, and one hundred and two hours from the time of his taking the supposed fatal dose. The body was examined twenty-one hours after death. The brain was apparently healthy, the lungs much congested, the heart hypertrophied, the stomach, small intestines and liver much congested; a considerable space in the stomach was infiltrated with black matter, and about six inches of the ileum was deprived of its epithelium, and partially ulcerated. The kidneys were both of small size. The right presented externally an irregular lobulated surface of a yellowish grey colour, having, here and there, small stellate congested patches: when cut into, it was found to be extremely dense and of granular texture; the cortical portion was the subject of extensive fibrinous deposit, which imparted to it a light yellowish grey colour; the tabular structure generally was changed into a buff-coloured fatty substance of firm consistence; two or three of the coni, however, still retained their healthy appearance: small puncta of earthy deposit were irregularly dispersed over the cut surfaces. The left kidney presented the same general characteristics, externally and internally, as did the right, but had, in addition, lying beneath its peritoneal surface, two cysts (of about the size of horse beans) which possessed distinct membranous walls, and did not communicate with the pelvis of the kidney; both were filled with a yellowish brown albuminous looking fluid. The urine in the bladder was albuminous; no trace of opium could be detected in the stomach, but urea was discovered in the cerebral substance on analysis. Mr Moore enters into an examination of the symptoms which this case presented during life, and of the appearances after death, and shows that they are all compatible with the indications of poisoning by opium; but inasmuch as the kidneys were diseased, and their diseased condition was of itself sufficient to produce these symptoms and post-mortem appearances, he concludes that the man died from natural causes. The case is very instructive, but the absolute cause of death remains doubtful."—Medical Times, Oct. 18, 1845.

Part V.—MEDICAL MEMORANDA.

Opening of the Norwich and Norfolk Hospital Museum—Dr Crosse's Address.

We have received a copy of the report of the opening of the Norwich and Norfolk Hospital Museum: and also of Dr Crosse's address on that occasion. Norwich has long been distinguished as one of the principal seats of practical surgery in the United Kingdom; and we beg leave to remind our readers that the next year's meeting of the Provincial Medical Association takes place at Norwich under the Presidency of Dr Crosse. Such of our friends on this side of the Tweed, as may be curious to witness the proceedings of this association, could not choose a fitter occasion than the Norwich

meeting; for whether we look to the place or to the President, we obtain a confident ground to predict that the meeting will be one above the common mark.

Of Dr Crosse's address on the occasion referred to, we quote the following abstract from the report:—

"Mr Crosse then presented himself and was warmly applauded, and read his inaugural address, of which we can give but a brief extract; first, because it is impossible to do justice to the interesting matter it contained in the space to which we are confined; and next, because it will be published at length in the early part of next week, for the benefit of the institution at whose opening it was delivered. After alluding to the request made to him, and the congenial nature of the task he was then about to commence, Mr Crosse proceeded to give a history of the rise and progress of the institution, its increasing value as offering superior aid to the poor, and the liberality with which it had been supported. Next adverting to the well-educated and enterprising medical officers who offered their gratuitous aid to such institutions—to their active and untiring zeal in the cause of the public—who were even always required not only to be *semper parati* but *semper adstantes*. The Governors, he hoped, would therefore bear with him if he placed the medical officers of that institution prominently before them, because it roused to greater exertion those who still lived, and so conduced to the public good.

"Mr Crosse then commenced his review with the renowned Dr Caius or Kaye, whose eminence as a physician, and renown as a scholar, were well known, and who still lived in the hearts of many by his works, proving that 'high character arising out of virtuous conduct and spirited public acts of munificence, defies the wreck of time.' Sir Thos. Browne, who practised 46 years in Norwich with great celebrity, was next noticed, and whose works were still read in all countries. From Dr E. Howman, another highly valued physician, who long since flourished in this city, the lecturer passed to Benj. Gooch, by whom such an institution had long been advocated, and whose views were appreciated and aided by the late W. Fellowes, Esq. of Shotesham; and, although his professional exertions were so arduous as to bring on illness, and compel his premature resignation of practice, Gooch had still the gratification of seeing, in 1771, his desires accomplished, as in that year, although not finished, the hospital was accessible to patients, and he was appointed consulting surgeon in his absence. The writings of Gooch were even at the present day referred to for their intrinsic practical value. Having doubtless in view his favourite project, he many years previously suggested, as one means of making hospitals more efficient—the education of pupils, lectures on extraordinary cases, a collection of instruments, anatomical preparations, and a suitable collection of books.

