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JOURNAL OF MEDICINE;
A
MONTHLY SURVEY
OF THE
PROGRESS OF MEDICAL KNOWLEDGE
AT HOME AND ABROAD.

EDITED BY

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AND DIETETICS,

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

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THE
NORTHERN
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PART I.—ORIGINAL ARTICLES.

Some Suggestions regarding the Anatomical Source and Pathological Nature of Post-Partum Hemorrhage. By J. Y. SIMPSON, M.D., F.R.S.E., Professor of Midwifery in the University of Edinburgh, &c.

THE non-occurrence of hemorrhage from the uterine vessels, after the complete detachment of the placenta in ordinary parturition, is probably not explicable, as is generally imagined, upon the sole circumstance of the simple and absolute contraction that occurs in the uterine fibres after delivery. We know, from the observations of Gooch,¹ Velpeau,² Rigby,³ and others, that post-partum hemorrhage sometimes supervenes when the uterus appears contracted and reduced to its usual size after delivery. On the other hand, numerous facts show that there is little or no tendency to hemorrhage after the perfect expulsion of the placenta, although this simple and absolute contraction of the uterine fibres be, at the time, so far prevented by the presence *in utero* of a

¹ Medico-Chirurgical Transactions, vol. xii. p. 157. "The observing practitioner must," Dr Gooch remarks, "have been frequently struck by the little proportion that existed between the want of contraction and the degree of hemorrhage; having found the uterus bulky without any hemorrhage, and a profuse hemorrhage without greater bulk of uterus. Nay, further, I have witnessed a profuse hemorrhage, though the uterus had contracted in the degree which commonly indicates security; and I have ventured to do what is seldom justifiable, separate the placenta before the uterus had contracted, without more hemorrhage than after a common labour. What is this circumstance that has so great an influence that its presence can cause a moderately contracted uterus to bleed profusely, and its absence can cause an uncontracted uterus to bleed scarcely at all?"—P. 152.

² *Traité de l'Art des Accouchemens*, tom. ii. p. 539.

³ *London Medical Gazette*, vol. xiv. p. 332, and *System of Midwifery*, p. 218.

full-grown foetus, as in those placental presentations in which, as occasionally happens, the after-birth is expelled or extracted before the child.¹ When the child is born in ordinary labour, and the placenta happens to be retained from *want* of uterine contraction, hemorrhage does not necessarily supervene. It is well known that Ruysch, William Hunter, and others, adopted, for a time, the practice of leaving the placenta in utero for hours and days till nature herself threw it off, and that they were at last forced to abandon this line of treatment,—not because uterine hemorrhage was liable to supervene, but because the dead and retained organ was found to become putrid, and to give rise to symptoms of severe irritation and fever. Again, after the complete evacuation of the uterus in common parturition, and the total removal of the placenta, hemorrhage does not necessarily supervene, though the uterine fibres are not in a state of firm contraction. We often find them alternately relaxing and contracting when after-pains supervene, and yet the general relaxation that is observable between the pains may not give rise to the slightest degree of flooding. Every practitioner has had occasion to watch with more or less anxiety, the uterus remaining of considerable size and softness for some time after delivery, and consequently with its fibres not firmly contracted, but without after-pains, and without hemorrhage supervening. In the same way, in some cases of placental presentation after the placenta has become expelled, and while the child remains in utero, the labour-pains have ceased; and still, notwithstanding this cessation, not only has no hemorrhage followed, but, on the contrary, the flooding that previously existed, has immediately ceased.

No doubt the occurrence, after delivery, of great and decided atony in the whole muscular system of the uterus, does assuredly give rise to post-partum hemorrhage. But if I may judge from my own observations, I would venture to remark, that the morbid condition which is most frequently and earliest seen in connection with post-partum hemorrhage, and which is specially remarkable in cases where the flooding is more enduring than usual, is a state of irregularity, and want of equability in the contractile action of different parts of the uterus—and, it may be, in different planes of the uterine fibres—as marked by one or more points in the organ, feeling hard and contracted, at the same time that other portions of the parietes are soft and relaxed—and by the contracting and relaxing fibres, slowly but frequently changing their relative situations.²

¹ See Northern Journal for February 1844, p. 252; or Edinburgh and London Monthly Journal for March 1845.

² “I have rarely introduced the hand into the uterus in a case of flooding without meeting with it [hour-glass or irregular contraction], whether the placenta had or had not been expelled.”—Dr Burns’ Principles of Midwifery, 9th Edit. p. 543.

Upon the same principle, I believe that in attempting to prevent or remove the morbid condition leading to post-partum hemorrhage, when it is functional in its nature, and not connected with any organic or traumatic causes, we ought to endeavour to produce not merely a certain *degree and amount* of uterine contraction, (the great and primary practical point to which we always justly look,) but also a certain *equability and uniformity* of contraction. At the same time I would repeat, that this part of the subject, like the whole question, of the manner and means by which hemorrhage is prevented from the exposed uterine veins, after every case of ordinary labour, stands, in my opinion, in need of new, careful, and extended investigations. I have, however, at present, no desire to encounter so wide and complicated an inquiry; and shall content myself with stating in reference to the subject, the few following suggestions.

First, Uterine hemorrhage after the separation of the placenta in any of the stages of labour, is *not Arterial* in its character. The utero-placenta arteries are numerous, but so long and slender¹ as to become readily closed; 1, By the tonicity of their coats; 2, By contraction of the uterine fibres upon the course of these vessels themselves as they pass through and amid the uterine structure; and, 3, and principally, by the changes in their tissues produced by the mechanical rupture of their coats,—*torn arteries* being little if at all liable to bleed,—and the placenta being separated by a true process of *avulsion*.

Secondly, Hemorrhage, therefore, under the conditions supposed, is *Venous* in its source and nature. Further, it is specially important to mark that it is a *venous hemorrhage by retrogression*. The *forward* course of the uterine and utero-placental venous circulation, is from the dilated maternal capillaries or cells of the placenta towards the periphery of the uterus, and the ovarian and hypogastric venous trunks. In uterine hemorrhage, the blood that escapes, instead of flowing onwards, regurgitates *backward* into the uterine cavity.

Thirdly, The mechanism by which, after the separation of the placenta, this retrograde course of the venous circulation towards the cavity of the uterus, so as to lead to hemorrhage, is *prevented*, is probably of a compound character, or is effected by different means. Each of these means may be more or less efficient under different circumstances and at different times.

Fourthly, The most powerful of these preventive measures consists in the uniform and regular contraction of the uterine fibres. By this contraction the canals of the supplying arteries are constricted, and the venous tubes or sinuses which more immediately

¹ I speak of these utero-placental arteries as they are seen in the beautiful injected preparations of them left by William Hunter and the second Monro, and as I have myself observed them in recent specimens.

yield the discharge, are directly compressed. The facility of this compression of the sides of the veins and the consequent diminution of their cavities, is promoted by the naturally thin, flattened form of their canals, and by the fact that the proper contractile tissue of the uterus forms their second coat,—the uterine veins consisting of the usual lining membrane of the venous system placed in direct contact with the muscular tissue of the uterus. At the same time, it is to be recollected, that there seems to be often no direct relation between the degree of uterine contraction and the degree of tendency to hemorrhage, for, as we have just seen,—1, No hemorrhage may occasionally be observed after delivery, though the uterus is not contracted to its usual degree;—and, 2, It may be present when the uterus is apparently well contracted. But, 3, there are, according to most anatomists, few or no *contracting* fibres in the structure of the os and cervix uteri, and certainly after delivery, I have generally, if not always found it remaining open, gaping, soft, and flaccid, even when the proper cavity of the uterus above, felt shut and contracted, and its parietes hard and firm. Still when the placenta is attached to the surface of this *uncontracting* portion of the uterus, as in *placenta prævia*, hemorrhage is not common after its separation, unless some laceration of its vessels has occurred. Here we have post-partum hemorrhage prevented, *without* the contractile mechanism, generally considered necessary for its avoidance, being almost in existence. And 4, in cases of spontaneous or artificial extraction of the placenta *before* the child in some placental presentations, and twin labours, the placental mass may be completely separated, and the uterus still remain *distended* by the presence of a child in its cavity so as to prevent much contraction of its fibres, without hemorrhage occurring. The venous trunks running to the uterus are not supplied with valves, and under the above and other circumstances, by what means in addition to, or in substitution of, the contraction of the uterine fibres, does nature prevent the retrograde flow of venous blood into the uterine cavity,—or, in other words, by what means does she prevent uterine hemorrhage?

Fifthly, The structure and mutual relations of the venous sinuses of the uterus seem calculated to obstruct and prevent such a retrograde flow of blood in their tubes as to cause hemorrhage. The uterine veins are large, but of a compressed, flattened form, and arranged in several planes or floors above one another in the uterine walls. On examining these veins in several pregnant uteri, by dissecting them from the outer or peritoneal surface of the organ, downwards towards the mucous, I have found the following arrangement:—Each venous tube gives off numerous communicating branches to the veins of its own plane or floor, by a set of *lateral* foramina. When, however, a venous tube of one plane comes to communicate with a venous tube lying in the plane immediately beneath it, the foramen between them is not in the

sides, but in the *floor* of the higher or more superficial vein, and the opening itself is of a peculiar construction. Looking down into it from above, we see the canal of the vein below partially covered by a semilunar or falciform projection, formed by the lining membrane of the two venous tubes, as they meet together at a very acute angle,—the lower tube always opening very obliquely into the upper.¹ In the folds of these falciform projections, the microscope shows the common contractile tissue of the uterus. Do these semilunar or falciform projections, and the oblique communications of the lower with the higher planes of veins, allow the normal flow of venous blood from the deeper to the more superficial veins of the uterus, while after the placenta is separated, they prevent that anormal or retrograde flow of it from the more superficial towards the deeper-seated venous tubes which would produce hemorrhage? Here I suppose it possible that these falciform processes may act upon the same principle as the Eustachian valve, but in a less perfect manner, while by the obliquity of the communications between the different planes of veins it may be that blood does not so readily retrograde into the deeper vessels, in the same manner as urine does not retrograde into the ureters from the bladder, in consequence of the oblique opening of the former into the latter. Do the uterine fibres seen in the venous falciform processes tend to aid this valve-like mechanism, by diminishing, under contraction, the apertures between the different planes of veins?

Sixthly, One cause contributing to prevent hemorrhage after the total separation of the placenta, is the abstraction from the uterine vascular system of the derivative or sugescent power of the maternal circulation in the placental cells, and the consequent tendency of the blood to flow in the more direct and freely communicating channels that exist between the uterine arteries and veins. Besides, the general and direct forward current of the blood along the course of these larger uterine veins diminishes, and, in a measure, destroys the tendency which it might otherwise

¹ In the course of dissecting the veins of a pregnant uterus, in the sixth month, from the peritoneal surface downwards, Mr Owen states that he “observed that where the veins of different planes communicated with each other, in the substance of the walls of the uterus, the central portion of the parietes of the superficial vein invariably projected in a semilunar form into the deeper-seated one; and where (as was frequently the case, and especially at the point of termination on the inner surface,) two, or even three, of these wide venous channels communicated with a deeper sinus at the same point, the semilunar edges decussated each other, so as to allow only a very small part of the deeper-seated vein to be seen. It need scarcely be observed how admirably this structure is adapted to ensure the arrest of the current of blood through these passages upon the contraction of the muscular fibres with which they are everywhere immediately surrounded.”—Works of John Hunter, vol. iv. p. 68. See also Mr Goodsir’s corroborative statement, in his admirable Anatomical and Pathological Observations, p. 61.

have either to flow backwards, or to escape by any existing lateral apertures of the vessels.

Seventhly, Among the other remaining means by which hemorrhage is more or less prevented after the detachment of the placenta, I may mention, 1, The occasional presence of tufts of foetal vessels left in the orifices of the uterine veins,¹ and forming not only immediate mechanical obstacles, but nuclei for the ready coagulation of the blood; 2, The formation of coagula in some of the collapsed venous tubes and orifices; and, 3, The presence for some hours, or even days, after delivery, of the collapsed decidua over the apertures seen in the veins on the interior of the uterus.

To these few and imperfect suggestions I am desirous to add one remark. Several of the natural means of arresting uterine hemorrhage that I have spoken of, admit of extended anatomical examination being applied to their more perfect investigation; and some of the observations that I have ventured to offer, may be yet proved or disproved, by being tested by direct experiments with vascular injections thrown into the dead body.

Remarks upon a Variety of Opium grown among the Lower Ranges of the Himalas. By J. S. SUTHERLAND, M.D., Bengal Medical Establishment.

THE following remarks upon a peculiar variety of opium, grown among certain ranges of the Himalas, were noted down in connection with the subject of "dysentery," and as resulting from a series of practical experiments regarding the value of different varieties and preparations of the drug in that disease, as it occurs in tropical climates. Until the last few years, opium was held in disrepute, by the medical profession, as a remedial agent in acute diseases affecting the mucous membranes. Its merits, when used with discrimination, are being developed by members of the profession, both at home and abroad.

In no disease of an acute form has opium as yet been acknowledged so serviceable as in the acute dysentery of India; and it is much to be regretted that so many members of the medical service in the East are still adverse to its early and extensive exhibition.

The neglect that opium has met with as a curative in dysentery, is not such a surprising matter; it is only eleven years since the publication of Mr Twining's "Clinical Illustrations of the more important diseases in Bengal," which up to the present

¹ See on this point the observations of Professor Reid in his excellent paper on the Anatomical Relations of the Blood-vessels of the Mother and Foetus.—Edin. Med. and Surg. Journal, vol. lv. p. 8.

time has been considered the text-book for young practitioners in India, and is in many respects a most valuable work; yet the following observation in his treatment of acute dysentery, shows that eleven years back the antipathy to opium was deeply rooted. Mr Twining says,—“When we remember the actual condition of the local disease which is to be removed, before we can cure the severer forms of acute dysentery, we shall hold opiates in great contempt;” and “I have very often seen opium exceedingly injurious, by masking the most deadly symptoms until the patient was past recovery. About one case in fifty derives benefit from ten grains of Dover’s powder about bed-time, after the ipecacuanha and gentian have ceased to do good; and perhaps one in 150 does, in like manner, find benefit from a right dose of *vinum opii*, or an opium pill.”

The observation just quoted is the more detrimental to young practitioners, that it occurs in a work abounding otherwise in sound medical treatment, founded on the best ground-work—post-mortem examinations; and there is little doubt, that had Mr Twining not been cut off soon after the publication of his work, the observation quoted above would have undergone considerable modification in after editions. Eleven years have done much to prove Mr Twining’s opinion erroneous.

Morphia, the most valuable alkaloid principle of opium, is preferred by most practitioners to the drug itself, in the generality of diseases. There are good grounds, however, for supposing that, in Asiatic dysentery, the concrete juice itself possesses some advantage over the pure alkaloid; and it would seem advisable to employ the drug in its utmost state of perfection, as furnished by nature. If the supposition is correct, that the concrete juice possesses any advantage over other preparations, it probably depends upon the more delayed progress of it through the intestines, and from its greater volume having more extended effect upon large ulcerations and extensively inflamed mucous surfaces.

In India, and especially in military hospitals, that may be months in the field, and removed from the resources afforded by depots of medical stores, the simple form of concrete juice may be more valuable than the alkaloid (if a superior variety is used), as being less perishable, and on account of the greater security with which the administration of it may be intrusted to subordinates.

The object, therefore, being to procure for general use a variety of the drug possessing the greatest quantity of valuable alkaloid, and the smallest proportion of deleterious principle, the attention of the profession is solicited to a variety of opium grown by the humble cultivators of the scanty patches of soil (capable of culture) among certain ranges of the Himalas, and which I have found better adapted for general use in the form of concrete juice, than any other variety known to pharmacologists. This opinion

is founded upon its use in hospital and general practice, both in India and Europe, and confirmed by the subjoined analysis, by which it is evident that the proportion of alkaloid principles, in the ratio of their value, is highly in favour of the new variety, known partially to medical men in India, under the name of "Hill Opium."

In reference to the subjoined analysis, it must be taken into account, that the portion of hill opium experimented on, was not a picked specimen; and as the other varieties compared with it in the table of analysis were specially selected, the circumstance tells certainly in favour of the new drug. There can be no doubt that much of the virtue arises from the deficiency of narcotina exhibited. Analysis may, however, not always completely account for a specific virtue, which I am inclined to attribute to the drug in question, and which may depend upon the aggregate as well as the proportionate value of its component parts. Nor is it impossible that the aromatic quality, alluded to in the analytical account, may exert a beneficial influence, when in opposition with diseased mucous membranes.

This drug has probably never reached this country before. It was originally brought to my notice by Dr W. L. M'Gregor, of the Bengal European Light Infantry, from whom I procured a small portion for hospital use, with the view of confirming in native constitutions, the results of Dr M'Gregor's practice in European cases. Dr M'Gregor found the hill opium peculiarly calculated for reducing inflammatory action in the mucous coat of the bowels, and he employed it in most stages of dysentery in Europeans, with the happiest results. I was prepared, however, to find this drug inadmissible in Asiatic constitutions—a supposition afterwards realized in many cases in which it was employed; a circumstance by no means astonishing, when the almost opposite nature of dysentery in Asiatics is considered, and the consequent treatment required in such cases. I allude to the frequent occasion for stimulating treatment requisite for the cure of the low form of dysentery, so generally the type of the disease in natives of India, and in treating which, it must be remembered, that the constitutions of Hindoos and Mussulmen differ; the former adhering to rice and vegetable diet, and the latter partaking occasionally of animal food, although more abstemious in its use than the natives of Europe. The moslem is also less scrupulous in exceeding in spirituous liquors, notwithstanding the Koran's prohibition; and this indulgence tends to render him more liable than the Hindoos to a high type of inflammatory action.

In native practice, therefore, my experience of hill opium has not been in an equal ratio of success with that of Dr M'Gregor among European soldiers, and for the reason already given, proved by the fact that moslems alone derived benefit from its use. The few cases, however, of Europeans in India, to whom I have ad-

ministered the drug, underwent decided improvement, and turned out favourably, and firmly established in my mind a sense of its superiority over other varieties.

A few words concerning the qualities of hill opium, as applied to practice in Europe. It does not lose any of its efficacy when used in a temperate climate; but to render it so, it must be prescribed in much the same doses as in India, namely, from one to four grains, according to the urgency of the case. I have had no opportunity of employing it in dysenteric affections as they occur in Britain; but I have exhibited it in the irritability preceding, and concomitant with, periodical chronic obstruction of the intestinal canal, where there was reason to believe that contraction of a portion of it existed, and threatened acute inflammation. The almost specific power of the hill opium in this serious case, can be confirmed by Dr James Marr of Edinburgh, who afterwards used it on several occasions with much confidence. The beneficial effects of the drug might justly be anticipated in every case requiring the employment of morphia.

There is no reason for supposing that the plant from which the hill opium is obtained differs in the smallest degree from the "papaver somniferum" of the "materia medica." The medicinal qualities of the concrete juice obtained from the plant cultivated in the "hills," must therefore be modified solely by the circumstances under which it is found. The climate and soil of the hilly districts in which it is grown may certainly influence its properties, as these are known occasionally to affect the powers of several remedies of a vegetable nature; and the peculiarities of culture adopted by the "hill men" may tend to the production of a peculiar property in its chemical composition, so as to affect its medical virtues. The localities where this opium is an object of cultivation, are those ranges of the Himala varying from six to eight thousand feet above the level of the sea. The plant is cultivated in little terraces or hanging gardens, watered by rills from the precipices above, and guided in tiny canals, such as are cut for rice growing. The soil consists of debris or detritus, from the overhanging mountains, and the enormous quantity of micaceous schist that assists in the formation of these mountain ranges, may form a soil specifically affecting the product. Besides the supply of this drug, necessary for the demand among the hill population, certain cause exists for the supposition that a contraband exportation of it is carried on towards Scinde by the Sutlej, and also by the Sirsa and Bahawalpoor countries. This was stated to me by a European trader, whose various avocations and vicissitudes had rendered him likely to be possessed of some knowledge of the circumstance. But there is no reason to think that any quantity reaches the British provinces, probably from its superior qualities being as yet unknown.

To arrive at a just conclusion on the qualities of hill opium, it

only appears necessary to weigh the beneficial effects of it in practice, witnessed by Dr M'Gregor, Dr Marr, and myself, (and more particularly in reference to the fact of narcotism or even constipation never resulting from its use), with the following analysis by a very enthusiastic chemist, Dr Samuel F. Thomson, experimental assistant in the University of St Andrews.

From this gentleman's analysis, it would appear that the value of the drug consists in the presence of rather more than the average proportion of morphia, and greatly less than the average quantity of narcotina, which agrees with the medical effects noticed, and is likewise interesting on the grounds, that the drug grown in the plains of Bengal, and usually termed East India opium, is asserted by such an undoubted authority as Dr Christison, to abound in narcotina at the expense of morphia.

ANALYSIS BY DR S. F. THOMSON.

I received from my friend, Dr J. S. Sutherland, a small quantity of a drug, the product of India, and called "Hill Opium." It was of a consistence as hard as bee's-wax, of a dark-brown colour, a bitter somewhat spicy, not disagreeable taste, an aromatic opiate odour, a somewhat shining and homogeneous fracture. Being requested to ascertain the proportions of morphia and narcotina in the specimen, I have subjected it to analysis, which has been repeated, and I can confidently say, that the opium is of fine quality, and in the hands of expert manufacturers of morphia, likely to prove not less productive than the average of the opiums in the European market. I have evidence that it contains the following proximate principles characteristic of opium, viz. :—morphia, codeina, narcotina, and meconic acid. When the opium had been exhausted, first by distilled water, and then by dilute acetic acid, the insoluble residuum amounted only to about 17 per cent, and the ash to 3·3. The morphia was estimated both by the process of Gregory, and by that of Mohr; and the narcotina was also ascertained by two distinct processes.

I.—*Estimation of the Morphia.*

1st, By the well-known method of Dr Wm. Gregory, I obtained from 50 grains of the opium, gr. 4·7 of the common muriate of morphia, or 9·4 per cent., which indicates nearly 7 per cent. of pure morphia. From this muriate I procured a minute quantity of codeina. The precipitated morphia was turned red by nitric acid, and blue by sesquichloride of iron. The infusion and the precipitated salt of lime were coloured blood-red by sulphated peroxide of iron, which is the property of meconic acid.

2d, Seventy-five grains of the opium were in the next place treated according to the process of Mohr. It was digested with successive portions of distilled water; first, for 48 hours, and then for 36, and 24 hours at a time—the infusion being always well

expressed from the residuum. The liquid being brought a-boil, was poured into boiling hot milk of lime, containing twenty grains of the caustic earth; and when it had boiled a little while, it was filtered, evaporated down, and boiled with sal-ammoniac, as long as odours of ammonia escaped. The precipitated morphia being washed and dried, was almost colourless, and weighed altogether gr. 6·675, which is 8·9 per cent. It was entirely soluble in oxalic acid, and was rendered blue by sesquichloride of iron, and red by aquafortis.

From these two separate processes, it is to be concluded that the opium contains not less than from $7\frac{1}{2}$ to 8 per cent. of this alkaloid, and therefore that a pound weight (avoirdupois) would yield nearly 13 drachms of good muriate of morphia.