"At its first opening, Wm. Donné was one of the principal surgeons to the hospital; attained much eminence as a lithotomist, and was the first great contributor to the cabinet before them, by the number and success of his operations—a cabinet which that very day contained 757 specimens of authenticated calculi, the result of public operations in that hospital, an exhibition the like the world could not produce. Donné removed the largest and most remarkable mulberry calculus on record, with success. Mr Donné practised in the hospital as surgeon for 31 years, whose portrait his lineal descendant, then in that room, had presented to the museum. Mr Donné resigned in 1802. Having paid a brief but honourable compliment to the abilities of Dr Alderson, Dr Yelloly, and Dr Wright, all of whom were known to some of those present, Mr Crosse turned more immediately to those who were more deeply associated with the success of the hospital, and for whom the public esteem was great. Rigby and Martineau, said Mr Crosse, each of whom fulfilled the appointments they held in the hospital energetically, and with unceasing reputation, for half a century, 'might be

emphatically denominated *par nobile fratrum*, and may we not add, *par impar*, (?) for never were two men less alike in many respects, though united so successfully in promoting the same admirable object.' Having taken a just review of the character and talent of Dr Rigby, 'the kind friend—the animating companion—and the skilful physician,' the Lecturer turned to that of Mr Martineau, who early imbibed a strong predilection for surgery. Mr Crosse's knowledge of this estimable gentleman, whose great strength of judgment, decision of character, and courteous manner, shed a lustre over the profession, was founded on personal intercourse. As an operator he was most skilful, and always went direct by the shortest cut to his purpose. When above 70 years of age, his performance of the most delicate operations, was such that he might justly say of him, '*Animo æque ac manu, strenuo, stabili nec unquam intremiscente.*'

"He contrasted the characters of these two celebrated men, and paid a high tribute to the Christian feeling and hopeful resignation of Mr Martineau during his last illness."

"The professional character and high qualifications of one who is still living, although not amongst them, recalled the sympathies of all present. Of Mr Dalrymple, Mr Crosse proceeded to speak; and there were but few present who did not accord with that gentleman in the wish that 'he were then amongst them with all his wonted faculties, his keen perceptions, to hear and to see what transpired, and to appreciate the feelings' of the governors, friends, admirers, and relations then assembled. On his first introduction into Norwich, Mr Crosse became intimately acquainted with Mr Dalrymple, from whom he never failed to receive the best information Mr Dalrymple's cultivated mind and experience could impart; and as assistant-surgeon to the hospital, he looked upon that as the happiest part of his life, mainly rendered so from his intercourse with an individual, who spent more of his time in the hospital, than any other officer. Mr Crosse then proceeded at length to describe particulars of his intercourse with this gifted individual, the enthusiasm of Mr D. on the scientific objects of his profession, and his genius, skill, and experience, whilst performing the responsible and arduous duties of surgeon to that establishment; and last not least, his attachment to that institution, exhibited in the promotion of its best objects, by the foundation of that museum, and in his bountiful contribution."

"The last section of Mr Crosse's address was devoted to the great objects of an hospital—the treatment and cure of patients—the instruction of pupils—and in its realization of Benjamin Gooch's motto, '*Patet omnibus.*' He next referred to the additional responsibility incurred by the admission of pupils; and to this object no greater or more necessary addition could have been made than the event they were met to celebrate—the immediate possession of such a museum—an event unparalleled in the career of any hospital. Mr Crosse then emphatically addressed the students present, pointing out to them the value of such an institution, the facilities afforded them for their studies, and the opportunity thus offered of acquiring information valuable to society; recollecting that, like Sir T. Browne, they should be impatient of sloth and idleness—beware at all times of being engaged in doing just nothing—but still more to beware of doing what their creed and their conscience told them was evil; and that when they had merged into the responsibilities of the profession, they should take a lesson from such local models as were recorded—of the charity and zeal of Rigby, the courteous high-minded deportment and practical tact of Martineau, and the untiring zeal of Dalrymple, by which so much of that which surrounded him was deposited, and of obtaining that influence over his patients which he so largely possessed. Thus would they lay a foundation for their usefulness and prosperity in life; and that all would be in vain, if, in tracing the sequences of nature, they failed to bow in humble adoration be-

fore the beauty and harmony of the works of Him who is eternal, the creator and sustainer of this wonderful universe."

"During Mr Crosse's eloquent and appropriate address, the interest of his audience was deeply rivetted, and their feelings were often expressed by repeated applause. Indeed, it was impossible not to be impressed with the energy, zeal, and feeling which had alike undertaken the task, and had carried it through to so perfect a success. No one will read this honourable and well-deserved tribute to the great dead, or to the honoured living, and to the benefits they have conferred on the museum, without exclaiming with Mr Crosse, '*Sit Perpetua.*'"

From the published address, we cannot refrain from extracting the following passages:—

"The first and great object of a general Hospital regards the treatment and cure of the afflicted—but in the accomplishment of this object it is always found desirable, in all such institutions where a considerable number of patients are assembled, to keep in view another object of scarcely less importance—and indeed the two are found naturally blended together, and almost to coalesce into one, when strictly and analytically viewed. Instruction given to pupils, compared with the relief afforded to the afflicted inmates, is like seed sown for a future and abundant harvest—it is a geometrical multiplication of good—a legacy left, with accumulating interest, by the present to succeeding generations. You can never keep up the character of any large Hospital, where its utility as a theatre and centre of medical instruction is unwisely concentrated and frustrated by the Governors; and very little is heard of the reputation of any Hospital, whose doors are not open to professional visitors. Considering the Norfolk and Norwich Hospital in this respect, we may affirm that it realises Benjamin Gooch's favourite motto—'*Patet omnibus*'—a man ranks low indeed in the scale, whose medical and general character is such, that he would be excluded from entering the wards of this establishment, at all proper times, for purposes of occasional observation and instruction."

"Still more recently, under the advancement of provincial hospitals generally, and more just and less exclusive views in our Corporate Medical Institutions, has this Hospital been recognized for supplying a part of the education required of each student by law, a change which distinguishes it from all the minor establishments of this district, comprising nearly a million of inhabitants. With this circumstance the Governors ought to be fully acquainted, as well as with the fact, that the annual income of the Hospital has for several years past been augmented by fees from students. Thus, in the progress of events, has additional responsibility been made to rest upon this Institution, and a claim arisen for fresh and increased opportunities of instruction to students; had all the Governors been made aware of, instead of most of them being wholly unacquainted with, these circumstances, [observed Mr Crosse,] as really happens to be the case, no more serviceable, proper, or effectual step could have been taken, to meet the demand, than making such an important addition as we are now assembled to commemorate. It is probably unparalleled for any provincial Hospital to have become at once possessed of such an anatomical collection as already occupies this apartment in which the most instructed of our profession may find much to interest them. Every such collection, indeed, contains specimens which are not to be found elsewhere, something curious, illustrative, and unique."

"'Do not fall,' says Mr Crosse, after some more general remarks, 'into the error of supposing, that your future duties will consist in prescribing for diseases, and the symptoms of disease, much less in performing mutilating operations; you will have to manage the minds of your patients, and to lay down the rules of temperance for the prevention of disease, and above all, as I have often repeated to you, never consider

yourselves as privileged to give pain, but for the purpose of relieving pain. Let me recall to you, an example, this day set before you, and placed on literary record for two centuries—the example of Sir Thomas Browne—and be like him impatient of sloth and idleness—beware at all times of being engaged in doing just nothing—but still more beware of doing what your creed and your conscience tell you is evil! Read and ponder on the sentences I have quoted from the writings of Benjamin Gooch, and let them be golden rules for your daily observance, not only whilst you continue to be students, but subsequently when you shall have merged into the responsibilities of professional practice—take a lesson from what you will find recorded of Rigby, that he entered the hovel with as little reluctance as the mansion—keep constantly before you the courteous, high-minded deportment, and cultivate the practical tact of Martineau—aim at the untiring zeal of Dalrymple, through which so much of what you see around you has been deposited for your instruction; moreover, aim at, with however little hope of attaining, his eloquent, amusing, colloquial discourse, which aided much in giving him the needed influence over the feelings of his patients."