II.—*Estimation of the Narcotina.*

1st, Fifty grains of the opium, dried and pulverized, were digested for two days in half a fluid ounce of ether, with the aid of a gentle heat. The solution was then poured off, and the mass being dried and powdered again, the digestion was repeated twice more, for a day each time, with fresh ether. The residuum was then washed with ether, and the whole solution evaporated nearly to solidity, and till it had no ethereal odour. This extract was of a dark-brown colour, and it reddened litmus paper. On treating it with warm and weak muriatic acid, a reddish solution was obtained, and a tough dark-grey residuum, insoluble in water, and of the character of caoutchouc. In the next place, the solution was boiled with animal charcoal, filtered and precipitated with excess of ammonia. The light-grey precipitate thus obtained, being heated in alcohol, some black matter was left undissolved, and the crystals of narcotina weighed gr. 0·85 or 1·7 for 100 parts of the opium.

2d, The residuum of the opium from process 1, 2, was digested for some days in dilute acetic acid, with the aid of a gentle heat, and the filtered infusion treated with ammonia in surplus. The black agglutinated precipitate was redissolved in acetic acid; its solution clarified by animal charcoal; and when the treatment with volatile alkali had been repeated, the washed precipitate weighed gr. 1·2. Being of a grey colour, it was doubtless mixed with some colouring matter, so that the result of this second experiment confirms the preceding, to the effect that the opium contains but a small per centage of narcotina.

It is not indeed to be relied upon as determining the real amount of narcotina, for we know that some of this alkaloid comes away by the maceration in water for morphia; but as the greater part of it is left in the residuum, we may justly regard the obtaining so small a quantity, as gr. 1·2 (impure) from the solid remains of 75 grains of the opium, a proof of the correctness of the former estimation by ether, which is the proper menstruum for

narcotina. In regard to the morphia, the estimation, by process No. 2, must be considerably nearer the truth than the first trial, in consequence of the greater security against loss in the prompt method of Mohr. In proceeding with No. 1., I had such a multitude of manipulations, as inevitably to cause serious diminution of the product. However, in the following comparison of the hill opium, with those of Turkey and Egypt, which were analysed by Mülder and Schindler, we shall take the morphia at 7.95. per cent—the mean between our two experiments.

Hill opium, morphia, per cent.....	7.95.	Narcotina, per cent	1.70.
Smyrna opium, (picked).....	10.84.	Ditto	6.80.
Ditto.....	9.85.	Ditto	9.36.
Ditto.....	10.30.	Ditto	1.30.
Egypt opium	7.00.	Ditto	2.68.

On the State of the Blood in Intermittent Fevers and Dysentery.

By LEONARD and FOLEY, Medical Officers in the French Army of Africa. Read before the French Academy of Sciences, 10th November 1845—(translated for the Northern Journal.)

1. In intermittent fevers, in the uncomplicated state, whatever be their type, the proportion of fibrine in the blood varies, but within the limits of health, or does not fall short of the minimum or exceed the maximum of its physiological proportion.

2. It becomes diminished in relapses, yet without falling below its physiological minimum.

3. The transition from the intermittent to the remittent or continued type, has no effect on the proportion of this constituent of the blood.

4. Of the complications, those only which are purely inflammatory cause it to appear in excess.

5. The congestions which take place in certain organs, and which are met with in every type, reach, in some rare cases, an inflammatory character, and hence increase the proportion of fibrine.

6. The cause which determines the transition of the fever to the malignant state, may have an influence on the relative quantity of fibrine; but this state cannot be set down as dependant on the proportion of fibrine, since that fluctuates in the several cases which present the same malignant character.¹

7. The cause which in intermittent fevers gives rise to enlargement of the liver, cannot be ascribed, any more than the typhoid state, to defibrination of the blood.

8. An increase of the blood-globules in intermittents, is an

¹ See Periscope, p. 47.

exception to rule. Their tendency is to remain stationary or to diminish.

9. Their diminution does not become signal, unless by the effect of the prolongation of the disease, relapses, and the enfeeblement of the constitution.

10. Though the occasional increase in the proportion of blood-globules be in general observed in severe forms of the disease, nevertheless no connection can be made out between these two states.

11. The solid matters of the serum have a tendency to decrease in quantity; this tendency to decrease affects at once its organic and its inorganic constituents.

12. The decline in the proportion of the albumen is well marked; this decline does not take place to the advantage either of the fibrine or of the blood-globules.

13. The matters soluble in boiling distilled water, are found to have increased; but this fact, which is not specially linked with the existence of intermittent fever, since it is to be observed in other diseases, and even in health, should be ascribed to the operation of some more general cause.

14. The substances soluble in boiling alcohol were found so fluctuating in their quantities, that no proportion could be established in regard to them.

15. Lastly, The water of the blood, which is very rarely diminished, has in general a tendency to increase, this tendency being often very well marked. It is almost always at the expense of the blood-globules that this alteration takes place.

The conclusion from these results is—

1. That the vitiation of the blood in intermittent fevers, in as far as the analysis made by the authors extended, cannot be regarded a primitive, or as a cause, but rather as consecutive, and by the effect of the disease.

2. That this vitiation, which arises in other diseases also, by consequence of their long continuance, as has been established by the labours of Andral and Gavarret, and of Bequerel and Rodier, has no particular character beyond affecting at once a great number of the constituents of the blood.

3. That if the development of intermittent fever be the result of a poisoning of the blood, which the authors do not absolutely deny, the principle from which it originates remains to be discovered, and that, on this account, the first derangements in the living economy which indicate the presence of the disease, may with as good reason be ascribed to a morbid condition, affecting some one part of the apparatus of the nervous system.

4. That the researches of a humoral pathology cannot escape some measure of the reproach cast on the pathological anatomy of the solids, because they cannot entirely raise the veil which conceals from our view the essence of diseases.

5. That, nevertheless, the knowledge of the changes produced on the proportions of the several constituents of the blood, under the influence of diseases, should be regarded as a real advance in addition to our knowledge of the lesions which the solids undergo.

6. Lastly, That after the study of the fluids of the human organism, another inquiry should follow; that of the laws according to which that power operates, which governs all the component systems of the animal economy.

Dysentery.—Out of six analyses, in four the fibrine was found to be increased; in two in the normal proportion. Whence it appears that dysentery, at one time, may accompany or be the result of an inflammatory state, at another time may exist without that state.

The duration of the disease seems to have no share in determining the variations in the fibrine, since the blood was drawn at periods more or less distant from its onset.

The blood-globules tend to diminish.

The solid matters were increased in no case; in four they maintained their normal proportion.

The organic matters had decreased in four cases; in two these retained their due proportion.

The inorganic matters deviated in no case from their physiological proportion.

The albumen was lessened in the three cases in which it was isolated.

The substances soluble in boiling water were obtained in four cases only; these were considerably increased. This fact deserves attention, as analogous to their state in the intermittent fevers.

The substances soluble in boiling alcohol were augmented in one case, and diminished in the two others.

The water was in excess in four cases; of due proportion in two cases.

PART II.—REVIEWS.

On Diseases of the Liver. By GEORGE BUDD, M.D., F.R.S.,
Professor of Medicine in King's College, London, &c. &c.

PROFESSOR BUDD'S work is a treatise on the Diseases of the Liver, founded on the most recent structural and pathological views of that organ. It is an octavo volume of some 400 pages. We

give the titles of the chapters. The first, after an introduction, in which the structure of the liver and the composition of the bile are spoken of, is on Congestion of the Liver; the second, on Inflammatory Diseases of the Liver,—including suppurative inflammation and abscess of the liver—gangrenous inflammation—adhesive inflammation of the capsule and of the substance of the liver—cirrhosis—and other forms of inflammation of the substance of the liver—inflammation of the veins of the liver, under the heads of suppurative inflammation of the portal vein—adhesive inflammation of the branches of the portal vein, and inflammation of the branches of the hepatic vein—inflammation of the gall-bladder and ducts, under the heads of catarrhal and suppurative inflammation—croupal or plastic inflammation—ulcerative inflammation—effects of inflammation of the gall-bladder and ducts, and fatty degeneration of the coats of the gall-bladder; a third chapter contains softening of the liver, destruction of the hepatic cells, suppressed secretion of bile, fatal jaundice; also fatty degeneration of the liver, partial deposit of fat in the liver, waxy liver, appearances caused by deficiency of fat in the liver, scrofulous enlargement of the liver, and other kindred states, excessive and defective secretion of bile, unhealthy states of the bile, gall-stones; a fourth chapter on Diseases which result from some growth foreign to the Natural Structure, contains cancer of the liver, origin of cancerous tumours of the liver; their growth, dissemination, and effects—encysted, knotty tubera of the liver—hydatid tumours of the liver. The fifth and last chapter is on Jaundice; there is, however, an appendix on the liver-fluke—its effects on sheep and other graminivorous animals—flukes found in the gall-ducts, in the duodenum, and in branches of the portal vein, in man.

From the chapter on Congestion, we extract the following passages:—

“The liver presents different appearances, according to the degree of congestion.

“In slight degrees, the twigs of the hepatic vein and the capillaries that terminate in them, are found, after death, turgid with blood, while the portal twigs, and the capillaries that immediately spring from them, are empty. A section of the liver presents, in consequence, a mottled appearance. The central portions of the lobules, where the vessels are congested, form isolated red spots, while the margins of the lobules, where the vessels are empty, have a colour which varies from yellowish-white to greenish, according to the quantity of oil-globules and of colouring matter which the cells contain. This appearance has been termed by Mr Kiernan, the first stage of *hepatic-venous* congestion. When the course of the blood through the heart or lungs is impeded, the hepatic veins and the capillaries that open into them are naturally the first to become turgid.

“ In a further degree of congestion, more of the vessels forming the capillary network are filled, of course in a direction backward, towards the portal vessels. The congestion extends from lobule to lobule, at those points where the adjacent lobules are connected by their capillaries; and when the congestion has nearly, but not quite, reached those twigs of the portal vein that go to define the lobules, all the capillaries of the lobules will be injected, excepting those immediately surrounding the portal twigs. A section of the liver will still present a mottled appearance, but now the pale portion will be in spots, where the uninjected twigs of the portal vein are divided, and the red portion will form a band continuous throughout the liver. This appearance is what Mr Kiernan has called the second stage of hepatic-venous congestion.

“ A liver congested to this degree is enlarged from the large quantity of blood it contains; and, as Mr Kiernan has remarked, it is frequently at the same time in a state of *biliary* congestion. The biliary congestion is an accumulation of biliary matter in the lobules of the liver, giving the uninjected portions of the lobules a deeper yellow or greenish tint than is natural to them. It seems to be a consequence of the congestion of blood, and is produced perhaps in great measure by impediment to the free escape of the bile through the small ducts, from the pressure exerted on them by the distended vessels.

“ In a still higher degree of congestion, the portal vessels likewise are found filled after death, and the whole liver is red, but, as was observed by Mr Kiernan, the central portions of the lobules are of a deeper hue than the marginal portions.

“ It is only when the vessels are so turgid, that the liver is enlarged, or the secretion and discharge of bile are somewhat impeded, that the congestion can be considered morbid.

“ Simple congestion, perhaps, renders the liver more friable, but this change of consistence is not very appreciable. The chief anatomical characters of congestion, are the deep colour of the liver and its increased size.”—P. 38—40.

The enlargement which the liver suddenly undergoes in states of congestion, and the equal suddenness of the disappearance of the increase, is what led some pathologists to represent the liver as possessed of an erectile structure. This idea was connected with the opinion that the liver is composed of two substances, a yellow and a red, corresponding to the medullary and cortical substances of the kidney; the red substance being regarded, while this view lasted, as that which possesses the erectile character. This appearance of two substances is fallacious, as was shown by Kiernan. The two colours arise from one portion of the lobules having the capillaries uninjected, and another portion injected with blood; the capillaries of the hepatic veins being most commonly distended with blood, while the capillaries of the vena portæ are empty.

The connection of congestion of the liver, and other diseases of this organ, with disease of the heart, has often of late drawn the attention of pathologists.

“The most frequent opportunities we have of observing the effects of simple congestion of the liver, are in persons labouring under organic disease of the heart. It often happens, that in such persons, when the circulation is more than commonly impeded, the liver grows larger. Its edge can be felt two or three inches below the false ribs. If the circulation be relieved by bleeding, or by diuretics, or by rest, the liver returns to its former volume. This enlargement of the liver from congestion, often takes place, and again subsides, very rapidly, according to the varying conditions of the general circulation.

“In estimating the bulk of the liver, in congestion and other diseases, we must bear in mind, that its natural limits vary with posture and many other circumstances. It descends an inch or two lower when the person under examination is standing or sitting, than when he is lying down; it is lower after inspiration, than after expiration; and it may be pushed down by fluid in the cavity of the pleura, or by bloated, emphysematous lung.¹

“Enlargement of the liver from congestion is, in general, unattended with pain, and the only complaint the patient makes is of a sense of weight, or fulness, in the right hypochondrium. Occasionally, these symptoms are succeeded by a slight tint of jaundice. As the blood, when its passage through the lungs is impeded, is imperfectly *decarbonized*, and gives a purplish colour to the face,—so, when its course through the liver is impeded, the blood is not completely freed from the principles of bile, and the countenance acquires a slightly jaundiced, or sallow tint. When both organs are congested at once, as happens when the flow of blood through the left side of the heart is obstructed, both effects sometimes follow,—the complexion becomes purplish, and, at the same time, sallow. This hue of the complexion, in cases of obstructed circulation, has been distinctly noticed by Dr Bright. He says: ‘When obstruction takes place to the circulation through the chest, but more particularly when the heart becomes over-distended with blood, we observe the countenance gradually assume a dingy aspect, in which the purple suffusion of carbonized blood is mingled with the yellow tint of slight jaundice: the conjunctiva is more decidedly tinged; and, if the disease continue long, sometimes completely prevails over the purple tint.’

“This jaundiced tint of the complexion, co-exists with a jaundiced condition of the liver itself, or, as Mr Kiernan expresses it, with *biliary congestion*, which has been already noticed as sometimes consequent on sanguineous congestion.

“If the biliary congestion be long kept up, the function of the

¹ Andral's "Clinique Medicale," t. iv. p. 108.

cells in the congested lobules is arrested, or rendered less active, and the cells become perhaps impaired in their vitality and powers of reproduction. The liver is permanently injured in its secreting element, as it is when the common duct has been long obstructed."—P. 41, 42.

Congestion of the liver is among the derangements attendant on chlorosis. Such a congestion produces an aching and fulness in the right hypochondrium, along with nausea, headache, and langour, and these symptoms are generally relieved by a dose of calomel, followed up by some doses of a saline purgative. The tendency to congestion of the liver in chlorosis is doubtless connected with the deficiency in the proportion of the fibrine of the blood. It is long since chlorotic congestion of the liver became familiar to medical practitioners; but till Andral and Gavarret began their researches on blood, no one seems to have suspected the fact, that such congestions were connected with the low proportion of the fibrine, or with one kind of poverty of the blood. In the following passage, Dr Budd refers to this observation, as made first by Andral:—

“Hitherto, we have considered only congestion of the liver produced by mechanical impediment to the return of blood from it,—or, as most writers express it, *passive* congestion. But the liver may be congested from other causes. Thus, in the hot stage of ague, there seems to be, in some instances, in the liver, as well as in the spleen, an accumulation of blood, which is not attended with effusion of any matter characteristic of inflammation, and which subsides when the fit of ague is past. We are ignorant of the exact cause of these temporary accumulations of blood.

“Congestion of the liver may also result from a faulty state of the blood, quite independently of any mechanical impediment to its course through the lungs or heart. In a person dead of purpura hemorrhagica, I found the liver and spleen very large, and of the dark colour of a morello cherry, from the great quantity of blood they contained. From the late researches of M. Andral, it seems that a great diminution in the proportion of fibrine is the change in the blood that most disposes to such congestions.

“The congestions of the liver in ague and from faulty states of the blood, have to the congestion produced by a mechanical impediment to the flow of blood through the lungs or heart, merely the outward resemblance caused by distension of the vessels. They differ from it in their causes, and are not removed or lessened by the same means. We have a clear conception of the way in which congestion from disease of the heart is produced, and also of the way in which it impedes the function of the liver, and ultimately leads to permanent change of structure—but of the mechanism and remote effects of these other kinds of congestion we know very little.”—P. 43, 44.

In the chapter on Inflammatory Diseases of the Liver, Dr Budd speaks first of suppurative inflammation of the organ.

Among the causes of suppurative inflammation of the liver, he places, first, the effect of a blow, or other injury. That this is not a more frequent cause of inflammation and suppuration, seems to arise merely from the perfect protection afforded by the ribs to the organ. This second cause, namely, the previous suppuration of a vein, is one of great interest in pathology. In the case of this metastasis of pus, Dr B. justly concludes against the actual transfer of the pus through the blood from a vein, or from one part of the body to be deposited in another part, as the liver, founding chiefly on the large size of the pus-corpuscles, as compared with the blood-corpuscles, whence it would be impossible for the pus to be deposited without the escape of blood at the same time. He considers the pus to be formed as a result of inflammation in the part of the organ where it collects; but that this inflammation is the result of the irritation produced by the presence of pus-corpuscles conveyed to the part so affected. "Globules of pus, mingled with the blood, are conveyed to the capillary vessels; and, it would seem, by becoming mechanically arrested, there excite each circumscribed inflammation and abscess." The lung is the most frequent seat of such metastatic abscesses, and often is the sole seat of them. And this is easily understood to be, because the inflammation is most commonly in one of the veins which directly enter into the system of the *venæ cavæ*; and hence the pus, in the first instance, enters the lungs, and arrives in its capillary vessels; "but if one of the veins that go to form the *vena portæ* be inflamed, the pus will be carried to the liver first, and abscesses will be found solely, or in greatest number, in that organ. Cruveilhier found, that if mercury be injected into one of the veins that feed the *vena portæ*, it will be stopped in its course through the liver, and will cause circumscribed abscesses there, just as it does in the lungs when injected into the crural vein."

The next cause of suppurative inflammation of the liver to which our author refers, is ulceration of the adjacent mucous surfaces, namely, of the intestines, stomach, gall-bladder and gall-ducts, and under the same head he includes dysentery.

It is long since it was remarked, that in persons cut off by dysentery, the liver is often found diseased. Sir James M'Gregor, and the late Dr James Johnson, appear, now a good many years since, to have come to the conclusion that a primary disease of the liver is the cause of dysentery. Their view, however, does not appear to have made many converts, resting, as it does, on the mere supposition, that an unhealthy secretion of the liver might cause irritation and inflammation of the intestines, backed by the fact just stated, namely, the frequency of diseased liver in persons who sink under dysentery.

If their conclusion had applied merely to what is termed in the East Indies, the fluxus hepaticus, that form of dysentery most frequent in those who have long resided in that country, there would have been less objection to their hypothesis; but since they seem to include under it the more acute form which attacks recent settlers, known by the name of colonitis, and which is a sudden and acute disease, their opinion has been most commonly rejected—the more generally, that it was easy to account for the frequency of diseased liver after death by dysentery, since it was likely that dysentery would be most fatal in those, who, at the time of its onset, were already affected with an additional malady, namely, disease of the liver. Dr Budd's view, however, is of a different character. We cannot promise to subscribe to his opinion without reservation; but, in the meantime, he has made out a plausible "prima facie" case, supported by many pathological facts. What he strives to establish is, that ulceration of the mucous surfaces, adjacent to the liver, falls under the same general rule in the production of suppurative inflammation of the liver as the inflammation of veins entering into the system of the vena portæ. Thus, that pus or other morbid products of ulcerative disease, or even of other changes, such as occur in dysentery, formed on the mucous surfaces of the stomach, small intestines, great intestines, gall-ducts or gall-bladder, being conveyed to the liver from any of these parts by their veins, all of which join the portal vein, may there give origin to inflammation, just as he believes the pus generated in the veins themselves, can determine the same result.

“Admitting dysentery, or ulceration of the bowels, to be a source of abscess of the liver, it is obvious that the liver does not become involved by spreading of the inflammation, but by some contamination of the portal blood.

“This may be either by *pus*, formed by suppurative inflammation of one of the small intestinal veins; or by matter of other kind resulting from softening of the tissues; or by the fetid gaseous and liquid contents of the large intestine in dysentery, which must be absorbed and conveyed immediately to the liver. It seems probable, that contamination of the first kind usually gives rise to small scattered abscesses; of the last, to diffuse inflammation, and a larger, perhaps single, collection of pus. If the morbid matter be such that it does not mix readily with the blood—as globules of pus or mercury—it will cause small, circumscribed abscesses, the rest of the liver being healthy. If, on the contrary, the morbid matter be readily diffusible in the blood, all the blood will be vitiated, and diffuse inflammation result.

“The admission of this explanation of the relation of abscess of the liver to dysentery, would lead us to expect that abscess of the liver might occasionally be consequent on ulceration of the stomach, or gall-bladder—parts, which, like the larger intestine,

return their blood to the portal vein—and this is found to be the case.”—P. 64.

Dr B., in confirmation of this view, cites a case, in which abscess of the liver was connected with disease of the splenic vein —“the most probable supposition is, that the disease in this case originated in the spleen; that the splenic vein subsequently became inflamed, and that the disseminated abscesses in the liver were caused by the noxious matter brought to it by the vein.”

We must pass by the remainder of this chapter, including many important observations on the changes of structure attendant on suppuration, on the difficulties in the diagnosis, and on the rules of treatment. We proceed next to the chapter on Gangrenous Inflammation.

Many distinguished pathologists have doubted if true gangrene ever occur in the liver. Mere blackness, or blackness joined with softening of substance, is not a sufficient evidence of gangrene of the liver. Even where a portion of the substance of the liver is reduced to a black pulp, like a clot of venous blood, a state sometimes found as a consequence of inflammation, there is not proof of the presence of gangrene, though this is the state of the liver to which, in past times, that name has been commonly applied. Dr Budd agrees with Annesley, that what medical men have sometimes taken for gangrene of the liver, has been the effect of changes after death. It seems doubtful, then, if gangrenous inflammation of the liver be ever primary; but it may affect the liver, like other internal parts, by contamination from distant gangrened parts. Dr B. quotes a case in which gangrene of the liver, marked by a defined boundary, together with gangrene in the lung, arose from gangrene of the toes produced by cold.

“In this case, the existence of gangrene, both in the liver and in the lung, was clearly shown by the defined line surrounding the gangrenous portions.

“The source of the mischief here was, no doubt, the gangrene of the toes produced by cold. The man was in the prime of life, of spare habit, muscular, florid, and in good health at the time of the frost-bite. The case shows us what a serious thing a small patch of gangrene in any part of the body may become.

“The dissemination of the gangrenous masses—the existence of a number of them *isolated and at a distance from one another*—proves that the septic agency was conveyed by the blood. The noxious matter thus disseminated destroyed the vitality of the tissues on which it acted most strongly.

“The chemical theory of these septic changes is now well known. All parts in which they are taking place, have a tendency to affect other parts brought into contact with them, with the same mode of transformation. The case just related—and it is by no means

a solitary one—offers one of the most interesting illustrations of this theory in the whole range of pathology. But, whatever be the explanation adopted, the fact is certain, and it is one of extreme importance, that gangrene of the extremities, or of any part of the surface of the body, produced by cold, by pressure, or in any other way, has a tendency to infect other and remote parts of the body with the same change.”—P. 102.

Our author adds, “I might, if it were needful, adduce many other instances, showing that gangrene of one part, produced by some cause acting only on that part, has a tendency to cause gangrene in other parts remote from it, and not subject to the same influence. It is in this way, in effect of gangrene of some other part, that true gangrene of the liver is most frequently produced. Rokitansky states that he has several times observed gangrene of the liver in connection with gangrene of the lung, and has never found it without gangrene of some other part.”