We take leave of Dr Crosse with hearty good wishes for the success of the institution, towards the infant prosperity of which he has exerted himself so laudably.

Process for Preparing Valerianic Acid. By Messrs T. and H. Smith.

Having of late had considerable demand for valerianate of zinc, in consequence, probably, of a desire among medical men to test its value as a therapeutic agent, we were led to inquire whether a method of obtaining the acid of valerian more quickly and abundantly than by the usual process, so very unsatisfactory in these respects, could not be devised. The method we adopted completely answered our expectations; and as it may be of some use as a guide to other chemists, who may have occasion to prepare valerianic acid, the process is subjoined:—

Let the valerian be boiled for three or four hours in rather more than its bulk of water, holding in solution an ounce of carbonate of soda for every pound of the root, and replacing the water as it evaporates. Let the liquor be strongly pressed out, and the residuum again boiled for a little, with a like quantity of water. After another pressing, let the process be repeated in the same way, a third and last time. After mixing the liquids, and adding two fluid drachms of strong sulphuric acid for each pound of the root used, let them be distilled. When about three-fourths of the liquid have passed into the receiver, let the distillate be fully neutralized with carbonate of soda, for which purpose a quarter of an ounce for every pound of the root will be quite enough. The valerianic acid can then be obtained in the usual way, viz. by concentrating the solution of valerianate of soda, decomposing it with sulphuric acid, and separating the valerianic acid, now set free, either by means of a separator or distillation. When the valerianic acid has been once obtained, no difficulty can occur in preparing any of the valeriantes.

The advantage of this method over that in which the root itself is simply distilled with water, will be seen on contrasting the results of both. By the latter method, the time required was six times greater than when the valerianate of soda in solution was distilled after adding a strong acid; and although the sacrifice of time was so much greater in the first case, the contents of the still continued to smell strongly of valerian, while in the latter, not a trace of the peculiar odour of valerianic acid could be detected, showing that the principle had been more effectually exhausted. And further, the amount of acid obtained, four scruples from the pound of root, was nearly thrice as great as could be got without the use of soda.

Since the above process was adopted by us, M. S. Rabourdin, Pharmacien à Orléans,

has published in the Journal de Pharmacie, a method suggested apparently by views of the subject similar to our own. He conceived that the valerianic acid might be partly in combination with a base, and that, by adding a strong acid, the volatile acid would be completely set free, so that, on distillation, a much larger product would be obtained. The result wholly justified his preconceptions. Five kilogrammes of the root gave from forty-five to fifty grammes of the acid, a result closely agreeing with the quantity produced by our own process.

The principle of the process suggested is very simple. In the one case an acid is presented to a valerianate, or supposed valerianate, to free it from combination with its base, by the exertion of a stronger affinity; while, in the other case, a base (soda) is presented to the valerianic acid, powerful enough to cause its effectual separation from that with which it was previously combined.

The two processes serve the same end; but it seems to us that the latter is, on the whole, to be preferred, principally because it has the advantage of presenting the acid in a state of complete solution, from which the operator can get it more easily and effectually detached, than when contained in the hard unyielding cells of the woody fibre. —Lancet.

On the Origin of the Firm Bodies found in the Cavities of Synovial Membranes.

By Prof. Bidder.

Dr Bidder offers a new theory in regard to the origin of the firm bodies which are occasionally met with in the cavities of synovial membranes. He was led to form this opinion from an examination which he made of a substance evacuated from the knee-joint of a patient, who had for a considerable time been suffering from a swelling of the joint, and symptoms indicating the presence of a foreign body therein; a natural opening formed itself, through which a granular substance evacuated; the individual granules of which this substance was composed were uniform in size and general characters; they were flattened and oval, about a line and a half in length, three-fourths of a line in breadth, and half a line in thickness; they were of a yellowish-white colour, presented no trace of a pedicle, and were held together in heaps of various sizes by a very small quantity of a greasy transparent fluid. They were highly elastic, and when cut into presented both to the naked eye and beneath the microscope a perfectly uniform surface, there being no appearance of laminæ, of a nucleus, of a surrounding capsule, or of any fibro-cellular tissue: they presented none of the characters of epithelial cells, or of oval fat-cells. Neither ether nor acetic acid detected in them any trace of fat; they were unaffected by water, but by the action of alcohol were shrivelled up. From these facts it appeared to Bidder that the explanation offered by Meckel and Hyrtl respecting the formation of these bodies could not be regarded as the only one: these anatomists attributed their formation to pieces of fat, which are deposited on the outer surface of the synovial membrane, through which they make their way and pass into the cavity of the joint, where they lie free, and the synovial fluid of which they take up and convert into fat; but it seemed to Bidder very probable, that the epithelial cells were in his case, and so might be in others, the cause immediately concerned in the formation of these bodies; that the cells, under the influence of increased vascularity of the synovial membrane, are abundantly thrown off and accumulate in the cavity of the joint, where by a process of endosmosis, or in virtue of their own peculiar vitality, they increase in size by abstracting nutritive material from the synovial fluid in which they are immersed: this view would seem to be especially favoured by the large quantity of albumen which the little bodies contained, and by the uniform size which they all presented. Bidder adds, that Dupuytren's account of the hydatid-like

way in which these bodies are formed should not be unconditionally rejected, neither should Meckel's description of their mode of formation in serous membranes.—*Oester. Medecin. Wochenschrift.*

Pathological Anatomy of Stumps.

"In March last, Mr Adams related to the Pathological Society of Dublin the appearances which he had observed in dissecting the stump of a man whose thigh was amputated ten years previously to his disease. The operation had been performed by a circular incision; the man (a lunatic), æt. 34 or 44, had never worn a wooden leg, but was supported by crutches to move about. Mr Adams and Mr Smith examined the condition of the various structures of the part. Its exterior presented nothing remarkable; the muscles were much attenuated, and adipose tissue, for the most part, occupied the place of muscular fibre. The *bone*, when denuded of all the soft parts, was found to present a remarkable example of atrophied bone: it is so light that it floats on water, and its tissue is soft, and it yields to the pressure of the fingers. The portion of the shaft of the bone which remains, being about a third part of its length, is altered somewhat in form from its normal state; it is a little more arched forward, and flattened laterally. The lower extremity is rounded off, and the termination of the medullary canal is (as it were), hermetically closed by a compact bony layer. The investing cartilage of the head of the bone was found thin and imperfect, and the cervix of the femur was so much shortened that the neck can scarcely be said, in this specimen, to exist posteriorly. The space between the corona of the head of the femur and the inter-trochanteric line posteriorly, is so much diminished as to be converted into a deep fissure, giving to the specimen the aspect of a fracture which had been united by bone. But the history of the patient, and the appearance of the bone, when a section of it was made, convinced these gentlemen that the patient had never met with a fracture of the femur. The section exhibits the usual appearance the interior of the neck presents when interstitial absorption of this portion of the bone takes place, either as the effect of age, or atrophy from any other cause. The cancellated tissue is observed in the whole of this section to be much rarefied, and the compact structure, or shell of the head, neck, and shaft, are reduced to the thinness of paper. Mr Adams remarked, however, that the bony basis of all stumps did not undergo this change; such may, very probably, be the case in all stumps which have not been actively exercised, particularly in cases where artificial limbs have not been substituted for the limb removed; he had found the radius and ulna in a stump he had dissected preternaturally heavy, and in this case the bones, far from becoming atrophied, had undergone an opposite change, their extremities having united below into a complete loop or arch, the convexity of which is downwards. In one of the two instances of this remarkable union of the bones, of which figures are given by Mr Adams, amputation had been performed within two inches of the elbow-joint; in the other, it was near the wrist-joint. Mr A. was not aware that this provision of nature to give bony firmness to stumps had been attended to by any writer except the Sandiforts, who give figures of this appearance of the bones formed after amputation below the knee, in the fourth volume of the Museum Anatomicum.