Dr B. next speaks of adhesive inflammation of the capsule, and of the substance of the liver, of cirrhosis, &c.; on this section we have nothing to remark. From that which follows on inflammation of the veins of the liver, we quote the following passages:—

“Inflammation, in veins, as in other textures, may be *suppurative*, that is, it may lead to the formation of pus; or it may be *adhesive*, and lead only to the effusion of coagulable lymph, which blocks up and obliterates the vein. But in the inflammation of veins that leads to the formation of pus, coagulable lymph is usually poured out as well as pus; and the pus does not fill all the inflamed portion of the vein, but is interrupted here and there by plugs of fibrine, so as to form a string of abscesses along the vein.

“Inflammation of the trunk of the vena portæ is of very rare occurrence. From being so deep seated, this vein is not liable to wounds or other injuries—the most common causes of inflammation of other large veins.”—P. 136.

“Inflammation of a branch of the portal vein, may be caused by an abscess of the liver, consequent on phlebitis of some distant part. This happens, however, very rarely; probably on account of the coats of the vein being thick and surrounded by areolar tissue. The only instance of the kind I have met with, is in a case sent me by my friend, Dr James Russel, of Birmingham. The patient, a man of middle age, had his leg amputated on the 18th of March, on account of gangrene coming on after a compound fracture. Three days after the operation, he had a rigor, followed by sweating. The rigors recurred, other constitutional symptoms of purulent phlebitis came on, he got gradually lower, and died on the 20th of April. Occasional pain at the epigastrium, was the only sign that the liver was diseased. An abscess was found in the apex of each lung, and three or four ab-

cesses in the liver. A large branch of the portal vein, in contact with one of the abscesses, contained a hollow cylinder of lymph, about two inches in length, filled with pus. The abscess, reaching the coats of the vein, had probably excited inflammation of its lining membrane, just as an abscess, reaching the surface of the liver, excites inflammation of the peritoneum above it.

“ Mere adhesive inflammation of branches of the portal vein, does not prove fatal, like suppurative inflammation; and on this account, and from the difficulty of distinguishing the different inflammatory diseases of the liver during life, we cannot yet give its clinical history. The patient recovers, and when he dies, perhaps some years after, of another disease, we see merely the ultimate changes to which obliteration of branches of the portal vein leads. These changes are very striking and characteristic. The surface of the liver is marked by deep linear fissures, corresponding to the obliterated branches of the vein, and caused by atrophy of those portions of the liver which the obliterated branches supplied. Rokitansky, who has well described these appearances, states that they are very common in persons who die in the hospitals in Vienna. They are by no means uncommon in this country. During the past year, I have had an opportunity of examining three good specimens of this disease.

“ It appears, then, that obliteration of branches of the portal vein causes atrophy of those parts of the liver which the obstructed branches supplied, and consequent diminution of the size of the organ. When an obliterated branch is near the surface, the capsule gets drawn in by the atrophy of the intervening lobular substance, and the surface is marked by a linear fissure. The lobular substance, supplied by other branches of the vein, may remain uninjured. A portion of the liver is lost, proportionate in amount to the number and size of the obliterated branches of the vein—and the person must suffer all the evils which such a loss entails. The disease, in its effects, is like that form of adhesive inflammation of the substance of the liver, which leads to new fibrous tissue in the portal canals of considerable size; and in two of the three instances I have mentioned, was attended by marks of disease in the capsule of the liver, and in the spleen, such as are usually found in that affection. In these instances, it was probably brought on by spirit-drinking. Rokitansky is of opinion that this disease of the liver is in many cases the result of direct communication between the venous system of the liver and that of the body, in consequence of the umbilical vein remaining pervious. He says that in extreme cases, it may become the cause of ascites.¹

¹ “ In the preceding chapter (p. 127), allusion has been made to cases in which ascites was associated with great enlargement of the spleen. These were most probably instances of the disease under consideration. The ascites gradually, though slowly,

“ Suppurative inflammation of a branch of the *hepatic* vein is, as already remarked, occasionally produced by a small abscess in the liver, consequent on phlebitis of some distant part. The abscess, touching the thin coat of the hepatic vein, sets up inflammation on its inner surface, just as it sets up inflammation of the peritoneum above it when it reaches the surface of the liver. Lymph is effused within the vein, at the point where it is touched by the abscess, the canal of the vein becomes closed at that point, and all the branches that feed it, even back to their capillary divisions, become subsequently, and in consequence, choked with fibrine and coagulated blood, with, here and there, a little purulent matter. I have observed these marks of inflammation in a branch of the hepatic vein, in two instances in which small abscesses had formed in the liver after amputation. In a portion of liver sent me by Mr Busk, in November 1843, which was taken from a man who died of phlebitis after amputation of the thigh, several branches of the hepatic vein were inflamed in this way, and obviously from this cause. The liver contained many abscesses, of the size of peas, and lined by a distinct, but very thin membrane.”—Pp. 143—147.

The section that follows is on a subject, concerning which our knowledge is still very limited, namely, inflammation of the gall-bladder and ducts. Dr Budd sets out with defining the forms of inflammation as observed in mucous membranes; these he reduces to, 1st, Catarrhal, in which the secretion is increased in quantity and changed in quality; this he regards as analogous to adhesive inflammation in other textures, no adhesion occurring because the matter poured forth has no disposition to become organised. 2d, Suppurative inflammation. 3d, Croupal or plastic, in which lymph is poured forth, so as in some instances to form a cast of the tube on the surface of which it is deposited. 4th, Ulcerative inflammation.

We confess we cannot see the analogy between catarrhal inflammation of mucous membranes and the adhesive inflammation of other tissues, as of the serous membrane. There is an increased and somewhat altered secretion from serous membranes, and from the synovial tissue under inflammation, and this increase of secretion may be regarded as corresponding to the increase in the secretion of mucous membranes under catarrhal inflammation. But this increase in the secretion of serous membranes has nothing to do with adhesion; it tends to prevent adhesion, even when coagulable lymph is thrown out at the same time, and when there is no coagulable lymph but only serous effusion, then the inflammation of the serous membrane is usually of the same lower intensity which marks most mucous inflammations. We should

diminished, and the patients were again able to follow their former callings; but the spleen remained large.”

be inclined then to say, that the catarrhal inflammation of mucous membranes corresponds to the inferior degrees of acute inflammation in serous membranes, in which there is no lymph thrown forth, but only serum, without tendency to adhesion—and that the croupal inflammation of mucous membranes in which lymph is effused, though without disposition to adhesion, does in fact correspond to the adhesive inflammation of the serous and other tissues. For the points of correspondence between these inflammations, notwithstanding the defect of adhesion in the mucous inflammation, are very striking. The adhesion which occurs so commonly on the effusion of lymph in serous tissues, is less of an essential than a contingent character—it depends on the two opposite surfaces being in contact, and similarly affected with inflammatory action; and the croupal inflammation corresponds to this, because, like it, it is inflammation of high intensity, followed by the same kind of effusion. And it is easy to see why this effusion is not succeeded by the same effect in the mucous as in the serous membranes; because the mucous surfaces are not in contact, being kept apart either by the presence of cartilages, as in the air-tubes, or other rigid tissues, or by distention with air and the like, as in the alimentary canal.

From this section, we quote the following passages:—

“ Inflammation of the gall-bladder, whether catarrhal or suppurative, seldom perhaps proves fatal of itself, except when the cystic duct is closed, and the gall-bladder converted into an abscess. When it is the sole disease, and the ducts are open, so that the matter can escape, the patient may perhaps recover perfectly, or may survive with the gall-bladder more or less changed in structure. I have twice found the gall-bladder and cystic duct contracted, and their coats thickened, in young persons who died of other diseases, and in whom there were no gall-stones, nor any trace of inflammation of the common or hepatic ducts, or of the capsule or substance of the liver.

“ I refrain from giving any details of these cases, as no particulars were noted that can serve to mark even the date of the disease of the gall-bladder.

“ Occasionally, the coats of the common duct, as well as those of the gall-bladder and cystic duct, are found thickened and indurated, without gall-stones, or trace of inflammation in other tissues of the liver. It is probable that in most cases of this kind inflammation is set up first in the gall-bladder by long retention of irritating bile, and afterwards in the ducts by the passage of this together with irritating secretions from the bladder.

“ In persons dead of granular liver, with ascites, it is not very uncommon to find the gall-bladder and cystic duct much contracted, and their coats thickened and indurated. The canal of the duct is much narrowed, and now and then completely closed, so that the duct is transformed into a fibrous cord. When this is

the case, the gall-bladder contains yellowish mucus, or is moulded on a gall-stone, formed of mucus and the yellow matter of the bile. In these cases, I imagine, the gall-bladder and cystic duct become inflamed, secondarily, like the capsule of the liver. (Clin. Med. iv. obs. 51 and 52.) The inflammation is probably seated in the outer coats. From there being other disease of the liver, it is difficult to determine in what degree the symptoms depend on disease of the gall-bladder and duct.

“ Sometimes the coats of the common duct, as well as those of the cystic, are thickened and indurated, and the canal much contracted. In such cases the hepatic duct and its branches are found dilated and filled with thick yellow bile; and the tissue of the liver is greenish or olive. (Clin. Med. iv. obs. 49, 50.) When the common duct is much obstructed, there is a deeper jaundice than belongs to mere cirrhosis. The colour of the skin is a golden yellow shading into green.

“ Further on, more ample details will be given of the effects of permanent closure of the common duct, which may result from various causes besides inflammation, and is very important, because it suspends the office of the entire liver, and, in the end, completely destroys the cells by which the bile is secreted.

“ Another, and much more common cause of inflammation of the gall-bladder, and of the cystic and common ducts, at least among the rich, is the mechanical irritation of gall-stones. But this gives rise to ulceration, rather than to the diffuse catarrhal or suppurative inflammation we have hitherto chiefly considered.

“ *Croupal* or *plastic* inflammation of the mucous membrane of the gall-bladder and ducts is very rare. Rokitansky says he has observed it in the ducts within the liver, in what has been called the secondary fever of cholera, and as a sequel of ordinary typhoid fever. It produces within the gall-ducts membranous tubes, in which the bile forms tree-like concretions; and this again, by blocking up the passage, causes distension of the capillary ducts behind.”—Pp. 161—163.

“ Closure of the *cystic* duct destroys the office of the gall-bladder, and leads to various changes in it, which depend chiefly on the length of time the duct has been closed, and on the previous condition of the gall-bladder.

“ When the cystic duct is closed by adhesive inflammation of the capsule of the liver, and the coats of the gall-bladder were previously healthy, the bile in the gall-bladder is absorbed, and its place is soon occupied by a glairy fluid, of the consistence of mucus or synovia, and not at all tinged, or but very slightly tinged with bile. After a time, this fluid is secreted in less abundance, and the gall-bladder contracts and shrivels; in some cases, almost to the size of an almond.

“ When the coats of the gall-bladder were previously diseased, and secreting cholesterine, which is generally the case when the

cystic duct is closed by a gall-stone, the gall-bladder, after the closure of the duct, will contain a viscid mucus sparkling with scales of cholesterine, or be moulded on calculi almost entirely composed of that substance.

“ It would seem from the cases before related, that closure of the cystic duct impairs the nutrition of the gall-bladder, and in this way, as also by the long retention of bile, when this is unhealthy, renders it much more liable than in its natural state, to inflammation and sloughing.

“ The effects of closure of the cystic duct on digestion and the general health, are much less serious than might have been expected, and sometimes are of very little import. I have lately met with a striking instance of this in a man, 64 years of age, who died in King’s College Hospital, of extensive softening of the brain, and of inflammation of the urinary bladder which was consequent on the cerebral disorder. I did not expect to find anything amiss in the liver. The man’s complexion was remarkably clear, and in the notes of his case, which were taken with much care, there was no mention of any disorder of digestion. The gall-bladder was filled by a mass of small stones, which choked the mouth of the duct, and completely prevented the entrance of bile. From subsequent inquiry of his friends, I learnt that he had never had jaundice, and never complained of disordered digestion.”

“ It has been stated, that closure of the cystic duct, by causing the bile to flow continuously into the duodenum, increases the appetite in a remarkable degree (Dict. de Med. t. v. p. 241)—but this effect was not noticed in the cases just mentioned, and in many others to which I could refer.

“ Closure of the *common* duct has far more serious effects.

“ The most immediate of these, are deep jaundice, dilatation of the gall-bladder and hepatic ducts, and retention of bile in the lobular substance of the liver, which acquires in consequence a deep olive colour. By the retention of bile, the liver at first grows larger, but its increase of size from this cause is, perhaps, never very great. Subsequently, from atrophy of the lobular substance, it shrinks again, and in the end, notwithstanding the dilatation of the gall-ducts, becomes much smaller than in health.

“ If the closure of the common duct occur suddenly, the gall-bladder, or one of the ducts behind the obstruction, may be distended so rapidly as to burst. Several cases of this kind are recorded. (See case cited from Andral, p. 155.)

“ When the obstruction occurs gradually, the bladder and ducts are distended more slowly, and when the duct has been long completely closed, are sometimes found of enormous size. Abercrombie (Diseases of Stomach, &c., 2d edition, p. 364), cites from Boismont, a case in which the hepatic gall-ducts were so distended in this way, and the lobular substance of the liver was so

wasted, that the liver had the appearance of a large undulating cyst. The closure of the common duct was caused by a membranous band which passed over it.

“The ultimate effect of closure of the common duct on the *lobular substance* of the liver, is very remarkable. The cells which go to form this substance, and which secrete the bile, are destroyed; the capillary vessels of the lobules, which minister to secretion, their office gone, waste; the liver shrinks, and no longer presents an appearance of lobules; and its office is no longer in any degree performed.”—Pp. 180—182.

Jaundice is rather a symptom than a disease. That form of jaundice, which the older authorities termed *Icterus Spasmodicus*, is best entitled to be termed *Idiopathic Jaundice*. This is jaundice without pain, and often of short duration, arising under the same circumstances, in which dyspeptic disease occurs. There is no evidence of its being dependant on spasm, nor is the nature of the disease well ascertained; still it is manifestly more of a primary disease than jaundice from gall-stones and the like. There may even be gall-stones without jaundice; and there are cases where transient attacks of pain, without yellowness, have occurred at intervals, during many years, mistaken for *gastrodynia*, until a more complete attack showed the real nature of the disease. Thus, jaundice is but a vague term, and had better be banished altogether from the nosology. The kind of jaundice of which Dr B. treats, belongs to what was formerly termed *Icterus Hepaticus*.

“We have seen that the lobules of the liver are spaces mapped out by the ultimate twigs of the portal vein, which are hairy, as it were, with capillaries springing immediately from them on every side, and forming a close and continuous network; and that the interstices of these capillaries are filled with nucleated cells. It is in these cells that the vital chemistry of secretion goes on. It is seen by the microscope that in different livers, the cells vary in size; that in some they are almost transparent, in others opaque, and apparently more solid; that in some they contain but a few very small oil-globules, while in others they are distended almost to bursting with globules of oil; that in some, they are colourless or nearly so, and in others, yellow with bile; that in some specimens, again, as in the case of Mrs Diprose, before related, they are broken down and destroyed. It is probable, too, that in some cases the cells are only slowly reproduced; that, without complete destruction, they become less productive of new cells, so that at length the number of active cells is much diminished.

“These differences in the condition of the cells cause, of course, corresponding differences in the size, colour, and texture of the liver; differences which were noticed long before that knowledge of the intimate structure of the organ was obtained, by which we are now enabled to explain them.

“ The most remarkable and most serious change is, where the cells are completely broken down and destroyed. It has been seen that this may result from long retention of the secreted bile from closure of the common duct. In consequence of this, the hepatic gall-ducts become enormously dilated, and the whole liver acquires a deep olive colour. Its tissue is flabby, but not readily broken down by the finger, and *presents no appearance of lobules*. Every part of the liver is affected alike, and exhibits under the microscope nothing but free oil-globules and irregular particles of solid, biliary matter. The liver contains but little blood, and partly from this, but chiefly from loss of the cells, it may be smaller than in health, and its surface wrinkled, notwithstanding the biliary matter accumulated in it.

“ But destruction of the hepatic cells may take place rapidly, without any obstruction of the gall-ducts, and, instead of being consequent on jaundice, may be the cause of jaundice that proves rapidly fatal, apparently from disorder of the functions of the brain.

“ It has been long known that cases of jaundice now and then occur which prove fatal in this way; and that in such cases it frequently happens that no obstruction can be found in the gall-ducts—which are pale and empty of bile—and no effusions characteristic of inflammation in any part of the liver. In some such cases, no change of structure has been remarked in the liver, and the disease has been described as fatal jaundice from suppressed secretion. In other cases, the liver has been found unusually small, and much softened, and changed in colour, and the disease has been spoken of as *softening* of the liver, or *simple softening*, or *black softening*, according to the colour of the liver in the individual case.”—P. 196, 197.

We must conclude our extracts from Dr Budd's work; and the last we shall present relate to cancer of the liver. Scirrhus of the liver is an expression familiar to us in medical works from a very early period. This term, it is plain, was often applied to states of mere induration of the organ. Hence, it has become common, from the effect of this abuse of the expression, to deny that true scirrhus ever occurs in the liver. This denial is quite at variance with the view taken by Dr Budd.

“ Having considered the inflammatory diseases of the liver, and the diseases which result from impaired nutrition of its tissues, and from faulty secretion, there remain for us to consider those which consist in some growth foreign to the natural structure.

“ The most important member of this class is *cancer*, which is more frequent in the liver than in any other organ. Indeed, no serious organic disease of the liver is, in this country—at least among people who have never drunk hard—so frequent as cancer.

“ In some instances, the liver is the only organ infected with

cancer, or is the organ in which the cancer originates; but far oftener, the formation of cancerous tumors in it is consequent on cancer of some other part, especially the stomach and the breast.

“ In the *Anatomie Pathologique* of Cruveilhier, the *Clinique Medicale* of Andral, and the little work by Dr Farre on *the Morbid Anatomy of the Liver*, twenty-nine cases are recorded in which cancerous tumors were found in the liver. In three only of these cases, was the disease confined to the liver (Cruv. liv. xii. pl. 2, p. 8; Clin. Med. iv. p. 445; Farre, case 2.) In another case (Cruv. liv. xxxvii. pl. 4, p. 3), the lungs and the liver were the only organs in which cancerous tumors were noticed. In another (Clin. Med. iv. 433), the liver and the gastro-hepatic omentum. In all these cases, it is, perhaps, fair to conclude that the disease originated in the liver.

“ In the remaining twenty-four cases, other parts of the body were affected with cancer, as well as the liver. In thirteen of them, there was cancer of the stomach; of five, cancer of the breast. Some particulars of these cases will be presently mentioned, which leave little doubt, that in most of them, if not in all, the disease was propagated to the liver from the stomach and the breast, respectively.

“ Many circumstances conspire to render the liver more frequently than any other organ, the seat of both disseminated abscesses and disseminated cancer.”—P. 299, 300.

The numerous quotations we have given from this work sufficiently attest the esteem in which we hold the talents and acquirements of the author. We conclude, with expressing our conviction, that no one will read this book without acknowledging that it is a most valuable contribution to the pathology and treatment of Hepatic Diseases.

On Scarletina and its successful Treatment by the Acidum Aceticum Dilutum of the Pharmacopœia. BY ISAAC B. BROWN. 12mo, pp. 66. London, 1846.

THIS little book, as the title-page shows, is principally designed to advocate the utility of dilute acetic acid in the treatment of scarlet fever.

We fear Mr Brown is over sanguine as to the effect of his remedy being universally beneficial in a disease which is so often intractable. As, however, Mr Brown appears from his book to be a man of sense and judgment, and as the rest of the treatment which he recommends is, in most respects, unexceptionable, we think it right to give our readers an opportunity of forming their

own opinion as to the strength of the evidence on which he recommends this remedy to his professional brethren.

Our author sets out with some observations on the great fatality of scarlatina. His particular attention was drawn to this disease by the death of one of his own children, nine years ago. He refers to the great mortality of scarlatina in London, varying from fifty to a hundred deaths in a week, and cites the report of the Registrar-General, as showing nearly twenty thousand deaths from this cause, during the year 1840, in England and Wales alone (19,816). Were such a mortality from this cause kept up every year, scarlet fever might well be pronounced to be the most fatal disease affecting the inhabitants of this country.

With regard to Mr Brown's own experience, he tells us that he has not brought the remedy before the profession, till after a six years trial of it. "I have not done so," he says, "before trying the plan of treatment I recommend for at least six years in some hundreds of cases; and, during that time, have never lost a single case, where I have seen the patient in the first stage, and where my treatment has been fairly carried out by the parents and attendants; whereas, before trying this treatment, I lost many, in common with every medical friend I knew."

We quote our author's whole treatment of scarlatina, that our readers may be better able to judge of the weight of his authority:—

"When I first visit a child with Scarlatina at its first stage, that is, with a white chalky-looking tongue, quick pulse, hot skin, and about the arms, shoulders, and face, a scarlet-looking rash, I examine the tonsils and fauces; and finding them with the same character of redness or scarlet blush as the face, I instantly apply, freely, caustic in the stick, order the following liniment to the throat, on flannel, or warm poultices, where the irritability of the skin will not allow the use of the liniment:—

R. Soap Liniment, one ounce.
Camphor ditto, two drachms.
Laudanum, two drachms. Mix.

Or if it be not quite convenient to obtain this liniment, a mustard poultice made of mustard and cold vinegar; and as soon as the liniment or poultice has had the desired effect, I order a linseed poultice from ear to ear, to be changed every three hours and never left off; I give a dose of calomel, two grains to a child under three years, and three grains above that age; and two hours afterwards a tea or dessert spoonful of castor-oil. If, as it sometimes happens, the patient cannot keep the oil on the stomach, I give a dose of rhubarb and magnesia; but I always first try the oil; and it will not unfrequently happen that the patient can retain the oil, although the parents tell you that it has never before been able to do so. My reasons for preferring castor-oil,

or some very mild and bland aperient, is, that the whole mucous membrane throughout the intestinal canal being under a state of irritation, great care should be had not to further irritate it by any purgative or saline aperient, as I have frequently seen diarrhoea follow a dose of Epsom salts, or even sulphate of potash, which has debilitated the patient, caused increased sore throat, and ended in death. As soon as the bowels are relieved, I give to a child under three years of age the following mixture:—

Take of Diluted Distilled Vinegar, two drachms.

Syrup, four drachms.

Distilled Water, two ounces.

Mix and take a fourth part every three hours.

And in proportion to the age increasing the quantity of acetic acid: and after fifteen, I give two drachms as a dose, and gradually increase it in proportion to the degree of fever. I mean by the dilute acid, that which is made of one part of the acetic acid of the Pharmacopœia to seven parts of distilled water:—as,

℞. Distilled Vinegar, one part.

Distilled Water, seven parts.