"The arteries and veins in this stump were found, by Mr Adams, to terminate in cul de sacs of somewhat conical form, and rounded of at their extremities. A small reddish plug of organized lymph fortified the termination of the artery. The interior of the artery had its lining membrane corrugated transversely. The nerves presented an appearance of relaxation or want of tension; the fibres of the nerves were more or less corrugated transversely, as to their length; the nerves were, as is usual in stumps, terminated near the cicatrix at the end of the stump by round bulbous extremi-

ties, each as large as a nutmeg; when sections of these bulbous extremities were made, they presented a fibrous appearance, like an ordinary nervous ganglion—an appearance noticed by Cruveilhier, Langstaff, and Smith, and well delineated by the former in Liv. 6, Plate 5, Fig. 4. The termination of the artery and veins were, in Cruveilhier's case, connected with this bulbous extremity of the nerve, and the bulb itself was connected by a fibrous structure with the cicatrix. These bulbous terminations of nerves of stumps are believed to exist always, and, indeed, can be readily felt through the integuments of the living or dead. In certain cases were the stump becomes conical, and is affected with frequent spasms, Sir A. Cooper has advised that these bulbous extremities of the nerves should be cut out. Should any one ever perform such an operation on his patient, he should take care of hemorrhage, and recollect the point so well delineated in Cruveilhier's plate, namely, the close connection of the cul de sacs of the artery and veins with the nervous bulb or ganglion."—Dublin Hospital Gazette.

The following passage in Dr Dowler's Post-mortem Tabular Series of Temperature, was omitted for want of room in our Review of his Work in our last Number.

"Since it is quite impossible, on the present occasion, to relate the details in more than two hundred histories of temperature, I will attempt to give you a faint outline of several, omitting all minor matters.

"History 1st.—Highest temperature during life in the axilla, 104 deg.; 10 minutes after death axilla 109 deg.; in 15 minutes the thigh gives 113 deg., 9 above the living maximum; in 20 minutes the liver gives 112 deg.; in 1 hour 40 minutes heart 109 deg.; thigh, old incision, 109 deg.; in 3 hours after removing all the viscera, a new incision in the thigh gave 110 deg., 6 deg. above the living maximum.

"Hist. 2d.—Alive: axilla 100 deg., hand 91 deg.; dead 1 hour and 5 minutes: axilla, at the end of every 5 minutes, 102 deg., 104 deg. 107 deg., thigh 107 deg., 2 hours after death centre of the left lung 106 deg., apex 104 deg., heart 104 deg., thigh 106 deg.; 3 hours, axilla 104 deg., liver 106 deg., thigh 106 deg.—repeated, 106 deg., rectum 105 deg.; 23 hours after death, room 90 deg., thigh 88 deg.; putrefaction developed.

"Hist. 3d.—Last stage, hand 91 deg., axilla 100 deg.; dead 30 minutes, axilla 104 deg.; perineum, without incision, 102 deg.; rectum 102 deg.; epigastrium 103 deg.; brain, through the orbit, 102 deg.; body appeared to be growing hotter, when demanded by friends for interment.

"Hist. 4th.—Last stage, hand 70 deg. (7 deg. less than the air); axilla 95 deg.; about 2 hours after death, axilla 100 deg., rectum 104 deg.; axilla rose to 102 deg., epigastrium 101 deg., thigh 102 deg., brain 99 deg., heart and left chest 100 deg.

"Hist. 5th.—2 days before death, hand 101 deg., axilla 104 deg.; 1 day before death, hand 100 deg., axilla 100 deg.; dead 5 minutes, axilla gave at different periods, and was still rising, 103—4 deg.—5 deg.—6 deg., epigastrium 106 deg., brain 101 deg., and falling; the thigh 101 deg., though exposed to a cold wind, which sunk the 10 deg. during the observations.

"Hist. 6th.—4½ hours after death, thigh exceeded the brain 6 deg., the chest 3 deg.

"Hist. 7th.—Air cold (Oct. 26), mercury falling 3 or 4 deg. per hour; dead 1 hour, axilla 103 deg., epigastrium 104 deg. nearly, liver 108 deg. and rising, brain 88 deg. falling; 2 hours after death, thigh 104 deg., left chest 98 deg.

"It is confidently believed, that these outlines of a few cases, taken almost at random, will serve to illustrate the principal features which belong to the whole. I wish rather to avoid the extended history of morbid temperature, in the living body, though here my materials are most ample, in order to give the more attention to its post-mortem phenomena."—P. 286—291.

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END OF VOL. III.

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