“I desire the patient never to be removed from bed, and inculcate the necessity of maintaining an equable and cool temperature of the body, by keeping strictly to the one room where the fever first showed itself; as any change of temperature during the febrile stage is often a certain means of checking free efflorescence; and in this disease a check, however slight, is rarely, if ever got over. I order the bed-furniture, carpets, and curtains, all out of the room, sprinkle chloride of lime and water freely over the floor, and in the passages leading to the room. I give at first bland diluents, as barley water, gruel or arrow root; but as I look upon this disease as one requiring early support, I soon give (frequently on the second day) veal, chicken, or beef tea, with some arrow root in it; and where the fever is of the anginose character, I begin with strong nourishment on the second day; good beef tea or soup, port wine in arrow root, and sometimes brandy as well; and I have never yet seen any danger from this diet, even in those cases which have been considered inflammatory, and, as some would affirm, requiring bleeding or emetics. I never allow the night clothes to be removed during the efflorescence; and believing the most effectual way to save my patient to be, strict attention to the tonsils and fauces, I apply once, twice, or thrice during the day a solution of caustic. (Nitrate of silver in the proportion of ten grains to one ounce of distilled water.) The application is effected by tying a small piece of sponge on the end of a black-lead pencil, or a thin piece of stick, dipping it in the solution, pressing down the tongue with a spoon, and sponging the tonsils and fauces thoroughly, removing all that peculiar viscid phlegm which is so marked in this disease; the relief this

gives the patient is most striking: respiration, which was most difficult and short before, now becomes free and full; the pulse soon partakes of the benefit, and the countenance is relieved from anxiety and distress, and assumes a more cheerful appearance; deglutition, before difficult and almost impossible, becomes comparatively easy, consequently nutriment can be readily given; and I again repeat, that I lay great stress on the judicious and careful administration of nutriment."—Pp. 11—15.

Acetic acid is far from a new remedy in scarlatina, yet it must be confessed that, in the ordinary practice of this country, it is at present obsolete, or nearly obsolete. Mr Brown, it appears, was induced to adopt the practice on hearing of its success in the hands of Mr Hunter of Margate, and he gives an extract of a communication from Mr Hunter, on the excellent results of this treatment in his practice.

There are few treatises on *materia medica*, in which acetic acid is not mentioned as having been recommended in malignant diseases, as in plague and scarlatina maligna, either in common with other acids, or specially as having an alleged effect, superior to that of other acids. Van Swieten at once commends it highly, and gives a caution against its over use; "*ipsum acetum, in putridis febribus tanti usus, majori copia sumptum, febrim excitat.*" Among the more recent authorities in favour of the use of acetic acid in scarlatina, we find Maldonado, a Spaniard we believe, who reports (1822), that he used it with success mixed with the drink, and in the form of enema, in an epidemic of scarlatina, with tendency to putrescence.

There is probably no disposition among medical authorities to doubt that diluted acetic acid is a remedy adapted to scarlatina, as being a refrigerant and an antiseptic in the medical sense of that term. And, we may presume, the only reason that most of these authorities would assign for neglecting the employment of it in that disease would be, that other remedies possessed of the same properties, in a higher degree, or in a more convenient form, had superseded it. This is hardly a good reason, unless it can be shown to rest on special facts rather than on theory. For it can easily be shown, that good remedies have sometimes been rejected from use, merely because the benefit alleged to be derived from them seemed an exception to the general rule of the prevailing doctrines of the day. We confess, we entertain strong doubts of the ultimate confirmation of Mr Brown's account of the great efficacy of acetic acid in scarlatina; but we see reason to suspect, that the internal use of it, as formerly practised in this and similar diseases, has become obsolete, rather by the effect of adverse therapeutical than practical considerations.

We think, then, the practise recommended by Mr B. deserves to be tested. But this is far from an easy proceeding. No doubt, scarlatina annually cuts off a great number in this country; yet

it is often a disease of a trivial character, and it sometimes proves fatal where it seemed to be mild, and is often recovered from under no treatment, or under barely judicious treatment, when it had put on the worst appearances. A disease, from which comparatively few escape before the age of maturity, must present a large proportion of spontaneous recoveries, even from its severe forms.

There are, therefore, serious difficulties in the estimate of the therapeutic value of any remedy; nor can it be made satisfactorily without a long period of trial, through different epidemics, in different localities.

In the early part of this century, the cold effusion, or what answered better with children, immersion in cold water, had the highest possible reputation in scarlatina. That remedy has been seldom used in our times. Is it, then, because our predecessors wrongly ascribed a beneficial influence to this remedy, or because the epidemics of late years have been of a less active character, that this once vaunted remedy has become obsolete? We believe that immersion in cold water was a highly useful remedy in many epidemics in the early part of this century. And we see no difficulty in the belief, that though this remedy has not been adapted to our later epidemics, other epidemics may come round, in which it will be as useful as it was then found. Speaking of the effect of acids, vegetable as well as mineral, in diminishing the activity of the febrile action, Mason Good says—"but our chief dependence for this purpose must be upon Dr Currie's bold and happy plan of employing cold water freely. Sponging will rarely be found sufficient, or rather will rarely be found of equal advantage with effusion; the fluid may, indeed, in this case be dashed against the patient till the heat is subdued, and the process be repeated as fast as it returns. The refreshment is often instantaneous, and operates like a charm; and seems to show, not merely a refrigerant, but an exhilarating power; the skin immediately becoming softer and moister as well as cooler."¹ This is not to be regarded as merely the opinion of the author, it is the opinion of the profession at the period, or just before the period, when he wrote. It would be easy, in like manner, to go over the history of other remedies which have enjoyed a reputation in scarlatina, and show that their efficacy depends, not on the invariable essence of the disease, but on the variable character which belongs to epidemics at different periods. It is obvious, then, that these variations must be taken into account in the estimate of the value of remedies proposed for such a disease as this.

We have made these observations the rather, because, though we have justly described our author as a man of sense and judgment, he is too much disposed to regard the disease as exhibiting

¹ Study of Medicine, vol. iii. p. 24.

one general character. For example, we take the following observations :—

“ Having proceeded thus far, it may be as well to sum up our observations on what has been written. I shall then first repeat, that I consider this disease to be strictly a disease of debility, and not inflammatory, as has so often been affirmed by others : that consequently every treatment which tends to lower the nervous powers of the patient is wrong : as for instance, active purging, bleeding, alkalies, and antiphlogistic diet ; on the contrary, that the treatment should, *ab initio*, be upholding ; that the febrile stage should not be cut down by active treatment ; but that even during this stage, when the tonsils and fauces are seriously implicated, steady nourishment, and even stimulants should be administered ; and indeed, in every other stage this should never be lost sight of.

“ To strengthen my opinion as to the importance of considering this fever one of debility and not inflammatory, and consequently not requiring bleeding, I may make an extract from a very excellent paper ‘ On the poison of Scarlatina,’ by Dr R. Williams, in his ‘ *Elements of Medicine.*’ After alluding to the practices of bleeding and of abstaining from it, he says, “ If we compare them, the result will stand thus :—

“ Of 121 treated at the Foundling Hospital in 1786 by bleeding.....	19 died.
„ 60 treated in the London Fever Hospital in 1829.....	10 „
—————	—————
181	29

or nearly *one* in *six*.

“ While of 200 treated by mineral acids and wine	2 died.
„ 160 „ „ purgatives and emetics.....	16 „
„ 50 „ „ ditto	3 „
„ 45 „ „ ditto	1 „
„ 100 „ by mineral acids and wine	3 „
—————	—————
555	25

or nearly *one* in *twenty-two*.

“ It seems therefore proved that one in six died after bleeding, while one in twenty-two died after a milder, if not a directly opposite treatment ; and the conclusion which inevitably follows is, that the chances of recovery are diminished by the practice of bleeding in the ratio of nearly four to one, as compared with the chances supposing the patient not to have been bled. If we set out with this view, all the other parts of the treatment will appear simple and judicious.”—Pp. 59—61.

Again, take the following passage :—

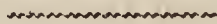
“ This leads me to mention more particularly, the frequent sequence to this disease, dropsy, generally assuming the form of anasarca or effusion of serum in the cellular membrane, between

the flesh and skin ; but sometimes the direct form of ascites or effusion of water into the peritoneum or lining membrane of the abdomen. This dropsical affection succeeds all forms of the disease ; it seldom occurs earlier than the sixteenth or seventeenth day after the disappearance of the eruption ; or later than the twenty-fifth or twenty-sixth day. It will be observed that this peculiarly strengthens the opinion that there is an increase of serum in the blood in this disease ; and as it is a fact, that I have never had a case of dropsy supervening on Scarlet Fever, since I adopted the treatment which I have attempted to sketch in the foregoing pages, I believe it arises entirely from the use of the acetic acid, which so acts on the blood as to prevent that separation of the serum from the fibrin, which takes place under other modes of treatment.”—Pp. 48, 49.

Before we can put any trust in the table as to the comparative effects of blood-letting, and an opposite plan of treatment, we must know the character of the symptoms under which blood-letting was practised, and also, whatever that character was, whether the cases treated by blood-letting were not, from the first, of more threatening aspect than those which were treated by a milder method.

With regard to dropsy being prevented by the acetic acid, we must be allowed to entertain very strong doubts. The tendency to dropsy, at least of the severer kinds, varies much in different epidemics—of which fact the history of epidemic scarlatina in Edinburgh, during the last twenty-five years, affords a striking example. And this fact, of which we cannot entertain the slightest doubt, explains sufficiently why the antiphlogistic, the stimulating, and the antiseptic plans, have respectively been held at different periods to be the means of preventing dropsy as a sequel of the disease.

With these few observations, we take leave of Mr Brown, trusting that if he hereafter discover any signs of his remedy becoming less efficacious than it has hitherto been, he will not fail to make the fact known to his professional brethren.



Communication from Dr Charles Ritchie of Glasgow, on the Notice of Raciborski's Work contained in our last number.

WE have received a communication from Dr C. Ritchie of Glasgow, whose papers on the physiology of the human ovary were incidentally mentioned in a notice of Raciborski's work on the function of reproduction contained in our last number. Dr Ritchie complains that his newly invented terms, “corpora periodica or menstrualia,” have been misused by the reviewer. We regret that Dr Ritchie should have been misunderstood. The article

was not a review of Dr R.'s opinions. His papers were obviously referred to, in a few lines at the conclusion of the article, for the sole purpose of intimating that opinions contradicting Raciborski's views had been brought forward since the work under consideration had been published. The reviewer did not complain of the Doctor's physiology; but only that his style is too florid for physiology. He confesses that he had not taken time fully to apprehend Dr R.'s papers, with an intimation that Dr R. is not an author whom one who runs may read. Dr R., on the contrary, thinks he was bound to have made himself master of his views before he could be entitled to give a notice of Raciborski's work. We cannot agree with Dr Ritchie. We shall take notice of Dr R.'s views in due time—but not till the bookbinder puts them in a more accessible form than scattered irregularly through the uncollected numbers of a weekly periodical. Raciborski's work was well entitled to take precedence of Dr R.'s papers, the last of which appeared but a week or two before the notice of Raciborski's work was printed.

We do not believe Dr Ritchie to be more sensitive than authors in general. He is, however, so much in earnest to have a rap at our reviewer that we cannot help gratifying him. He lets fly at him right and left with argument and wit. We can believe Dr R.'s wit to be, on most occasions, true attic salt—but as our readers will see presently, our reviewer's offence changes all his attic salt to cayenne pepper. He is not content with correcting the error; he pelts at him as the representative of the Negriers, Gendrins, Raciborskis, and all the heretics, foreign and domestic, who hold other than the Ritchie creed; and even insinuates, by means of two points of admiration, that he has gone beyond them, and had the temerity to invent a rupture of the ovary at each menstruation, and some inexplicable change besides on that organ at the same period.

Now we must exculpate our reviewer from having invented any opinions on this occasion—as we have said above, the article is a mere notice of Raciborski's work—committing us to no opinions on the subject for the present, as we desired; and the reviewer accordingly has very successfully kept the power in reserve, in case it were necessary, of adopting Sir Roger's cautious decision, that much might be said on both sides.

We cannot believe that Dr Ritchie is serious in representing the rupture of the ovary and the escape of an ovum in connection with menstruation, as an invention of our reviewer—but in case it should be so, out of a host of passages, we refer him to page 440 of Raciborski's work, where the author debates with himself what becomes of the ova emancipated from the ovary at the epoch of menstruation, when the Fallopian tubes happen to be obstructed, and comes to the conclusion, founded, he says, on facts, that the ovum becomes dissolved in the cavity of the peri-

toneum—" sans produire la moindre inflammation sensible du peritoine." And if we were not afraid of mistaking the meaning of the Alexandrine sentence with which Dr Ritchie's last paper concludes, we should have said that he himself acknowledges a breach in the ovary to take place, when he says that ova have been discovered " escaped from the ovarian vesicles without the aid of the malès, within the tubes of the virgin mammal." ¹ Fortunately it suits our purpose equally whether the Doctor be here adopting the statement as a fact, or only ridiculing the idea of Bischoff and Raciborski.

With regard to Dr R.'s second point of admiration, we agree entirely with our reviewer, that the real discovery which has been made, whatever farther investigation may make of the details, is the *general nature of the change* which the ovary undergoes in menstruation.

Dr R.'s point of admiration at " change" implies, we conjecture, his belief that the word " ovary" has nothing to do with the contents of the ovary. If we are right, the Doctor must publish a glossary with his next work to show that " nut" is improperly held to include the kernel. But enough—our reviewer is not so sensitive as Dr Ritchie, so we print the Doctor's communication verbatim, points of admiration and all.

To the Editor of the Northern Journal of Medicine.

SIR,—I have just seen the December number of your Journal, which, in a review of M. Raciborski's work, " *De la Ponte Periodique chez la Femme, et les Mammiferes,*" contains some observations on my opinions on the same subject, which are of so extraordinary a nature, that I am led to request you to do me the favour to insert a few remarks on them in your succeeding number.

Ist, Your Reviewer asserts that " Dr C. Ritchie of Glasgow denies that the bodies thrown off at menstruation are true ova. He terms them corpora periodica, corpora menstrualia." Now, Mr Editor, it would just as readily have occurred to me to say, that the ovaries themselves were " thrown off at menstruation," as that the bodies here spoken off, which any one who had not read my papers " cursorily" indeed, must have known to be corpora lutea, were so. Corpora menstrualia are the exuviae of the ovum after it has been thrown off; and I suggest the name precisely because menstruation is the exclusive cause of their existence, as organised bodies. What I do deny is the figment, which the Re-

¹ Ritchie—Medical Gazette, Oct. 17, 1845, p. 1059.

viewer is anxious to support, that an ovum is "destined to be excluded or laid" at every menstruation, and also the kindred speculation that menstruation depends on such exclusion; and what I state on these points is, that menstruation occurs often, and also for many months consecutively, without the exclusion of an ovum, and that the catamenial orgasm, instead of being regarded as the effect of the periodical escape of an ovum from the ovaries, is the cause of the maturation of the ova, and by the production of extended linear lesions of the ovary over their external aspect, facilitates their discharge.

2*d*, Your Reviewer continues,—“His view” (viz. that the bodies thrown off at menstruation are false ova, which I regard as corpora lutea!), “does not accord with the ordinary simplicity of the operations of nature.” I willingly concede the wisdom and profundity of the remark, had not the premises on which it proceeds been so mistaken. My view really is, that ova are being passed from the ovaries, not at menstruation merely, but constantly, throughout every period of female life, from birth to old age; and that owing to the frequent return of the menstrual orgasm, in the child-bearing period of life, they acquire a perfection of structure then, which is essential to their fecundativeness, and a consequent tenacity of their coats, which, while it prevents their so frequent discharge in the menstruating, as in the amenorrhœic female, requires the additional absorbing power, which I show to be communicated to the ovaries by menstruation, in order to their being discharged at all; and I contend that this view, with all due respect to the opinion of your Reviewer, “does accord with the simplicity of the operations of nature.”

3*d*, “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.” I am too eloquent, and too little physiological. My “Contributions” are published in two series’. The first consists of a strictly anatomical description of more than a hundred dissections of the human ovary, in every variety of physiological condition, followed by an analysis of the facts so obtained, which terminates in a refutation of many of the opinions most familiarly entertained on the physiology of the ovary, and in a succession of positive propositions on the origin, structure, and different relations to the uterine state of the bodies called corpora lutea. In all this there is nothing which can be charged with eloquence, but there is much which has, at least, the look of physiology; and I submit it to your Reviewer, who has evidently had the second series only in his recollection when he wrote, whether it was quite courteous to deny me the honours of science, and reduce me to the level of a fancymonger, without being himself familiar with his subject. The second series, besides embracing

the critical history of the anatomy and physiology of the human ovary, from the earliest period to the present day, contains an exposition of my opinions on the same topics, as founded on the anatomical researches embraced in the first series, viewed in relation with the historical details of the second. That these descriptions ever rise higher than simple narrative, I have yet to learn; that they are rapid may well be pardoned, in a history which includes six or eight separate lines of investigation, each extending over several centuries, and some of them originating in the earliest beginnings of medical science.

4th, The Reviewer concludes a long disquisition on the old question of the paternity of the discovery, that an ovum is discharged at every menstruation, and on the opinion that these phenomena are related to one another, as cause and effect, with the following appeal:—"But even he (Dr Ritchie) must admit, that twenty or twenty-five years ago, no such idea as the uniform or frequent rupture (!) of the ovaries at menstruation was entertained, and that therefore 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." To what class of *ideas* "rupture of the ovaries" belongs, puzzles me as much as the composition of curry, "made of peppers, and these kind of things," lately did a more exalted personage; and I would humbly submit, that to speak of the "kind of change which the ovary undergoes at menstruation," savours as strongly of eloquence as it does of physiology. Were it not for the admonition proffered me by the Reviewer on "imagining," I could imagine—looking at the structure of his paper—that he was nothing else than some smooth Saxon physiologist, who had disguised himself in the *incog.* of a Northern reviewer, the more conveniently to expatiate on a favourite subject; but let this be as it may, I must decline his appeal as being more of a personal than of a scientific nature; and I do this the more readily, as, with the amount of proof now submitted to the profession, I would have supposed that any competent judge who had examined it—and a Reviewer writing expressly on the point, should have examined it—could not fail to have reached the conclusion, that the hypothesis of the vesicular origin of menstruation was a mere puerility with which it would not be to the credit of any one to be identified. I have the honour to be, Sir, your obedient servant,

CHAS. RITCHIE.

Glasgow, 7 West Regent Street,
22d Dec. 1845.

PART III.—PERISCOPE.

SURGERY.

Case of Excision of the Head of the Femur.

In Vol. I. of this Journal, p. 277, is an abstract of the recorded cases of excision of the head of the femur. Since then, the operation has been performed with a successful result by Mr Ferguson, in King's College Hospital, being the second instance of the operation having been successfully performed in Britain.

The patient, a boy of fourteen, had suffered for ten months previously to his admission into the hospital, from disease of the left hip. A month before his admission, a large collection of matter formed over and behind the great trochanter, which burst spontaneously, and from this point there still continued a copious discharge.

The condition of the limb was such as is usually noticed in the advanced stage of hip-disease. It appeared considerably shorter than the sound one, and was much bent both at the knee and hip-joints. There was constant pain in the knee, but little in the hip, except on motion of the limb, or on forcing the head of the femur against the pelvis.

After remaining in the hospital for more than three months, the condition of the patient was as follows:—"The distortion of the limb had increased, and in consequence of lateral curvature in the lumbar region of the spine, with corresponding obliquity in the pelvis, as well as further flexion at the hip and knee, the shortening was more apparent than ever. The heel on the affected side was between four and five inches above the other. The shaft of the femur sloped obliquely downwards and inwards, and the knee rested on the inner side of the thigh of the sound limb; the head of the bone could be felt through the soft parts lying on the dorsum ilii, and its identity could be more accurately ascertained by passing the finger into a large sinus, which opened on the surface over and behind the trochanter major. The articular extremity was so isolated that the finger could be passed round it in all directions. There were several small sinuses contiguous to the large one, but it could not be ascertained that any of them led to the diseased bone, or communicated in any way with the pelvis. There was a large circular sore, which occupied the whole of the skin over the trochanter major, and profuse discharge of thin matter from the open surfaces. The patient made no complaint of pain, unless the limb was moved, but seemed weaker and more dejected than when first admitted: he could lie with comparative comfort only on his right side. Pulse varied from 100 to 110; appetite indifferent; tongue very red; cheeks frequently flushed; had profuse night sweats; and the feet and face were slightly œdematous."

As the lungs and other viscera appeared to be sound—as there was no distinct evidence of disease of the acetabulum—and as the diseased head of the femur seemed to be acting as a foreign substance among the soft tissues of the hip, Mr Ferguson, with the concurrence of his colleagues, resolved to perform the operation in question, and operated accordingly on the 1st March 1845.

The steps of the operation were as follows:—"A longitudinal opening about six inches long, was made in the line of the femur, extending from over the head of the bone to a little below the trochanter major, and the tissues were separated from the

shaft of the bone, a little below that process, so as to permit a curved needle to be used for the introduction of a chain saw. This latter step was attended with considerable difficulty, owing to the depth and obliquity of the bone, and, when accomplished, proved of little value; for after several trials, the instrument (which worked very indifferently in my hands) broke, and I was compelled to adopt another mode of procedure. With a sharp-pointed bistoury, I separated all the soft parts from the neck of the bone and the trochanters, and then, by causing the knee to be moved across the opposite thigh, and using the femur as a lever, the head and portion of the bone thus isolated, were so thrust out of the wound, that I could with facility apply the ordinary saw for the requisite section. Not being satisfied with the condition of the interior of the bone at the surface exposed by the saw, I enlarged the opening and removed about three quarters of an inch more, then closed the wound with a few points of interrupted suture, and covered it loosely with a pledget of lint. No vessel of sufficient magnitude to require a ligature was divided. The cotyloid cavity was filled by a fibro-gelatinous mass, similar to the lining of the sinus."

"When the patient was placed in bed, a long splint was applied, with the view of keeping up gentle extension; and the limb, as far as the bent state of the knee would permit, was placed parallel with its fellow. The apparatus was somewhat similar to Boyer's long splint, but was so constructed that its upper end could be temporarily removed for the purpose of dressing the wound; and the fulcrum for extension, instead of being on the injured side—as when fracture of the neck of the femur is treated in this way—was taken from the other side of the pelvis."

The symptomatic fever was very slight; the health improved rapidly; the sweatings ceased, as also the pain in the knee; the appetite became natural, and the patient gained flesh. On the 8th of May the splint was removed. He was greatly improved in strength, and moved about the ward on crutches with his clothes on, the wound being nearly closed. The limb was found to be two inches and a half shorter than its fellow, four inches and a quarter being the length of bone removed, measured through the curve of the neck and shaft. The head of the bone was in a state of ulceration, and entirely denuded of cartilage.

On the 3d of October, the following report is given:—"The boy now walks about on crutches, and besides looking hale and plump, expresses himself as being in every way in good health. The limb is quite straight, and about the same length as when he left the hospital a month ago, although, as he moves along, the heel seems to be nearer the ground, on which he now rests the forepart of the foot. There is free movement both at the knee and hip, and already, at the latter part, he has considerable power in elevating the thigh by the actions of the psoas and iliacus muscles. There is no pain or tenderness about the hip, and the two sinuses have all but closed. The discharge from them is very slight, and there is no indication of any further disease in the bones."—*Transact. of Medico-Chirurgical Society of London*, vol. xxviii.

Mr Ferguson's Method of Operating in Cleft Palate.

The operation for the removal of this congenital deformity, as first practised by Gracfe and Roux in Europe, and Warren in America, is conducted, as is well known, on the same principles as guide the surgeon in the operation of closure of a harelip. This operation was practised with various success, and, with the exception of some modifications as to the manner of paring the edges, introducing the stitches, tying the knots, the kinds of ligature, &c., the operation remained materially the same as originally proposed, we believe, by Roux, till within the last ten or twelve years. It was then proposed by Professor Dieffenbach, as well as by Professor Pancoast of Philadel-

phia, to make longitudinal incisions between the alveoli and the stitches, so as to allow of the more ready and effectual approximation of the free edges of the cleft. Incisions of various kinds have since been made by Dr Mettaner of Virginia, Roux, and Mr Liston, all of which have had for their end the more complete approximation of the edges of the cleft, by relieving the tension of the contiguous soft parts. Dr Pancoast alone seems to have considered the division of muscular fibres as bearing on the results of the operation. He says :—After paring the edges of the fissure, and introducing the ligatures, “when the knots were prepared for tying, but before they were finally secured, Wenzel’s cataract knife was passed from before backwards through the attached sides of the palate, to enable the two halves of the velum to come together in the middle line, as well as to divide the insertion of the palate muscles, so as to prevent them straining the sutured edges of the palate asunder.”

Mr Ferguson considering that muscular action was probably the greatest obstacle to the union of the flaps, made the following observations on examination of the mouth of a person whose palate was cleft :—

“As we look into the open mouth, the flaps may be seen under four different conditions—First, If the parts be not irritated in any way, the gap will be quite conspicuous, the lateral flaps will be distinct, and the posterior nares, with the upper end of the pharynx, will be observed above and behind. Second, If the flaps be touched, they will in all probability be jerked upwards by a motion seemingly commencing at the middle of each. Third, If the parts be further irritated, as by pushing the finger against them into the fissure, each flap is forcibly drawn upwards and outwards, and can scarcely be distinguished from the rest of the parts forming the sides of the nostrils and throat. And, fourth, If the parts further back be irritated, as in the second act of deglutition, the margins of the fissure are forced together by the action of the superior constrictor muscle, already described in my observations on this process, in an earlier part of the paper.”

“All these conditions and movements are, in my opinion, very readily accounted for. In the first instance, the parts may be deemed in a quiescent state; in the second, the levatores palati are called into play, and move the flaps as described; and, in the third, these muscles act still more forcibly, and the palato-pharyngei will join in drawing the parts outwards. The fourth condition I need not again describe.

“If the free margin on one side of the fissure be seized with the forceps, drawn towards the mesial line, and the flap be then irritated, it will be drawn upwards and outwards with remarkable force; this movement, it is evident, can only be effected by two muscles, the levator palati and palato-pharyngeus.”

Mr Ferguson then proposes, as an important accessory to the operation of staphyloplasty, the division of those muscles, which is so essential to a happy result. The muscles of which he recommends the division, are the levator palati, the palato-pharyngeus, and the palato-glossus. The division of the first of these is deemed of the greatest importance; the second scarcely less so; and the third may be effected or not, as the circumstances seem to demand.

All motory influence is thus cut off from the velum in an outward, upward, or downward direction, and the only remaining muscles, which can at all directly act on the soft palate, are the superior constrictors of the pharynx. These, however, will only act during deglutition, and even then their tendency will be to throw the parts closer instead of separating them. We should have thought that the action of the circumflexus would also have been adverse to the results of the operation in stretching the soft palate from side to side; but Mr Ferguson expresses himself thus on this point :—“I am inclined to think that its (circumflexus) action is very limited; and probably, as

the dissection in my possession would indicate, is greater upon the parts outside the posterior pillar than on those contiguous to the fissure."

The steps of the operation are thus described :—" With a knife, whose blade is somewhat like the point of a lancet, the cutting edge being about a quarter of an inch in extent, and the flat surface being bent semicircularly, I make an incision about half an inch long, on each side of the posterior nares, a little above and parallel with the palatine flaps, and across a line straight downwards from the lower opening of the Eustachian tube, by which I divide the levator palati muscle on both sides, just above its attachment to the palate. Next, I pare the edges of the fissure with a straight blunt-pointed bistoury, removing little more than the mucous membrane ; then, with a pair of long blunt-pointed eurved scissors, I divide the posterior pillar of the fauces, immediately behind the tonsil ; and, if it seems necessary, cut across the anterior pillar too, the wound in each part being about a quarter of an inch in extent. Lastly, the stitches are introduced by means of a eurved needle, set in a handle ; and the threads being tied so as to keep the cut edges of the fissure accurately in contact, the operation is completed. These different incisions may be made in the order here detailed, or possibly it may be found most convenient to divide the palato-pharyngeus first, next the levator palati, and then to pare the edges when the muscular action has been taken off."

The needle used by Mr Fergusson for introducing the threads, is the curved one set in a handle, the eye being near the point, so that the thread may be seen and laid hold of readily, as soon as the parts have been transfixed. The sutures are made with a stout silk or flaxen thread.

The operation has been conducted on these principles, in two cases, by Mr Ferguson, the details of which are given in his memoir on the subject, which will be found in the Transactions of the Medico-Chirurgical Society, vol. xxviii. The results in both were most satisfactory.

We cannot doubt, that when Mr Fergusson's proposals with regard to this operation have been more extensively tested by practice, they will be looked upon as a most important improvement in this department of operative surgery. In considering the anatomy of the parts in connection with the above suggestions, based as they are on physiological principles, we feel sure, that, in practice as well as theory, Mr Ferguson will be found to have removed the great difficulties experienced by the surgeon in the removal of this distressing deformity.

Ligature of Subclavian Artery. By PROFESSOR MOTT.

A man, of 35 years of age, while shooting, was wounded in the left shoulder by a gunshot. Two pellets passed obliquely through the shoulder, and were extracted on the anterior aspect of the upper arm. Twelve others, after the application of poultices, came out in the region of the inferior angle of the scapula, and two could be felt under the skin about the middle of the clavicle. A few hours after the injury, a tumour formed in the armpit, which increased in size for three days, when it was felt to pulsate. On the sixth day, after severe pain, there was numbness of the whole extremity. The pains occurred for two days in paroxysms, lasting each time for about an hour, after which the whole arm became swollen and œdematous, the skin began to desquamate, and a thin humour was secreted. On the 11th of April 1844, ligature of the right subclavian was performed by Professor Mott. An incision was made through the skin three inches long from the anterior border of the sterno-mastoid muscle, one and a half inches over the clavicle downwards and outwards to the acromion process of the scapula. The superficial fascia and platysma myoides were divided, when a mass of effused blood presented itself, in which, while the patient tried to swallow, an elevated line, running upwards and inwards, became visible, which, on more careful examina-

tion, proved to be the omohyoid muscle very dark in colour. On separating the deep cervical fascia, the artery was found, and a ligature applied at the point, when the artery emerged from behind the scalenus anticus.

During the operation, ligatures were placed on two or three branches of the transversalis humeri and colli arteries, as well as on the external jugular vein.

The result was favourable. By degrees the œdema disappeared entirely. The aneurismal sac was gradually almost quite obliterated, sensation and motion returned, and, in June, the patient was quite well.—New York Journal, Jan. 1845, as quoted in Oppenheim's Zeitschrift.

Ligature of external Iliac Artery. By W. BOLING.

A negro, of 20 years old, had a large aneurismal tumour stretching three inches from Poupart's ligament, and a second on the right thigh.

On account of the short distance between the art. femoralis profunda and the epigastric, the operator preferred the ligature of the external iliac to that of the common femoral artery.

After a drastic purgative, and the administration of fifty drops of laudanum, the first incision was made parallel with and an inch above Poupart's ligament, from the abdominal ring to the superior spinous process of the ilium. The incision through the tendon of the external oblique, from the pulling aside of the skin, happened to be about three-fourths of an inch nearer the umbilicus and the linea alba. From this reason, as also from the restlessness of the patient, and the contraction of the muscle, it was necessary to extend the incision of the external oblique half an inch outwards from the first incision. The border of the transversalis and internal oblique were now divided to the extent of an inch, and the fascia transversalis opened outwards from the abdominal ring. The peritoneum was drawn aside, and the sheath of the artery opened to the extent of the fourth of an inch. After the application of the ligature, the aorta pulsed strongly.

The symptomatic fever continued for a week, and was treated with blood-letting and sedatives. The ligature separated on the twenty-third day. The pulsation in the abdomen continued strong—the aneurismal tumour became hard and devoid of pain. The temperature of both limbs never differed after the operation, as the collateral circulation had established itself, no pulsation being felt in the tibial artery before the operation. No appearance of hernia. The second aneurism continued to increase.—American Journal of Medical Science, as quoted in Oppenheim's Zeitschrift.

Femoral Aneurism after Fracture of the Thigh-Bone, cured by ligature of the external iliac artery. By D. BRAINARD.

On the 1st of March 1842, Dr Brainard was called at Graves to a respectable citizen of the town of Chicago in Illinois, who, twelve weeks previously, in stepping out of a carriage, struck the upper part of his right thigh against the wheel, by which fracture of the femur at that part was produced. A temporary bandage was applied, and the patient removed home, a distance of forty-five miles, when he was treated by means of extension and counter-extension, till he was seen by Dr B. The right leg was then found two inches shorter than the left, turned outwards, and with considerable swelling of the hip and thigh. The foot could be easily brought to its proper position, but was again brought up on discontinuing the extension. No crepitation or callus could be felt, and it was impossible to distinguish whether the fracture was outside or within the capsular ligament. The strength of the patient was much reduced; sweating, diarrhœa, cough, with hæmoptysis, although the presence of tubercular deposit could not be discovered, pointed out a tonic treatment; and, in order to accom-

plish this, a firm starched bandage was applied round the thigh and hip, so as to allow the patient to move about, and even to ride several miles. The shortening of the limb continued, and, when Dr B. left Chicago, on the 20th October 1842, to return to St Louis for the winter, the state of the fracture remained unchanged.

On the 17th February, 1843, Dr B. was called to see his patient, who now suffered from a large swelling, which stretched twelve inches downwards from Poupart's ligament, occupying the whole anterior aspect of the thigh. The tumour was distinctly aneurismal; and, as after fruitless attempts to prevent the increasing size of the disease, an operation appeared unavoidable, ligature of the external iliac artery was performed on the 24th of February. The ligature separated on the 23d day, and the wound was entirely healed on the 25th. Subsequently, a firm bandage was applied, and the swelling disappeared entirely; but, although in this way, the patient could make use of the limb, no union by bone took place.

The occurrence of the aneurism, Dr B. ascribes to the tearing of the tissues during the long journey after the injury.—*American Journal of Medical Science*, October 1843, as quoted in Oppenheim's *Zeitschrift*.

Case of spontaneous cure of Femoral Aneurism. By J. LUKE.

A healthy and powerful labourer, of 31 years of age, entered the London Hospital, 19th February 1845, on account of a tumour in the upper part of the right thigh. The swelling was of an oblong shape, stretching three or four inches downwards from Poupart's ligament in the direction of the femoral artery, and was much more prominent at its lower than at its upper extremity. In diameter, it was two inches at its upper, and three at its lower part; it pulsated very strongly throughout, and was much expanded at each pulsation. It was emptied of its contents by pressure; upon relaxing which, it was rapidly refilled. No stethoscopic sounds were to be heard, and the tumour was devoid of pain. The patient complained of weakness, and of slight numbness in the whole limb, and occasionally suffered from cramp in the calf of the leg. The temperature of the limb was normal, and the arteries pulsated as strongly below the tumour as the vessels of the other leg.

The swelling was first accidentally observed a year before; it was thought to have been caused by the lifting of heavy weights, and not to have increased in size during the last year.

On the 3d of March, the tumour was covered with adhesive plaster and bandaged. When these dressings were removed, five days afterwards, the formerly soft and compressible tumour was found hard and unyielding, as well as somewhat painful on pressure. Its pulsatory movement had entirely disappeared, and no pulsation could be felt in any of the arteries of the limb. The leg felt colder than the other. The bandage was reapplied, the limb enveloped in wadding, and a mercurial plaster applied to the swelling.

On the 19th of April, the patient had left the hospital for ten days, the tumour being considerably diminished in size; the foot was still occasionally numb, and he sometimes suffered pain in the calf the leg in going up a stair. There had been no return of pulsation in the arteries.—*Medical Gazette*, May 1845, as quoted in Oppenheim's *Zeitschrift*.

DIETETICS.

On the Comparative Nutritive Capabilities of different Substances.

Different authors have attempted to frame a scale of nutritive equivalents. Bous-singault founded one on the quantity of nitrogen contained in the different articles of

diet. Liebeg assumes, that although pulse, beans, peas, and all other vegetable substances used as food, contain a large quantity of nitrogen, yet they are of comparatively little value as articles of nourishment, because they contain in but very inconsiderable quantity the component parts of the bones (phosphate of lime and magnesia); they satisfy the appetite, but give no strength.—*Phosphorus* is a necessary ingredient of the animal body, and must therefore be an element of animal nutrition. It is required as a constituent of the blood, the flesh, and the bones of man and animals, and is found in many organic substances.—*Sulphur* is required to explain the development of sulphureted hydrogen, and hydrosulphuret of ammonia, inasmuch as it gives odour to various organic substances. The organism derives its sulphur from the animal substances used as nourishment. Flesh, eggs, and milk contain it, so also does vegetable fibrine, as corn; vegetable albumen, as almonds, nuts, cauliflower, and turnips; vegetable caseine, as beans and peas, and it is particularly present in the cruciferæ.—*Iron* is a constituent of most, if not all, organic tissues. Most articles of nourishment contain it. Veal contains less than beef, because calves generally, before their death, lose much blood. Iron is contained in the yolk of the egg, in milk, and in most esculent vegetables.—*Chlorine* is a constituent of the blood of the gastric juice, and different excretions, the urine, saliva, tears, and fæces, as it is constantly being consumed in the formation of the gastric juice, and the secretions; so is its reproduction more frequently necessary. It is introduced into the system in the form of chloride of sodium, or table-salt.—*Sodium* is a constituent of the blood of the animal tissues, and secretions, and is introduced into the system, more particularly in the form of the chloride. It is not a common constituent part of plants, unless when they grow near the sea or other salt water. Most waters contain a small quantity.—*Calcium* enters into the composition of all animal tissues. Our organisation derives it from the flesh, vegetables, and minerals which we consume, as well as from water.—*Magnesium* is found in small quantities in the blood, the teeth, the bones, the nervous substance, the thyroid gland, and other parts of the body. It is a constituent of vegetable and animal articles of diet. Slight traces of *potassium* are found in the blood, solids, and animal secretions. It is a constituent of animal and vegetable articles of food, more especially the latter, and is found in grapes and potatoes.—Canstatt's Jahresbericht, 1845. Bd. 7.

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PATHOLOGY.

*Remarks on the Pathology and Therapeutics of Typhus.* By Dr RICHTER.

Dr R. considers that the nervous symptoms in typhus are not dependant on the morbid changes in the mucous membrane of the intestinal canal, for he has observed them before degeneration of that tissue had commenced, and *vice versa*, they have disappeared before the membrane had recovered its healthy state; and, moreover, there are other diseases where the intestinal membrane becomes degenerated, and nervous symptoms are not present during any part of their course. The nervous symptoms of typhus depend much more on defective nutrition of the organisation generally, as well as of the nerves in particular. This is confirmed by the etiological conditions of the disease, such as those which exert an influence on soldiers in the field, particularly mental depression, grief, care, exertions causing physical exhaustion, and food deficient in quantity and improper in quality. The connection between the nervous symptoms and defective nutrition is also confirmed by the facts, that death from starvation exhibits all the nervous symptoms of typhus, and the injection of putrid organic matter into the veins has a similar effect. Further proof of this connection is borne by the physiological

and chemical researches of Andral and Gavarret into the nature of the *typhoid* state. As a consequence of this condition, the proteine (*i. e.* the albumen and fibrine), and the fatty matter become absolutely diminished in quantity, while the blood-corpuscles and alkalis are relatively increased. Inasmuch as in typhus the fibrine is absolutely diminished, a much less quantity of it passes into the lungs for oxidation, and accordingly the organic metamorphosis going forward with less intensity, the debility and weakness of the patient becomes manifest. The deficiency of the oxide of proteine, as the author satisfactorily proves, is brought about in this way, too few blood-corpuscles (by means of which the organic acids and acid salts are formed from the decomposed organic substances in the venous blood) are set free to be converted by the process of respiration into fibrine. Hence, there is not enough of oxide of proteine taken into the organs as is necessary to compensate for the organic matter decomposed. The quantity of the decomposed organic products is in proportion to the quantity of acid produced in the lungs; and hence, too, the solution of the blood-corpuscles and the formation of fibrine is in equal proportion. Hence, one of the chief symptoms of the typhoid state, *viz.* diminution of the biliary secretion, becomes evident. According to Schultz and Hunefeld, the bile is composed of some of the products of the decomposition of proteine, compounds of fat, the decomposed envelopes of the blood-corpuscles, and hematosine. But as now these products of decomposition are present in too small a quantity, and the fat, before it arrives at the liver to form bile, is destroyed by the excess of oxygen, so it is clear that the bile must be secreted in too small a proportion. What then does nature do to effect a cure? She excites a febrile state so as by means of an increased rapidity of the circulation and respiration to hasten the oxidation of the fibrine in the typhous blood to form a larger quantity of the oxide of proteine. To give nutritive diet to a patient in this state is to increase the disease, because the food must first be converted into chyle, and that into blood-corpuscles; but here the organic metamorphosis stops, no fibrine being formed. The indication in the treatment is to produce fibrine, and this can only be done by means of substances which favour the metamorphosis of the blood-corpuscle into a fluid plasma. According to the experiments of Hunefeld, chlorine exerts the most powerful action in the solution of the envelopes of the blood-corpuscles. On the decomposition of the envelope, the nucleus of the corpuscle, the true representative of fibrine, remains undissolved; but this result, according to Hunefeld and Mülder, may be brought about by the salts of ammonia, the carbonate or phosphate. Hence, it is without doubt clear, that the alternate exhibition of chlorine and ammonia, as employed by the author to produce the oxide of proteine, which was intended to cause the metamorphosis in the capillaries necessary for cure, strongly supported the struggles of nature to effect recovery. According to the author, calomel, given from 10 grain to scruple-doses, has a similar effect. The chlorine is exhibited in the form of *c. oxy-muriatic acid.*—Casper's *Wochensch.* No. 11, 12, 1845.

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#### *Hysterical Paralysis.*

Hysterical loss of sensibility is more particularly remarked in the organs of sensation, and without the motor powers of the organ being affected; accordingly, one frequently meets with hysterical loss of sight, hearing, taste, or smell. The most frequent is hysterical amaurosis, and next to that dumbness. The author has seen loss of taste and smell in one instance only, and in that case the anæsthesia was confined to the left side of the tongue and left nostril. The affection generally comes on suddenly, after a hysteric paroxysm, the paralysis may be either complete or incomplete. Sometimes before the supervention of the disease, there may be a weakness of the organ in the discharge of its function. The anæsthesia may extend to the skin only, or to both muscles

and skin. If it is a limb that is about to suffer, a feeling of weight is frequently complained of, and it is seldom that a limb which has lost its sensibility retains its powers of movement entire.

The loss of the motor powers announces itself generally without any remarkable phenomena, but comes on suddenly after a slight or severe hysteric paroxysm. The author has observed that the inferior extremities are more frequently attacked; the superior and the extensor muscles rather than the flexor. There is frequently also pain in the affected limb.

Paralysis of both motor and sensitive powers generally occurs at the same time, but not always simultaneously in the same limb or organ. It is frequently the case that the motor paralysis affects the inferior extremities and anæsthesia, the upper part of the body. Frequently the paralysis manifests itself by aphonia, or at least by stammering. Its course is very remarkable; the same patient may, in consequence of different paroxysms, be attacked with paraplegia, hemiplegia, amaurosis, deafness, aphonia, paralysis of the œsophagus, bladder, or rectum individually, or all at the same time. Frequently motor paralysis is complete, while the sensibility is only become dulled or perverted.

At the commencement of the complaint, Piorry praises the good effects of the sulphate of quinine dissolved in alcohol or tincture of cinnamon. If the paroxysms occur at the period of menstruation, the appearance of the discharge is to be promoted. If the paralysis is of old standing, blisters, friction, with stimulating liniments, the douche, electricity, strychnia, and brucia, are to be employed. Above all, the patient must be urged to exert her whole powers of volition to make some movement. When all the foregoing means have proved unavailing, the author recommends a trial of animal magnetism.—M. Macario, *Annales Medico-psych.* Janvier 1845.

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## MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

*The Bark of the Prunus Laurocerasus in Cases of Amenorrhœa and Suppressed Menstruation.* By H. KASTNER.

The author first tried the efficacy of the drug upon a strong plethoric girl, 16 years of age, in whom about a year previously the symptoms of menstruation had appeared, but had latterly almost entirely ceased. She suffered at times, however, under considerable inconvenience, such as congestion in the head and chest, and also violent colics; these symptoms becoming much increased, the author tried many of the remedies usual in such cases, and she was even made to sleep with a menstruating female, but all without effect. Dr K. at length became acquainted with the use of this bark, and six days before the next periodic return of these symptoms, the patient was ordered to drink daily a pint of a decoction made with two ounces of the bark. Exercise and foot-baths were at the same time recommended, although these had been tried before without avail. On the expected day, the usual disagreeable symptoms came on, viz. loss of appetite, borborygmi, frequent desire to pass urine, with a burning sensation during micturition, dragging sensation in the pelvis, with cephalic congestion; two days thereafter a mucous discharge appeared from the vagina, and on the third a diarrhœa, along with the catamenial flow, which continued moderately for four days; her next period of menstruation was two days too late, and the next again three days too early, but after this the indispositions became perfectly regular. Two other similar cases are recorded with an equally favourable issue; and, lastly, a case of suppressed menstruation in a girl of 18, in whom, after using the decoction for two separate periods of eight days each, the dis-

charge was re-established. It is proper to observe, that in all the cases, exercise, foot-baths, and leeches or eupping, were also employed.—Casper's *Woehenschr.*, 1845. No. 33.

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*A frequent and little known cause of Sterility.* By PROF. OSIANDER of Göttingen.

Professor O. believes, that in many cases which have come under his notice, sterility was owing to elongation of the cervix uteri, too pointed a form of the anterior lip, and improper direction of the os uteri. The Professor continues, this more especially deserves the attention of physicians, since it belongs to those causes of sterility which are not absolute, and may be remedied, if the female, during the sexual act, be placed in the proper position (on her face.)—Holscher's *Annalen*, Hannover, 1845. Hft. 1.

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*Uterine Ulcers.*

The *Gazette Medicale de Paris*, No. 7, 1845, contains a paper by M. Peraire, recommending the advantages of frequently repeated cauterization, with the nitrate of silver, of ulcers on the uterus.

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*Remarkable Pain in the Abdomen.*

The *Medicin Zeitschr. Russland's*, 1845, No. 19, contains a case where a female complained for five years of a violent pain extending from the left groin to the præcordia, where it caused inexpressible torture and vomiting. Above the left groin, for a space of three inches square, the abdomen felt hard and full. She commenced to take the aqua laurocerasi in doses of 20 drops, three times daily, gradually increased to 30 drops. By degrees the pain abated, and in two weeks had entirely ceased, although her medical attendants had no doubt that it depended on organic disease of the ovary.

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*Phlegmasia Dolens.* By DR BOUCHUT.

The author disputes the opinion of those who consider that this disease—a milk metastasis—is caused by any affection of the lymphatics, nerves, skin, cellular tissue, or fasciæ lata. Dr B. relates the results of his observations in the morbid anatomy of 41 accurately observed cases; and in consequence of what he there found, he localises the cause of the disease in obliteration of the veins of the affected limb, by more or less organised plugs, which ultimately adhere to the tunics of the veins, though the coats of the vessels themselves remain uninjured; pus sometimes forms in the inside of these plugs. When the inguinal glands swell, this is in consequence of the stoppage in the veins, and not a primary affection of the lymphatic system. Further, contrary to the observation of most writers on the subject, the author affirms, that, instead of pitting not ensuing from pressure by the fingers, he has found the effusion into the cellular membrane not to differ from the usual serous infiltration. Dr B. then speaks of the development of the collateral venous circulation; in one of his cases where the superficial and deep veins were obliterated, the collateral venous circulation of the skin became so highly developed, that that organ became livid, in fact, almost black, and hence the author raises some objections to the term "*alba*," as applied to phlegmasia dolens. The author asserts that this disease does not attack the inferior extremities solely, but that it may also be seen in the superior, or indeed in any part of the body, even in the ophthalmic vein, as Laennec has said: he admits, however, that it is most frequent in the lower extremities, and more particularly in the left one. The writer denies the occurrence of any premonitory symptoms; the disease, he says, comes on

suddenly, and manifests itself by severe pain, which is followed by swelling; this spreads in proportion to the obliteration of the vein. If the obstruction is quickly formed, so is the swelling; and hence comes the extreme tension at the commencement of the disease, and by and by, as the collateral circulation is formed, the swelling decreases. The temperature of the affected limb is not much altered at first; it is a few degrees higher, but at last it falls a little; the fever is inconsiderable, there is often none at all. Dr B. does not admit that metastasis of the disease takes place, the so-called metastasis is merely an extension. Where obstruction of the veins of internal organs takes place, there are characteristic symptoms. The disease generally terminates favourably by means of the collateral venous circulation; yet Dr B. never saw it entirely cured before the end of the second week. Dr B. gives cases where abscesses, gangrene, paralysis, and elephantiasis have all resulted from the disease; he believes that it proves fatal only through extension of the obliteration or some puerperal complication. Phlegmasia dolens is most frequently seen in lying-in women; nevertheless Dr B. has seen examples of it during the latter months of pregnancy, in the last stages of phthisis, of cancer, and even in men. From the similarity of the symptoms, and morbid appearances in these cases, he considers them identical with the phlegmasia alba dolens of lying-in women, and he prefers to include them all under the term "spontaneous venous obliteration." The predisposing cause of the disease is, according to Dr B., a superabundance of fibrine, and some change in the composition of the blood. The pressure of the enlarged uterus or obstetrical operations are only the exciting causes. The proximate cause of the coagulation of the blood is retardation or complete obstruction to the circulation, for no structural disease of the venous tunics is discoverable. Phlegmasia dolens is therefore not a phlebitis, but something quite different. For treatment, Dr B. considers general blood-letting useless, and confines himself to the application of narcotic cataplasms and heat, in order to accelerate the venous collateral circulation. Compression of the limb is hurtful. When the œdema is excessive, Dr B. recommends puncture with a needle, not with a lancet, for fear of gangrene.—Gazette Medicale de Paris, Nos. 16 and 19. 1844.

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A case of phlegmasia dolens, in a young girl of lymphatic temperament, and affected with irregular menstruation, is recorded by Dr Steudel in the Wurtemberg Correspondenz Blatt, Oct. 1844.

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## FORENSIC MEDICINE AND MEDICAL POLICE.

### *Influence of the Price of Bread upon Disease and Mortality, and its Adulterations.*

According to careful investigation and accurate calculation, Messance has shown the remarkable and constant influence of the price of bread in the increase of disease, and the number of deaths. According as the price rose or fell, the amount of disease and the number of deaths increased or diminished; and the most recent investigations of Melier (Compt rendu, 1844) give the same result. In France and Belgium, the bakers commit many frauds, by adding noxious substances to the mass of dough, which frequently do not show their injurious effects until the bread has become somewhat stale. Salts of copper and alum are frequently mixed with the dough, to increase the weight of the bread. Gypsum, white lead, and bone-ashes are employed for the same purpose, as well as to whiten the loaf. According to Chevalier, there are two kinds of mould which attack bread. The first appears in bread that has been kept in a moist place; it is in colour greyish-blue, resembles down, and progresses slowly. The second assails bread that has

not lain in a damp place ; it frequently progresses quickly, and after some days, shows a reddish vegetation, which Gualtier de Claubry has found to be a variety of *penecillium*.

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*The Mortality of Illegitimate Children.*

The frequent occurrence of illegitimate births in the Prussian province of Posen has induced Dr Cohen v. Baren to institute some investigations as to the injury resulting in them to the children, from the mother being placed in an improper position at the time of birth, as compared with injuries from the same cause in married women. Of 50 cases, 30 were born while the mothers were standing, 17 while stooping or sitting, and 2 while kneeling. Of the 50 women, 32 were primiparæ. Of the children, 40 were at the full time, and 10 premature. Of these latter, 7 were above 30 weeks of utero-gestation. Of the 19 which were born while the mother was stooping, sitting, or kneeling, 1 had a fracture of the skull ; it was probable, however, that this was caused by laying a heavy stone on the child's head, for it was dropped on soft turf ; in 10 of these, not the slightest contusion or ecchymosis could be discovered ; in 1, probably from dragging upon the cord which was much shortened from being several times twisted round the foetus, there was rupture of the liver. In 25 cases, the umbilical cord was torn ; in 7, the placenta came away along with the foetus, the cord being un-torn ; in 15, the cord remained uninjured ; and in 3, this point could not be determined. In the 25 cases, where the cord was torn through, 11 children presented ecchymosis, 5 fractures or fissures of the cranial bones, and 1 rupture of the liver. The conclusions from Cohen v. B.'s investigations, compared with those which Heuke gave in his critique on Klein's cases, are as follows :—1st, The proposition that the fall of children on the ground can cause dangerous injuries, and through these death, is proved ; and although it must be regarded in general, as only an occasional cause of death, still cases are not wanting where injuries received in this way have been the sole and only cause. In illegitimate children, too, a trifling injury is of greater importance than in children born in wedlock, and can be the cause of their death. 2dly, It is proved that the fall is not invariably followed by death, as many children have fallen without receiving the slightest injury. 3dly, That if unexpected protrusion of the child is frequent in persons who do not conceal their pregnancy, it is much more frequent in those who do. 4thly, In unmarried females, it occurs chiefly in primiparæ. 5thly, The assumption, that unmarried females being generally long in labour, the injuries observed on the foetal head are to be attributed to its long detention in the pelvis, is correct in a very few instances. 6thly, The unusual conditions in which women who bear illegitimate children bring forth, cause that very slight contusions, concussions, and extravasations arising from the parturient process may be followed by death, and therefore the medical jurist ought to be very careful in attributing such traces of injury, (even though very considerable), to violence intentionally applied. 7thly, Of 4 children, born in an unusual position, in 3 it can be affirmed that the cord was broken by the act of parturition itself. 8thly, Injuries of the head are to be ascribed to the fall more especially where the ground is hard, rather than where it is soft. 9thly, The integrity of the cord is an obvious prevention to the production of injuries of the head ; and where injuries are met with under such circumstances, we must rather suspect that they were induced by violence applied in some other way. 10thly, In delivery, in an unusual position, the cord is generally torn, it is seldom that the foetus remains in connection with the placenta in the uterus, and still more seldom that both come away together with the cord entire. 11thly, Illegitimate children show a less degree of physical development.—*Preussische Vercin Zeitung*, No. 27. 1844.

*Poisoning with Acetate of Lead.*

M. Lesieure Desbriere, Professor of Chemistry, describes a case of poisoning by the above salt. Post-mortem examination of the body showed intense inflammation of the intestinal canal from the stomach to the rectum. Part of the digestive tube being carbonized along with carbonate of potass, a button of metallic lead was obtained, and with the usual reagents the presence of lead was proved in a filtered solution of the calcined mass. The acid, with which it was in combination, could not be ascertained. A remarkable feature of the case, were bloody evacuations, in contradiction to the assertion of Roynetta, that salts of lead always cause constipation.—*Journal de Chimie*, Juillet 1845.

*Arsenic in the soil of Burying-grounds.*

M. M. Pelouze, Danger, Flandin, and others, have, by chemical investigation, found arsenic to exist in the earth of many places of interment. This may arise from three sources:—1st, The soil may contain it naturally, as at Fontevrault, where it is found in the rocks in combination with iron. 2dly, Agriculturists may have spread it on the ground, from having at some previous period sown seed which had been mixed with it to poison insects. And, 3dly, from manure, or the cleansings of streets, having been laid on the soil. The last case will appear more intelligible when we recollect the quantity of arsenic which, under different forms, is daily employed in the various arts.—*L'Experience*, No. 374.

*Ignorance of Pregnancy.*

Dr Rüttel mentions the case of a woman, ætat. 41, who, having been married for 17 or 18 years, and remaining sterile, was unexpectedly delivered of a healthy, mature, and living child. She, herself, being ignorant of her pregnancy, and having but a few days before delivery, repudiated such a supposition.—*Henke's Zeitschr.* Hft. 2, 1845.

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## PART IV.—MEDICAL MEMORANDA.

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LETTER TO THE EDITOR BY M. D., ON THE LATE ATTACKS ON DR WM. ROBERTSON'S APPOINTMENT TO THE ROYAL INFIRMARY OF EDINBURGH.

*To the Editor of the Northern Journal of Medicine.*

SIR,—In the *Lancet* of November 22, I observe an offensive article with regard to the late appointment of Dr William Robertson to the office of junior physician to the Edinburgh Infirmary. This is coupled with a letter from a person denominating himself “*A friend of the sick poor*,” who, in the bitterness of his feelings, heads his remarks by “*Edinburgh Infirmary, an ugly job*.”

I regret much to see that these have been followed up by an article in the last number of the *Edinburgh Monthly Journal of Medical Science*, censuring strongly the conduct of the managers of the Infirmary, on account of the choice they have made on the present occasion.

But I should not have considered the opinions of the *Lancet* and *Monthly Journal of Medical Science* worth noticing, had they not been backed by statements, erroneous,

and tending to mislead the public as to Dr Robertson's professional status, and, consequently, as to the choice of the managers of the Infirmary on the present occasion.

Dr Robertson is mentioned in these articles as "a boy," "aged at the utmost twenty-five," and the other candidates are said to have been "graduates of medicine before Dr Robertson left school." Further, he is said to be "the youngest man in the College of Physicians, and therefore, the youngest person legally qualified to get the office."

The amiable "friend of the sick poor" talks of the "reckless conduct of the managers; but I should advise the philanthropist to be more certain of his facts before he again makes such a tissue of "reckless" misstatements.

Dr Robertson had, at the time of his appointment, almost completed his twenty-eighth year. He commenced his professional studies in 1834, and graduated at Edinburgh in 1839, having been marked by some of his teachers as a student of unusual talent and industry. He soon afterwards went to the Continent, where for two years he continued his professional studies in the medical schools of France and Germany; after which he returned to Edinburgh, where he has since been engaged in practice, and has for the last three years officiated as an active medical officer in the New Town Dispensary.

During the epidemic fever, which was prevalent in Edinburgh during the winter of 1843-44, Dr Robertson was called on by the managers of the Infirmary to act as an additional physician, which was rendered necessary by the great increase in the number of fever patients in the hospital; and, in this capacity, he discharged his duties during some months, to the entire satisfaction of the managers. Was this no claim on the consideration of the board, on such an occasion as the present?

Dr Robertson is said to be "the youngest man in the College of Physicians." I may state, Sir, with certainty, that he has at least two juniors in age (if not more) in the College of Physicians. Further, the names of one of the unsuccessful candidates (Dr Makellar) stands considerably below that of Dr Robertson on the College list; and the names of the other two (Drs Andrew and Bennett), a very short way above it. And, lastly, Dr Robertson enters the Infirmary as junior physician to Dr Douglas, who, though a younger man than him (Dr R.), had the good fortune to be appointed to the office of junior physician two years ago.

The author of the remarks on this subject in the Monthly Journal of Medical Science, after expressing his dissatisfaction with the appointment, states, that this is not his opinion only, but "the opinion expressed by the profession in Edinburgh." This, Sir, I distinctly and advisedly deny. It is by no means my wish to draw a comparison between the candidates. The excellence of all four was undeniable; and the managers had subject of congratulation in having men of such attainments and unexceptionable character to choose from. But, in fairness to Dr Robertson, I will confidently state, after having made many inquiries on the subject, that, as far as I can ascertain, the appointment has given nearly universal satisfaction to the medical profession in Edinburgh. I have myself had little opportunity of forming an estimate of Dr Robertson's professional attainments; but I understand from those who have had such opportunities, that he is a most accomplished physician, and that his professional zeal and talents fit him admirably for the duties of an hospital physician.

The forebodings of both the above mentioned journals, as to the lack of candidates for the appointment, on future occasions, are very appalling; and I sympathize deeply with the feelings of the "friend of the sick poor" in the prospect of the poorer classes being unable in future to procure medical attendance in the hospital. But I would remind them, that the candidates have at present unhesitatingly come forward, seeking to obtain the appointment, while a man considerably junior in age even to Dr Robert-



son, already held a senior appointment in the hospital. If the writer in the Monthly Journal of Medical Science had, on the present occasion, been among the unsuccessful candidates, it is evident he would resent the imaginary indignity by not again offering his services at a future period; but, Sir, it is to be hoped that the good sense and judgment of the unsuccessful candidates will show them that such would be very far from a prudent or dignified course to pursue.—I remain, Sir, yours, &c.

M. D.

Edinburgh, 16th December 1845.

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 HOMŒOPATHY.

*Extract from a Letter, dated Vienna, Nov. 4, 1845.*

Even in Vienna, homœopathy is looked upon as quackery, and only practised—by a number at least—to keep them from complete starvation, it being the rage at present. The success of the cases in Fleischman's Hospital is due to the circumstance of its being a private one, belonging to the Sisters of Charity, into which are admitted only such cases as he thinks fit, which he treats and discharges without control. Consequently, it is easy enough to make a fine statistical appearance. Skoda's treatment, however, verges on homœopathy; among other things, he never bleeds, at least I have not yet seen him do so in pneumonia. All have as yet, of 6 or 7 that I have seen, done well. There is one man in at present, however, for whose death, if he dies, which I rather think he will, I shall be much inclined to blame this bad practice. However, we should not judge rashly, as I believe, at one time, he bled largely. It is, at all events, useful and interesting to see what nature or medicine in a small way can do, without having any responsibility.

5th, The patient I mentioned above, is to-day better, and I think will now recover. No thanks to the medicines, which I found out were ordered merely *pro forma*. Indeed, I suspect that this is the case with them all, and that the patients of the clinical wards at least are doomed to sink or swim by natural efforts in the cause of science. Pleasant idea! Certainly a good preparation for homœopathy.

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 PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY.

(From the Minutes of the Society.)

## SESSION XXV.

Wednesday, 12th November 1845.—Dr GAIRDNER, President, in the Chair.

I.—Dr Peddie read a series of cases, illustrative of the contagiousness of puerperal fever, and its intimate connection or association with erysipelatous and phlebitic inflammation.

He had felt it to be his duty to communicate the facts connected with these cases to the profession, as, besides being important in a pathological respect, they might perhaps contribute in some degree to avert hazard from a most interesting class of patients, and preserve to the medical man that peace of mind and prosperity in practice, which might otherwise be interrupted. While candour required this course, he felt assured of obtaining sympathy on account of the painful situation in which he had been placed; and that though the unfortunate medium of spreading a fatal disease, no larger share of blame would be imputed to him than appeared due, when the history of these melancholy cases had been carefully considered.

Case 1st.—Mrs S. aged 32, previously weak in health and depressed in spirits, en-

tertaining a presentiment of approaching death, was delivered on the 2d September, after an easy labour. She was not carefully nursed; was seized on the third day with fever, which soon assumed the principal features of the malignant adynamic type, as described by Locock and others; and died on the 10th—the eighth day from her accouchement.

Case 2d.—Mrs W. aged 23, a poor woman; attended for another practitioner, at that time out of town. She was a very delicate person, and predisposed also to fever by a strong presentiment of death; was delivered after a very easy labour, although her first child, on the 7th September, and afterwards transferred from Dr Peddie's care. She had begun to complain on the third day, and died on the 13th—the sixth day from her accouchement—with all the symptoms of the adynamic fever, complicated with much intestinal irritation.

Dr Peddie was not aware of this person's illness and death, until after he had delivered his next patient.

Case 3d.—Mrs K. aged 25, also delicate, and in extremely low spirits, was delivered on the 14th September, of her second child; labour natural and easy; fevered on the 16th; her case afterwards presented nearly the same features as those in Case 1st; and she died on the 21st—seven days from the period of her confinement.

On the appearance of fever in Mrs K.'s case, and finding that no epidemic prevailed, Dr Peddie perceived that a contagious puerperal fever had broken out in his practice, and immediately consulted with several medical friends as to whether he should now for a time give up all obstetric engagements. The advice received, was to comply as usual with the next call for attendance, but to adopt every possible precaution against the transmission of the virus farther. Accordingly, by assiduous attention to sprinkling and washing with the solution of the chloride of lime, proper arrangement of visits, and change of garments—not forgetting even the gloves and handkerchief—he secured the safe delivery and recovery of three patients—the first on the 19th, the next on the 22d, and the last on the 25th of September. That none of these patients showed the smallest tendency to fever, was the more satisfactory and encouraging, as the first and last were rather delicate, and the other was sister to Mrs S. (Case No. 1.) who died only twelve days previously, and with whom she was much in contact. This, too, was the more singular, as she was in a state of so much alarm in the prospect of her own approaching hour of trial, as to be seized with labour rather prematurely. Dr Peddie's anxious fears regarding the farther propagation of the disease were thus lulled into security; and he felt disposed to view the occurrence of three consecutive cases of fever as one of those remarkable coincidences with which medical men occasionally meet; or if they really were instances of contagious fever, that the virulence of the morbid influence was exhausted, or could be overcome by the adoption of precautions. These sanguine hopes, however, were soon distressingly disappointed by the occurrence of the two following cases in rapid succession.

Case 4th.—Mrs T. aged 29, was delivered of her second child at 12 noon, on the 26th of September. Resided a few doors from Mrs K. (Case No. 3.) whom she attended on the evening of her confinement, and visited frequently until the fever showed itself, and again on the 18th, although strictly prohibited, when she assisted in effecting a change of clothes and bedding. She was afterwards likewise exposed to contagion from the constant intercourse of friends between the two dwellings. Her labour was very easy, and she had every appearance of doing well, until next day at 12 o'clock noon, when she fevered; and death occurred in the evening of the 30th—the third day from the period of accouchement.

Case 5th.—Mrs T. aged 23, was delivered of her first child at 12 o'clock noon, on the 27th September, after a natural but rather tedious labour. It was completed some

hours before Dr Peddie had an opportunity of knowing that his last patient (Case 4.) had been seized with the fever; and on making his evening visit, he found that she too was already affected with the dreadful malady. Death took place at 3 a.m. on the 30th, less than three days from the time of her confinement.

Dr Peddie considered it beyond question, that Mrs T. (Case 4.) had obtained contagious fomites from his last fatal case (No. 3.); and while herself affected therefrom, had communicated the virus anew to his person, who conveyed it unconsciously to Mrs T. (Case 5th) in whom it was developed almost from the moment of parturition.

Dr Peddie now abandoned the practice of midwifery; was confined at home for several days, being much indisposed with sore throat, fatigue, and anxiety; took medicine, and the warm-bath; exposed the clothes worn at all these cases in an airy chamber, and sprinkled them from time to time with the solution of the chloride of lime; and went into the country for eight days, four of which were spent at the sea side, and four on an excursion into Perthshire and Stirlingshire. A fortnight, less one day, thus elapsed before Dr Peddie resumed practice, and accepted (on the 13th October) the next obstetric call, in consequence of urgent solicitation. Dr Peddie entered into a minute detail of the symptoms of this case (Mrs M.'s, aged 30; first child), which unhappily proved fatal on the 24th October—eleven days from the period of her accouchement; and he gave it as his own opinion, after much careful consideration, that he could not persuade himself of its having been a case of contagious puerperal fever, as there was a total dissimilarity in symptoms and mode of termination from the preceding characteristic cases, and as she had been in a most critical state of health for a considerable time previous to labour, with ulceration of the bowels, dilatation of the heart, and general debility. Dr Peddie, however, stated, that lest his opinion was incorrect, he had felt it to be his duty to withdraw from midwifery practice for some time to come.

After some remarks on the nature of puerperal fever, and the opinion of authors concerning it, Dr Peddie narrated several cases of erysipelas, phlebitis, and peritonitis, attended by him at the same time, and mixed up with his puerperal cases. From one of these, he thought it probable that the animal poison, producing the line of disastrous events in the accouchement chamber, originated; and referred, in proof of this opinion, to parallel instances related by Mr Stow of Doncaster, in the Provincial Journal, No. 166, 1843. The subject was a gentleman with a gangrenous erysipelas, spreading from sinuses surrounding the right hip joint, which took their origin from a mismanaged bubo, and a much impaired constitution. It was the most malignant case of the kind ever witnessed by Dr Peddie—proving fatal on the 13th September, after the body had become deeply jaundiced, and large purulent deposits, with considerable emphysema, had formed in the right knee and left shoulder joints, as also among the muscles of the right forearm. This patient required dressings twice daily on account of the profuse discharge of dark-coloured fetid matter from the sinuses; and it was while attending him, although ablutions were regularly performed, that Dr Peddie delivered Mrs S. and Mrs W. (Cases 1 and 2.), and, on the day following his death, Mrs K. (Case 3.)

Dr Peddie then gave an account of several cases of *disease undoubtedly originating from the puerperal fever case*, (No. 3), thus affording a reflex proof of the existence of a puerperal contagious virus affecting non-pregnant individuals, according to their special circumstances. One of them, a lady's nurse, who assisted frequently at Mrs K.'s, was seized on the 25th September with fever—the symptoms at first being chiefly referrible to the abdomen, and then to acute phlebitis of the right forearm, from which she had been bled, and died delirious on the 2d October. Another was a nurse, who had acted occasionally at Mrs K.'s, had also waited on the sick nurse for one day, and had visited Mrs T. (Case 4.) on the afternoon of her confinement, was affected with erysipelas of the head and face, from which she recovered with difficulty. And a third was

an old lady who was lodging in the house of the lady's nurse, with whom she took fever simultaneously, which, however, in her case proved to be mild. It was also remarked, that almost every individual who had visited at Mrs. K.'s during her illness, complained soon afterwards of one kind or another, particularly with slight feverishness and sore throat; and it was at this time also that Dr Peddie himself became affected in the same way.

Dr Peddie concluded his communication, by stating the following as the principal points which he thought the facts mentioned seemed to prove:—

1st, That a specific virus, of an animal nature, is produced under certain circumstances, and in turn generates a peculiar form of fever in the puerperal state.

2d, That a virus frequently originates from erysipelatous inflammation.

3d, When once generated, it may be communicated from one lying-in patient to another with extraordinary virulence, quite independently of locality or epidemic influence, either by direct intercourse, or through the medium of a third person; and that this is more likely to happen when the predispositions of a weak body and a depressed mind exist.

4th, That it may also produce disease of various kinds in non-puerperal individuals, more especially of an erysipelatous and phlebotic character.

5th, That the treatment of a contagious puerperal fever, whether directed by theoretical opinions, or the indications of physical signs, proves of little avail; but that if any theory is to be entertained respecting this malady, it should be that something of a specific and morbid nature requires to be thrown out of the system, and the powers of life at the same time sustained; and that the practice which holds out the greatest prospect, small at best, of this being accomplished, is the adoption of the diaphoretic and stimulant plans, according to the stage of the disease.

6th, That the principal concern of the medical man should be (seeing that a cure is so rare) to adopt every conceivable precaution against the occurrence of a single case of the disease, or to lessen the risk of its propagation when once established in his practice. And to attain these ends, patients in childbed should either not be attended at the same period with cases of malignant or severe erysipelas, or that proper caution should be observed as to ablutions, more especially after contact with any discharge from such patients; and when a case of puerperal fever does occur, chlorinated ablutions should be used; and if a second occur, he should withdraw from obstetric practice for two or three weeks, if possible; and in the interim attempt, by removal into the country, warm-baths, and other alterative and purifying means, and by the exposure of clothing to a free atmosphere or high temperature, to rid himself of the subtle and powerful virus, which adheres to him so tenaciously.

II.—Dr Bennett exhibited several specimens of Dr Shibert's models of pathological anatomy, which he considered to be superior to similar models in wax, from their being less liable to injury from exposure, and from their being easily cleaned by washing, when accidentally soiled.

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*Wednesday, 3d December 1845.*—DR GAIRDNER, President, in the Chair.

I.—Dr Simpson read a communication on Excision of the Cervix Uteri. Out of eight cases in which he had performed this operation, in three the amputated vaginal portion of the cervix was the seat of Carcinomatous disease. He detailed the particulars of these three cases. In one (a case of cauliflower excrescence) the patient has remained perfectly well since the date of the operation in 1840, and in the interval has borne and nursed three healthy children. In a second patient, whose health and

strength were greatly reduced, the excised part presented a tumour having all the microscopic and other characters of Müller's *Carcinoma fasciculatum*. It is now upwards of two years since the operation, and the patient continues to enjoy the best of health. In the third case, the diseased cervix presented a well marked specimen of Müller's carcinoma reticulare. The patient remained well for eight months, but the disease then recurred, and proved fatal fourteen months after the operation.

Dr Simpson concluded his communication by offering some remarks on the best mode of performing the operation, and the cases suitable for it.

II.—Dr Bennett read a paper, entitled Observations on Ovarian Dropsy. From several cases of this disease which he had observed, followed by careful post-mortem examinations, he endeavoured to show, that the fluid so frequently found in the cavity of the peritoneum, was secreted from the interior of the tumour in the following manner:—The cystic tumour of the ovary, at an early period of its development, is crowded with secondary cysts. These become expanded, and at last burst into each other, so that at an advanced period it consists of only a few or even one large cyst. In some rare cases, the external wall of the tumour contracts adhesions to the peritoneum throughout, an example of which was given. In the generality of instances, however, ulceration takes place in the walls of the cyst, the secreted fluid passes through the opening so made, into the cavity of the peritoneum, and there accumulates.

The structure of these cystic tumours consists, 1st, of a dense fibrous envelope; 2d, of numerous secondary cysts, varying in size. They are all richly furnished with blood-vessels, and are lined internally with a distinct layer of epithelial cells. These cells, as the cysts expand and burst, escape through the ulcerated openings with the fluid. They constitute the floccule seen in the viscid fluid removed by tapping. They are easily distinguished microscopically from the known structure of lymph, and their detection is, in the author's opinion, capable of being made diagnostic in certain cases. Dr Bennett further thought, that the uterine sound of Dr Simpson greatly facilitated the diagnosis of ovarian and uterine tumours.

The author then read the details of a case in which, at his request, Dr Handyside had performed ovariectomy, both ovaries being removed. It terminated fatally on the 70th day.

The reading of Dr Bennett's paper having extended to a late hour, the Society agreed, on the motion of Dr Cormack, seconded by Dr Andrew, to hold a meeting this day fortnight, for the purpose of taking into consideration the subject of ovarian dropsy.

Dr Cumming, 3 Elder Street, and Dr Irving, Royal Lunatic Asylum, Morningside, were admitted ordinary members.

The Society then elected the following gentlemen as Office-bearers for the ensuing year:—

*President*—John Gairdner, M.D.

*Vice-Presidents.*

Robert Hamilton, M.D.      W. Beilby, M.D.      W. P. Alison, M.D.

*Councillors.*

|                          |                        |
|--------------------------|------------------------|
| James Syme, Esq.         | Alexander Peddie, M.D. |
| Robert Christison, M.D.  | W. Mackinnon, M.D.     |
| Alexander Cockburn, Esq. | Allen Thomson, M.D.    |
| John Goodsir, Esq.       | James Duncan, M.D.     |

*Treasurer*—Robert Omond, M.D.

*Secretaries.*

Douglas MacLagan, M.D.      J. H. Bennett, M.D.

## DIVISION OF THE SPINAL MARROW.

*Recovery.*—A very remarkable, perhaps unique, example of this, is recorded by Dr Eli Hurd, of Middleport, Niagara county, New York, in the *New York Journal of Med.* (Sept. 1845.)

The subject of the case was a man who jumped from a waggou upon a piece of timber, the surface of which being wet, he slipped and fell upon his back and left side. On endeavouring to rise, he found his lower extremities numb and powerless. He called for assistance, and when raised, a chisel, which was in his coat-pocket when he jumped, was found sticking in his back. An attempt was made to extract the instrument, which resulted in pulling off the handle. Dr Hurd was then called, and in a few minutes was on the spot. With the assistance of three or four men, and after a prolonged and severe effort, Dr H. succeeded in drawing out the chisel, which was five inches in length to the shoulder, seven-eighths of an inch wide, and from a quarter of an inch, at the shoulder, tapering to less than one-eighth of an inch in thickness at the cutting extremity.

The wound was then dressed, and the patient carefully conveyed home. At the time of extracting the instrument, the patient saw "vivid flashes of light, which were apparently followed by total darkness." During the operation he was conscious of very little pain.

The wound made by the chisel was opposite the spinous process of the lower dorsal vertebra, on the left side. At its superior extremity it was half an inch from the spinous process, and one inch at its inferior extremity; so that a line drawn parallel to the spinous processes of the vertebræ, and three-fourths of an inch to the left, would have intersected it in the middle. The direction of the instrument was upwards, at an angle from the surface of twenty to twenty-five degrees, and to the right of about twelve degrees, penetrating the spinal column, and undoubtedly entirely dividing the cord. Perfect insensibility of the skin below the wound, with paralysis of the lower extremities, bladder and rectum, was the immediate consequence. The shock that the system received, produced great prostration for some forty hours, when reaction took place, and was followed by fever for ten or twelve days. The external wound cicatrized in a few days, scarcely discharging a spoonful of pus. The urine was drawn off by means of the catheter for six days after the accident, when the bladder began to resume its functions; two days after the instrument was discontinued. Cathartics failing to move the bowels during the same period of time, and for two or three days longer, dejections were procured by stimulating enemata. Returning sensibility occurred in the skin the fifth day, and an imperfect use of the limbs about the fifteenth.

The patient first commenced locomotion on his hands and knees, then by pushing a chair round, and afterwards by means of crutches, which he has been obliged to use ever since. Distortion of the feet and ankles commenced some weeks after his efforts to get about on crutches, and increased for several years thereafter; yet his general health continued good.

The treatment during the state of prostration was by diffusible stimulants, through the febrile stage by antiphlogistics; while friction, with stimulating liniments to the paralyzed parts, was used throughout both stages, and for months afterwards.

Sensibility of the skin and action in the inferior extremities returned very slowly; so much so, that four years and seven months after the accident above mentioned, carelessly sitting or kneeling with his left knee nearer than usual to the hot fire, without feeling any pain, or being conscious of suffering, the skin and integuments over the knee-pan, and on either side of it were so badly burned, that mortification and sloughing took place. This was so deep, that the cavity of the joint was opened and exposed

to view. The patella was covered only by the periosteum, and after a few days, as he was endeavouring to draw his leg up in bed, broke transversely across. The superior portion of the patella protruded so much from the wound in consequence of the retraction of the extensor muscles, that, after various unsuccessful attempts to reduce and keep it in place, it was removed by amputation. The knee was now much inflamed and swollen. The wound gaped horribly, and every symptom gave indication of a fatal issue. A fungous vegetation sprang up from every side of the wound, filled up the cavity, and formed a spongy protuberant mass above and around it. Hemorrhage followed every application of caustic that was made to check its exuberant growth, as well as compression, even the slightest touch. The miserable patient became extremely exhausted, and amputation of the diseased and crippled limb seemed the only alternative, and even that a doubtful one.

At this juncture, three weeks from the period of the burn, the wound was dressed with Singleton's Golden Ointment, under which a cure was gradually effected.

A large ugly-looking puckered cicatrix remains over and above the left portion of the joint. The inferior portion of the patella is drawn round upon the outside of the knee-joint. The leg is rotated outwards, and the heel thrown in so as to point to the hollow of the right foot. The toes are thrown out and drawn up towards the metatarsal bones, and the whole foot is drawn inwards, and flexed upon the tibia in such a manner as to make almost a right angle with the leg. There is also considerable deformity of the right foot and ankle, though less than of the left.

There is no curvature of the spine, nor has there been at any time. Nor is there any complaint whatever of the back. He can get into and out of a carriage, mount a horse from the ground without assistance, and ride off at any pace. He has been elected constable and collector of the town where he resides for a number of successive years, discharged the duties of his office acceptably to the public, and attends to many other kinds of business. He has married within two years, and has one child. In fact, he is, in every sense of the word, as *well* as he ever was, except his crippled condition.

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*Gastrotomy.*—An interesting case in which this operation was performed, was read before the Tennessee State Medical Society, by Dr J. E. Manlove, and is published in the Boston Med. and Surgical Journal (July 23, 1845.) The patient, a coloured boy, 17 years of age, was suffering when Dr M. first saw him, 7th July 1844, under some general uneasiness of the abdomen, and fever, and had been constipated for 12 or 15 days. He had taken Epsom salts, castor-oil, and several enemata, without effect. Bleeding *ad deliquium animi*, calomel and opium, stimulating enemata, the introduction of flexible tubes, as far as possible, into the intestines, enemata with tart. antimony, &c. failed to produce an evacuation from the bowels. The patient's condition on the 10th July was as follows:—"Abdomen enormously distended; difficulty of breathing; extremities cold; pulse very feeble and quick; countenance anxious; no evacuation. Gastrotomy was considered the only possible means of even prolonging his life; and although the operation promised but little benefit, yet the certainty of death without it, justified us, in our estimation at least, in undertaking its performance. An incision was made in the median line, commencing about two inches below the umbilicus, and extending down towards the pubes four or five inches. The peritoneum and bowels along the lower half of the incision had formed a most intimate adhesion, and in cutting through the former an opening of about one-fourth of an inch in extent was made into the latter. From the opening there proceeded large quantities of flatus and liquid feces, as well as the oil and turpentine, which had been taken. On further examination, it was discovered that the intestines were united to the peritoneum by extensive adhesions at various

points within reach of the finger and probe. The wound was closed by sutures and adhesive straps, except the opening into the intestine. The amendment in all the symptoms in one hour was astonishing; the extremities became warm; the pulse slower and fuller, and during the morning he was able to fan himself, the weather being excessively warm. On the next day his appetite was good, and he continued to improve, and to discharge the contents of the bowels through the artificial anus until the 17th day after the operation, when the bowels acted naturally, the opening having nearly closed."

Six months before the boy's present illness, he had received an injury from the falling of a piece of timber on the abdomen, from which the adhesions discovered in the operation resulted. The boy was well nine months after the operation, and was exhibited at the meeting of the society.

The reporter advocates the operation in similar cases, and in support of his views, adduced the following case:—

"Dr Wilson, of this county, was called to attend, in conjunction with several others, a negro man, who was supposed to be labouring under intus-susception. All remedies had been used to procure evacuation of the bowels which ingenuity could suggest, but in vain; and the patient was reduced to the last point of life. Gastrotomy was determined to be the only means of affording relief. It was performed by Dr W., and the intestines drawn out of the cavity of the abdomen until the point of obstruction was arrived at. About one inch of the ileum was found to be invaginated; and the attempt to relieve the intus-suscepted portion, discovered the fact that adhesions had been formed between the receiving and received parts of the intestine. The adhesions were dissected loose, and the bowels returned into the abdomen. Natural passages immediately took place, and the patient was rapidly restored to perfect health. It is not unreasonable to suppose the chances of recovery would have been much enhanced, had the operation been performed before the adhesions were established."

We much fear that such fortunate results are not likely to often follow in similar cases.—*Amer. Journ. of Med. Science*, Oct. 1845.

#### *Oxalic Acid in the Rhubarb or Pie Plant.*

A family of four persons, in this city, recently, after eating very freely of the leaves of the domestic rhubarb or pie plant, boiled and served as "greens," were all of them, shortly after, seized with severe vomiting. In one of the persons it was followed by gastritis. The others recovered directly after the vomiting. We have occasionally seen notices in the newspapers of this plant producing noxious effects.—*Buffalo Med. Jour.*, No. 1.

In the second number of the same Journal, there is an analysis of the rhubarb plant, by Lieutenant Long, U. S. army, M.D. From this it appears, that the small bundles in market, weighing about 1 lb. contains  $24\frac{3}{4}$  grs., or rather more than two scruples of oxalic acid. "The minimum fatal dose of the crystallized acid on record in standard works is half a drachm; but it would, doubtless, be unsafe to take a much smaller dose than this of the acid in a free state. Yet as the diluted acid is regarded and used as a safe refrigerant in fevers, and as a portion of it exists in the pie plant in combination with lime, and is therefore inert, it would seem hardly probable that any deleterious effects would result from the use of the plant."

In one experiment, Dr Long used the petioles or stalks, and in the other, both the stalk and the leaf, without any appreciable difference in the result.

These results are certainly curious, and we hope they will induce further inquiry. So far as the root of rhubarb has been examined, it would not seem to contain any free



oxalic acid, but oxalate of lime, varying according to the different localities producing it, from 11 to 35 or 40 per cent. (See Christison's Dispensatory. Art. Rheum.)—Ibid.

*Case of Intus-susception terminating favourably by the Discharge per Anum of Intestine, about sixteen inches in length.*

A very remarkable case is reported by Dr A. B. Dayton, of Middleton Point, N. J., in the *New York Journal of Medicine* (Sept. 1845), purporting to be of this character:—The subject of the case was a man 35 years of age, whose previous health had not been good, and who had had two or three severe attacks of colic, and who was seized with severe pain in the right lumbar region while attending to his ordinary business. Bleeding and a cathartic partially relieved him. Three days afterwards, when seen by Dr D., he was suffering from pain in the right lumbar region, with considerable tenderness of the abdomen generally; and from this time he continued to suffer, at short intervals, the most excruciating pains, except when under the influence of anodynes. He continued in this state for four weeks, during which time he became very much emaciated, and death seemed inevitable. “When he voided per anum, a portion of intestine from twelve to sixteen inches in length, either in one or two pieces: it was in two pieces when I first saw it, but it may have been torn into two by persons who had been previously examining it. The part which I exhibited to the society, and still have in my possession, is twelve inches long; the other part, which was lost during the cleaning and washing, was supposed, by those who saw it with myself, to be not less than four inches long; so that the whole would vary but little from sixteen inches.

“The portion passed is small intestine, having all its characteristics well marked. It is not, neither was it, as I believe, a continuous tube, in form of natural intestine, but is divided in its whole length; its edges being uneven, rough and jagged; its mucous surface in spots, dotted over, and in other places almost covered with small, dark, granular particles, being hard and resembling grains of sand, except in colour; there are also two or three patches, from half an inch to an inch in diameter, in which the entire coats of the intestine are changed into a dark mahogany-coloured substance, not dissimilar to thin turtle-shell either in hardness or appearance. A considerable part of the intestine presents a healthy aspect, except at its sloughed edges.”

What is most extraordinary, if there be no mistake as to the nature of the case, is that “the attack neither commenced with, nor was it during its whole course attended with vomiting, unless the emesis was the effect of medicine; neither was there obstinate constipation of the bowels, for cathartics operated freely and kindly, without unusual pain or difficulty, from the beginning to the termination of the disease.”

ON MEDICAL CERTIFICATES OF INSANITY.

*To the Medical Profession.*

GENTLEMEN,—The Secretary of the Commissioners in Lunacy has addressed a letter to me, implying an irregularity in my conduct in having received a patient into my establishment, when the “medical men certifying had omitted altogether to subjoin any fact from which they formed their opinion as to the gentleman referred to being of unsound mind.”

It is my opinion that very many of you may be wholly unacquainted with the recent Act of Parliament passed in August last, relative to the insane, which most seriously concerns every member of the medical profession.

The Commissioners have expressed themselves satisfied that I will cooperate with them in their determination to carry out, *bonâ fide*, and strictly, the intentions of the

legislature. I therefore cannot do a greater service to you, or cooperate more effectually with them, than by publishing the letter addressed to me on the subject, because, while it must direct your attention to the Act, the provisions of which the Commissioners are aiming to enforce, it must awaken you to a knowledge of your position with them, in the case of your non-compliance.

As regards the case which has induced the Commissioners to caution me against receiving patients upon irregular certificates, which cannot be received by them as legal documents, I may observe, they knew his father had placed him under my care; they had received an opinion from myself, as well as from two other medical gentlemen, that he was deranged, but they had not any fact stated from which those gentlemen formed their opinion, and therefore they deemed the certificates irregular, and my conduct reprehensible.

I mention these circumstances, in order to impress on every member of the medical profession, the implicit attention expected from you, and you will not fail to take notice that, from a dereliction of your duty in not attending strictly to the provisions of the Act, you may not only bring yourselves into trouble with the solicitors of the Commissioners, but place the proprietors of lunatic asylums in a most painful dilemma.

The insane are often not brought to us until they cannot be managed.

On the one hand, we are liable through your inadvertence to incur the censure of the Commissioners, for affording them the aid of our experience. On the other hand, we may be thought by the relatives, who are unacquainted with these preparatory measures, to be wanting in the common feelings of humanity.

The following is the letter to which I allude.

I am, gentlemen, yours very faithfully,

FRANCIS WILLIS, M.D.

Shillingthorpe House, Stamford,  
Nov. 29th, 1845.

Commissioners in Lunacy Office,  
12, Abingdon Street, 21st Nov. 1845.

SIR,—The attention of the Commissioners in Lunacy has been drawn to the medical certificates for the admission of \* \* \* \* a private patient, into your asylum, in which the medical men certifying have omitted altogether to subjoin any fact, from which they formed their opinion as to the gentleman referred to being of unsound mind, and a proper person to be confined; thus acting in direct violation of the statute, the non-compliance with whose provisions in this respect is constituted by the 49th section a misdemeanour.

Under these circumstances, the Commissioners have felt it their duty to take the course which they have adopted in similar cases, and to refer the certificates in question to their Solicitor, with instructions to communicate with the medical gentlemen whose names are attached thereto, and to take such proceedings as he may deem advisable towards enforcing a compliance with the Act.

I am further desired to caution you against receiving patients upon such irregular certificates, which cannot be received by the Commissioners as legal documents.

In thus drawing your attention to the subject, the Commissioners are satisfied that you will cooperate with them in their determination to carry out, *bonâ fide*, and strictly, the intentions of the legislature as respects the insane.

I am, sir, your very obedient servant,

R. W. LUTWIDGE, Sec.

F. WILLIS, M.D.

Shillingthorpe House, near Stamford.

Med. Gazette, Dec. 12.

THE  
NORTHERN  
JOURNAL OF MEDICINE.

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No. XXII.—FEBRUARY 1846.

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PART I.—ORIGINAL ARTICLES.

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*On the Rules applicable to the employment of Venesection and of Opium in Obstetric Practice.* By JOHN BREMNER, Surgeon, Marnoch. Communicated by DR THATCHER.

UPON a retrospective view of the opinions of the very able authors selected for consideration in No. XX. of this Journal, respecting the employment of venesection in obstetric practice generally, the diversity which exists on certain topics cannot fail to arrest the attention of even superficial observers; and would seem, before being subjected to the refining processes of minute investigation and inductive experiment, to warrant the conclusion, that they cannot, in their allied state, consistently harmonize with the characteristics of simple unalloyed truth.

Agreeably to the plan already specified, those circumstances demanding the abstraction of a portion of the vital fluid claim a preference to our attention.

By means of special reference to the extracts in question, they may, the writer imagines, be enumerated and classed in the following order:—1st, A state of plethora or excitement of the sanguiferous system generally; and which, although variously expressed, appears to be more particularly taken notice of in the works of Drs Denman, Hamilton, Rigby, and perhaps Dr Gooch (see p. 180.) 2d, A state of excitement, or, as it is commonly termed, “rigidity” of the os uteri v. internum, and also of all the parts connected with the second stage of labour, on which the greater number of the writers quoted, with the exception of Drs Smellie and Denman, dwell at considerable length. 3d, An unyielding condition of the uterus in consequence of an undeveloped band of fibres in its cervix, described in the writings of Drs Gooch and Campbell, but more especially in those of Dr Hamil-

ton. *4th*, A partial or spasmodic state of contraction of the body or fundus of the uterus, commonly denominated irregular action—a description of which is given by Dr Burns, p. 454; but more fully by Dr Rigby, p. 212. *5th*, Premature rupture of the membranous sac, stated by Drs Hamilton, Burns, &c.

Impressed with the idea, that to the preceding list might be expected to be added the various concomitant circumstances mentioned by the respective authors, as contributing to the necessity for the evacuation of blood, (*viz.*) heat of surface, quick, full, or strong, hard and sharp pulse, thirst, restlessness, tumefaction, unusual tenderness, &c., the writer would beg to state that he deems such a procedure, not only unnecessary, but highly improper, seeing they never occur as idiopathic affections, but only symptomatic of the state on which those above described depend; forming, in proportion to their number and intensity, the criteria by which to judge of the degree and extent of surface over which the same may have become disseminated.

With the view of simplifying, as far as possible, the illustrations about to be made, the present is considered as the most proper season for the introduction of the history of the resisting causes of labour purposed in last paper, and which will be understood to be identical with those requiring the employment of the lancet, here submitted to consideration.—

*1st*, Of plethora or general excitement.

The writer supposes that the terms plethora or excitement, though strictly similar in their nature and effects, are nevertheless capable of a division, so far as to limit their application to two diversified states of the system, insomuch, that while one of plethora cannot properly exist apart from that of excitement, the latter affection may, and is often met with in practice, where the former is entirely absent.

A state of plethora, therefore, he conceives, is most correctly described, when it is made to include that of excitement or inflammation combined with one of a redundancy of the sanguineous fluid, and perhaps also of adipose matter; and from reasons which at first view must be obvious to the discerning practitioner of midwifery, can seldom, in the full sense of the word, occur but amongst females of sound and vigorous constitution, and previous good health.

That of simple excitement, on the other hand, he believes himself warranted in asserting, frequently lays claim to as its subjects those naturally of a wholly opposite character, or who may have become greatly enfeebled in consequence of former repeated pregnancies, with the addition, it may be, of tedious deliveries; or perchance, from having been the victims of great bodily exertion, or long and deep-rooted disease, and in whom the powers of the circulation are scarcely adequate to the requisite demands.

The line of demarcation betwixt the extremes now mentioned,

and the medium state from which they emerge, may in many cases be difficult to draw, neither is it matter of importance it should be otherwise; but the preceding distinction has been considered necessary to be made, because the writer imagines it by no means an unpopular opinion, more especially amongst young practitioners, that in delicate and weakly individuals, venesection, if not improper and dangerous, is at least destitute of use, although there can be no doubt it has, in such instances, been repeatedly carried to the opposite extreme.

Without adverting farther to distinctive appellations, it may be remarked that the general period at which this state of excitement becomes any wise prominent, the writer has found to be principally during the seventh month of utero-gestation, when the system has become highly surcharged with blood.

He is aware, however, that in laying down this as the rule, it is like most others connected with the *ars medendi*, one liable to many exceptions. For while he has met with a certain proportion of cases wherein it had manifested itself at an earlier period, he has had frequent opportunities of witnessing instances in which it had occurred considerably later; and not a few in which it was found to exist upon the accession of labour, where the smallest suspicion of its presence was not entertained. As to those last mentioned, it is necessary to explain that they were individuals in whom either it was considered to have been wholly subdued, or upon repeated examinations previous to the commencement of labour, had never been discovered; and these cases, but for the subsequent prompt recourse to the lancet, would have been tedious in their progress, and, perhaps, doubtful as to their termination.

The design of being thus minute is intended to point out the insidious nature of the affection, and the attention with which it requires to be watched.

*Symptoms.*—The symptoms by which its presence can, in the most of cases, be detected, are a sense of languor over the spirits, together with a constricted state of the body generally, occasional flushings of the face, suffusion of the eyes, loathing of the ordinary quantity of food, thirst, constipation of the bowels, a rather scanty and high-coloured flow of urine, &c.

The surest and most unequivocal indication, however, is the state of the pulse.

This, it will be observed in the list of quotations, is variously described as quick, full, strong, hard, &c. Were it the case that a promiscuous selection of one or more of the distinctions here specified, were found uniformly sufficient to establish the existence of the state of excitement in question, then all doubt upon the subject would speedily be at an end; and the practitioner would only have to distinguish betwixt a development of the gen-

uine characteristics, and those occasioned by his sudden, and, perhaps, unaccustomed appearance at the patient's bedside.

The result of the experience derived from the range of cases which have come under the writer's observation, however, go a considerable length, he is of opinion, to subvert the coincidence of the diversified conditions of the pulse as to the point at issue.

The first in order (*viz.*), an accelerated motion of the circulation is a never-failing attendant on almost every kind and degree of pyrexia or febrile disease, in many of which venesection would not only be unprofitable, but highly injurious—on which account it seems, in its solitary state at least, not entitled to the smallest confidence as a correct indicator of the presence of inflammatory action.

But though insufficient of itself, it may be supposed that when viewed in conjunction with the two succeeding varieties, which seem to differ merely in the mode of expression, its infallibility cannot be called in question.

The solution of the problem, it is obvious, rests solely on the merits of the peculiarity, termed fulness or strength. This at first view to an intelligent observer, must appear very unsatisfactory in its evidence, more especially when it is recollected that, like a state of plethora, it uniformly varies in proportion to the vigour and soundness of the patient's constitution, and her previous exemption from weakness and disease.

Thus have these in their combined state, in the writer's estimation, been long found alike inadequate to establish its reality, even when accompanied with considerable heat of surface, &c.

Not so, however, with respect to the presence of the remaining condition (*viz.*), a state of hardness—a definition which, if not altogether identical with that of sharpness, seems to be very nearly allied.

To obviate any misunderstanding, could such possibly arise from these, the writer would suggest the propriety of substituting that of *incompressible or wiry pulse*—terms which possess the advantage of long sanction and familiarity amongst professional men.

When, therefore, either previous to, or upon the approach of labour, the same is found, whatever may be its situation in other respects, pulsating with rather increased than diminished force upon the application of pressure with the finger, a degree of excitement, greater or less, may almost of a certainty be suspected to exist.

Having, however, been occasionally deceived in certain cases where the examination was conducted with the patient in bed, the writer has for a good many years adopted the following simple method, with the most undeviating success.

When upon his arrival, he finds her occupying the recumbent

posture, he expresses a wish to have her removed and placed in a chair. Should the state of incompressibility be only apparent, a most marked difference will suddenly take place; and by exchanging the sitting for the erect position, if considered necessary, the illusion is quickly at an end, or *vice versa*.

The plan here described has become so habitual, and been found of such service, that I seldom have recourse to venesection, under any circumstances, without the state of the circulation being first tested in the preceding manner.

It was originally suggested, on observing, that, in several of the cases mentioned, where the operation was performed in bed, the blood exhibited none of the fibrinous crust called "buffy coat" generally met with, and no corresponding favourable results were obtained; as also on witnessing the effect produced on others removed from beds where it (V.S.) could not with propriety be accomplished. It may here be remarked, that a loaded state of the bowels appears to be one of the most common, and, at the same time, effectual causes in producing the fictitious state of the pulse alluded to—a circumstance in doubtful or apparently critical cases, which should always be kept in view.

Should the degree of the affection, however, be any wise considerable, its detection is uniformly simple and easy.

When no application has been made, or steps taken for its removal, more especially in those of sanguine temperaments, or in proportion as a tendency to plethora may exist, as has been already observed, it "settles down upon some important part or organ," becoming occasionally diffused over a considerable space.

The linings, and not unfrequently one or other of the organs contained in the thoracic and abdominal cavities, in consequence of their vital and intimate union, are commonly the seat of its more aggravated attacks in preference to the remaining parts of the body.

When it takes place, however, in a slower and less acute degree, those included under the head of the second resisting cause, seem more peculiarly predisposed to participate in the "*diffusive*" nature of the malady.

*Diagnosis.*—It can only, the writer is of opinion, be confounded with affections of a similar kind, which may have been rooted in the system previous to conception, or, as is known occasionally to happen, nearly coeval with that event.

The importance of this diagnosis chiefly consists in supplying the attendant, upon any suspected case, with an additional motive for watchfulness over the state of his patient during the early period of pregnancy, when he is aware of such being fully established, lest abortion, or it may chance, premature labour come to pass, and thus prove the means of frustrating fondly cherished expectations and desires, which may not again be realized.

2*d*, State of excitement of os uteri and external parts.

It might *a priori* be suspected, that in consequence of their close relationship with the very wonderful and no less mysterious phenomena displayed in the respective processes of the propagation, germination, and development of the foetus, viewed in connection with their high vascularity of texture and depending situation, the parts in question would be amongst the first involved in the state of phlogosis or inflammatory action described—a fact there can be no hesitation in affirming, to which daily experience in the practice of those conversant with the anatomy and healthy function of these very important organs, can bear ample testimony.

*Symptoms.*—As the result of observation in a considerable number of cases, the writer believes the characteristic marks of this very frequent and formidable complaint, upon the investigation of which he is now about to enter, so prominent and conclusive, as to warrant its arrangement under two general heads or divisions—1*st*, That wherein it arises in consequence of a previous excited state of the system or circulation; and, 2*d*, Where its existence seems more peculiarly to depend on the advanced period of life at which females occasionally become pregnant for the first time—allowance of course being made for the reciprocal intermixture which must now and then subsist betwixt them.

Disavowing, as he does, the smallest desire whatever to censure or condemn the use of terms which have received the sanction of the wise and great, who have preceded him in the field of obstetric inquiry, provided they lead to no manner of confusion in practice, the writer imagines, that in the present instance, should he be in any measure successful in his illustrations of the positions advanced, a change is so far necessary from that hitherto employed, so as to coincide with the *data* on which the same are founded.

Relating to the first of these, he considers the substitution of the title “*excitement*,” for that of rigidity, as much more appropriate, and expressive of its real nature; while “*rigidity*,” on the other hand, seems better adapted to convey more correct ideas regarding the second—which has been uniformly found to be exempt in a much greater ratio from the state of phlogosis attendant on those whose acquaintance with puerperal circumstances has been earlier formed.

The appellation “*natural toughness*,” bestowed upon it by Dr Hamilton, would seem to apply with more systematic precision under the latter than the former head. In no other manner can the distressing, but by no means exaggerated description of the symptoms which stamps the first stage of this affection, as exhibited by him at p. 131, receive a satisfactory explanation.

The term “*natural*,” without being subjected to a constrained definition, could, it is conjectured, but very inaptly apply to



such a history as the following:—"When the first stage is retarded by the natural toughness of the os uteri, the sufferings of the patient are always more or less distressing. There is a feeling of wretchedness which is not relieved during the intervals of the pains; sickness at stomach, with excessive retchings, are the usual symptoms; restlessness and despondency are the natural consequences;" conditions which evidently imply that a morbid process has been longer or shorter going on. When viewed, however, in relation to the second, the discordance is easily reconciled.

In passing under review the various opinions advanced by the numerous list of writers in the preceding paper, respecting this affection, it will be remarked, that, whilst described by the majority as of a very formidable and untractable character, by none have the difficulties which stand in our way, in order to a correct understanding of its nature and treatment, been rendered so appalling, and magnified to such extent, as Drs Ramsbotham and Blundell.

In further prosecuting the illustration of this subject, that plan has been adopted, by means of which, the circumstances which shall be pointed out, and the observations arising therefrom, are intended to be such as it is imagined would be met with on our attendance on a case where the affection is supposed to exist in a *medium* state—the patient's health and strength, to a certain extent, impaired on account of previous indisposition; and where interference of every kind has been withheld as useless or improper.

Upon the practitioner's being called on to attend such a case, when as yet no regular uterine action is established; more especially, if he has not been on terms of previous acquaintance with his patient, and she about to be confined for the first time, such a state may be expected to exist when occasional, or perhaps pretty frequent attacks of pain are experienced, the force of which is in a great measure exhausted, without diverging to any considerable distance from the spot whence they originally sprung up, which may chance to be either across the superior portion of the sacrum, the loins, or somewhere in front of the uterine region. And his suspicions will receive, in all probability, additional confirmation, when, upon inquiry, he is given to understand, that the object of his present solicitude has passed a good many sleepless and wearisome nights, in consequence of the unremitting and baneful influence exercised over her perhaps otherwise delicate and susceptible frame, by reason of these distressing, although spurious pains. Symptoms of constitutional disturbance, as formerly taken notice of, will likewise manifest themselves in a greater or less degree; and, provided the patient be able to give any thing like a correct delineation of her situation, it will almost invariably

be found that most of these have for some length of time preceded the occurrence of the nocturnal pains.

The exceptions to this rule have been met with chiefly in those cases where injury has been inflicted upon the aperture itself and parts adjacent, either by means of neglected, or imperfectly treated acute disease previous to conception, or the improper use of instruments in former labours; states, which attention and intelligence on the part of the practitioner alone can serve properly to discriminate.

I likewise feel called upon to declare, that an excited and thickened state of the os uteri may occasionally be expected to be met with, where none of these circumstances have occurred, and where there has been well nigh an exemption from the pains in question. The subjects to whom these remarks apply have been found to consist principally of *primi paræ* of good natural constitution, in whom the extension of the morbid influence to the parts under notice had been of very limited duration. This may be looked upon as the first gradation of the complaint; whilst a continuance of pains of the nature described, whether occurring in primary pregnancies, or amongst those females who have passed through the ordeal of child-birth once, and perchance again, at the full period of gestation, seldom fails to aggravate its severity.

Several distressing cases of this affection have been met with, where, in the preceding, generally primary labour, the head of the child, from incomplete descent into the pelvis, by reason of maltreatment at the commencement, required to be lessened in bulk, and drawn forwards by means of the crotchet; and where, consequently, the os uteri had never been fully dilated.

It is to be understood, that, in this statement, no case is included where deficiency of space, however small, had existed.

To resume, more closely, the subject;—the patient being placed in bed, and the necessity for an examination into the state of matters being explained and acquiesced in, the attendant is satisfied that labour has commenced: for the sake of quicker illustration, let the os internum be capable of being reached, and that upon the accession of a pain or two it feels open; and, as Dr Hamilton at p. 120, most correctly expresses the condition, a “decided tightening of its edges is found to have taken place.” Even at this early period, if careful in his observations, he can scarcely fail to discover the thickened, inelastic, irritable, and perhaps serrated, or unequal extremity of the organ.

A good many hours of acute suffering may possibly in this way elapse, before it can be fully discovered that the presentation is in the natural order; the pains either not going completely off, or recurring at very irregular intervals. The pulse retains its incompressible feel, whilst an acceleration in its motion has evidently taken place.

The degree of restlessness and agitation manifested by the pa-

tient, clearly shows that the state described by Dr H. is not far distant. She perhaps expresses a desire for, and would fondly compose herself for a short time to rest, but cannot, on account of the lancinating nature of the pains which are gradually advancing, both in frequency and strength.

When an examination is instituted, she shrinks from and complains of the introduction of the finger, unless accomplished with the utmost gentleness and caution.

The state of the parts formerly described, can now be more satisfactorily ascertained; whilst an opportunity is afforded of observing the slight enlargement of the orifice, compared with the number and severity of the pains.

The poor patient is, however, likely doomed to undergo a still farther increase of her sufferings in consequence of the violence of these *labour* pains, as they have been very appropriately styled, becoming greatly augmented, whilst their efficiency is exerted in the same disproportionate ratio as before. Making the supposition, that the labour has continued from ten to twelve hours, the head having only completed half its descent into the pelvis, it must appear evident that her situation has already become somewhat critical. Should her constitution be originally good, and general health but slightly impaired, she may, provided rupture of the uterus do not supervene, at the expiry of about thirty hours, or even upwards, of well-nigh continued distress, give birth to her offspring without artificial assistance being required; and in the space of from two to three weeks will be able to leave her bed, and possibly her chamber, for several hours during the day. Her future recovery, provided no inflammatory disease ensues, may be tolerable, in consequence of her long confinement to bed, but must of necessity depend a good deal as to whether she is subjected to the task of nursing or not. It will be found, however, that her constitution is much more delicate than formerly, not so much from the severity of the labour as the previous state of excitement, by means of which it has, in a certain degree, become undermined, and she is easily fatigued, complains of pain and weakness in her back, has a leucorrhœal discharge; and should an examination in course be permitted per vaginam, the os uteri will be found to be extremely tender to the touch, whilst a probability exists that it may to a certain extent have become prolapsed.

Should the labour be much longer protracted, or her constitution prove of the delicate or susceptible kind, her chance of delivery by the unaided efforts of nature is extremely small. In both cases, the safety of the child will depend much on the strength of the pains and the length of time required to complete the second stage.

A third, and in many cases, more likely termination is, that the powers of the uterus, and likewise of the system generally,

should the action have proved violent in the early part of the process, will be so far reduced before the first stage is over, when the application of forceps of any description, in ordinary hands at least, becomes quite impracticable, in which case no choice is left but to finish the delivery by the operation of embryulcia, or allow both mother and child to descend unseparated to the grave.

*Diagnosis.*—In addition to the diagnostic symptoms of this affection, stated at the commencement, it may here be necessary to observe that its actual existence, in most instances, can only be fully determined by examination. In the institution of this, however, it deserves to be borne in mind, that it is not a thickened, unyielding state of the part so much, that constitutes a case of genuine excitement, as the degree of tenderness or pain, heat, &c. which is experienced upon the application of the finger. The absence or presence of the circumstances here noted will mark the gradation both towards that of general excitement, and where it arises consequent upon an advanced period of life.

Should venesection have been properly performed, at least a fortnight previous to confinement, it will turn the scale considerably in favour of a less irritable condition of the parts.

It has likewise to be distinguished from a state of œdema, which, from obvious reasons, is often an attendant upon the pregnant state. When it occurs in its more simple form, it can seldom fail to be readily understood on account of the soft elastic impression which the part conveys to the touch; the want of tenderness, and the readiness with which it gives way to the operation of genuine uterine action.

The remarks hitherto submitted to consideration will be found chiefly to refer to the state of the os uteri, and consequently applicable only to the difficulties to be encountered during the first stage. It is, nevertheless, a fact, established beyond the possibility of dispute, that those connected with the second are frequently the seat of a degree of excitement such as to occasion much delay and anguish to the patient, and trouble to the attendant; and whilst, provided he be careful and sufficiently minute in his observations, he may expect from time to time to meet with cases where the line of separation can be readily drawn; he will, in others, have to contend with it in every varied degree from the commencement to the termination of the labour. When, therefore, its existence is fully proved in the first case, our suspicions should be roused in the expectation of meeting with it in the second.

Another circumstance, the writer considers of importance to be attended to, is the fact, that the condition of the pulse, on the approach of labour, is no sure index as to the degree in which this morbid state may afterwards be found, in consequence, that when the system has been fully placed under its sway, it gradually, provided no counteracting measures be employed, loses both in tone

and energy—the general force of the circulation participating in equal proportion. Not a few instances, at least, have been witnessed, in which, from the comparatively low, though wiry state of the pulse, no particular difficulty in the outset was feared, but where the complaint in question prevailed in a very aggravated form, and could be accounted for upon no other principle or mode of reasoning. More direct evidences can, in the majority of these cases, be obtained from the violence and duration of the nocturnal pains and other circumstances.

The result of the experience acquired by the writer, enables him to affirm, that many cases of difficulty have been, and it is feared, are still occasionally mistaken for, and stigmatized under, the hackneyed appellation “of rigidity,” wherein the whole interruption to the regular progress of the labour seemed to depend upon a moderately excited state of the sanguiferous system, and consequently requiring only the abstraction of a limited quantity of that fluid for their relief.

In instances of the kind now described, where uterine action has been some length of time established, and the dilatation advanced a certain way without the aid of venesection being called in, it then becomes, he is well aware, a very difficult question to determine exactly their real nature prior to the accession of labour, as the parts under consideration, otherwise perhaps exempted, soon become excited, partaking, as they must of necessity do, in the state of engorgement, in common with all the other parts of the system.

For the purpose of rendering the diagnosis between the primary and secondary forms of the affection as intelligible as possible, the following general rule, where the attendant may not have enjoyed an opportunity of making himself intimately acquainted with his patient's situation previous to the commencement of labour, respecting the comparative degrees of resisting power which they severally exercise over its more usual and regular course, will be found worthy of particular confidence—allowance being granted for diversity of constitution with regard to delicacy and very considerable prostration of strength, the size of the infant's head, which shall be more particularly taken notice of hereafter, and any other casual circumstance.

In cases where the degree of excitement is moderate and of limited duration, the pains are found for the most part to return at pretty regular intervals, and the dilatation advances for a certain length of time progressively, although somewhat slowly—by the time, or perhaps before the first stage is fully completed, unless prompt counteracting measures have been adopted, uterine action, and, consequently, the process of dilatation fail together.

A very opposite effect, however, is witnessed when the system is more freely surcharged with blood. Notwithstanding the action is frequently well-directed and powerful, no corresponding

impression is made on the os uteri; but as soon as the encumbering weight is relieved by the judicious employment of the lancet, the aperture is found much more speedily to yield than in any case where disorganization of its structure has to a greater or less extent beforehand taken place.

Instead of the active appearance exhibited by the uterus now described, it occasionally happens that a sluggish or inert condition of the organ is met with, which the same appropriate treatment, applicable in the other case, when timely resorted to, never fails to rouse to action—a state very correctly and fully detailed by Drs Burns and Rigby.

In concluding the imperfect sketch here presented, it remains to be told that the opinions it advocates have been the result of long and studious observation, in a good many cases where the symptoms were such as to exhibit the affection, whose nature it is intended to display under all the varied forms and degrees which have now, and shall afterwards be recorded—the inductive inferences being drawn from a pretty close consideration and comparison of their effects, as witnessed from the apparent period of its germination, to that state where the healthy function of the organs more immediately concerned in the parturient process, seemed so deeply imbued with its influence, as to be altogether unfit for action.

(*To be continued.*)

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*Continuation of a Paper on the Treatment of Fractures by Splints of a New Construction; with some Remarks on the utility of Splints in Disease of the Hip-joint.* By WILLIAM KERR, Surgeon, Glasgow; Corresponding Member of the Medical and Physical Society of Calcutta.

SINCE the publication of my paper descriptive of a new species of Splints for Fractures,<sup>1</sup> additional evidence has occurred of their utility, and I have been thereby led to make some improvements on their construction. Those who have read that paper may possibly recollect that the apparatus for fractures of the thigh was the least tried of all the contrivances, having been employed in only one case, and that a boy, so that it was then wholly untried in adults. In the boy's case it was eminently successful—the fracture having united without the slightest shortness or deformity. The splints were removed on the 27th day from their application, and 32d from the accident; the patient, during the time he wore them, having been able to turn from side to side, to sit up, and to be carried to any part of the house in his

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<sup>1</sup> Northern Journal of Medicine, for November and December 1845.

mother's arms. The very satisfactory issue of this case, and the principles on which the splint is constructed, satisfied me of its applicability to adults. I am gratified to say that a case, which has lately occurred, has completely realized my expectation. A gentleman, about 40 years of age, of ordinary weight and stature, on the 19th ult., fell backwards over a piece of wood, and his feet having been entangled by another at a considerably lower elevation, the left os femoris was snapped across a little beneath its middle. On being raised, he found that he could neither stand nor walk. I saw him a few hours after the accident. The thigh, even when covered by the trousers, presented a bent outline, the foot was everted, but slight pressure turned it straight; and on the pressure being removed, the foot again became everted, without the patient being able to prevent the movement. When his clothes were removed, the bent figure of the thigh was more apparent, and corresponding with the displaced portion of the bone, there was considerable swelling on the outer and middle part of the thigh. The injured thigh was about an inch and a half shorter than the sound one. By pulling moderately, the unsound limb speedily became of its proper length; at the same time, the swelling of the thigh disappeared, and the pain ceased. Lateral pressure at the site of the fracture now produced distinct crepitus, which was heard several times afterwards, while the splints were being applied. An oblique fracture was inferred, from the thigh becoming shorter soon after I ceased to pull. My apparatus was put on. Neither inflammation, fever, nor any unpleasant symptom followed; on the contrary, his appetite was all along excellent; the pain began to abate from the time the thigh was properly secured in splints, and the swelling to diminish from the fourth day. From the second day, he was able to shift from one side of the bed to the other, with very little assistance besides that of cords tied to the roof of his bed. From the sixth day, he sat for a few minutes daily on the edge of his bed, his feet resting on a stool on the floor. On the fourteenth day, he stood on one foot, with the support of two persons, till a clean sheet could be put on his bed. As long as he stood, one of his assistants bore up the weight of the splints. On the twenty-first day, the union of the bone appearing to be pretty firm, the bandages around the thigh and leg splints of the apparatus were taken off; and on the twenty-fourth day, the whole apparatus was removed, and the limb left bare. Not the slightest overlapping or bend of the bone, and, consequently, not the slightest shortening of the limb could be discovered. There was no exuberant callus, so that the site of the fracture could scarcely be detected. During the progress of the cure, he was seen by Dr A. D. Anderson, Messrs James M. Adams, and R. G. Maxwell, surgeons, and by Mr Dougan, of the Royal Infirmary. After the splints were removed, he was examined by Dr Macfarlane. Owing to the angle

at which the body is held to the thigh by the apparatus, he was able to write letters daily during his confinement.

Mr John Bell says, that "the machine is not yet invented by which a fractured thigh-bone can be perfectly secured."<sup>1</sup>

I trust that this cannot now be asserted, when a patient is able to shift from one side of his bed to the other, to sit up, even to stand, and, as the result showed, without disturbing the thigh-bone in the slightest.

An accident of no little difficulty to manage with ordinary apparatus, is oblique fracture of the humerus. A case of this kind admitted into the wards of the Royal Infirmary of this city, was placed under my care by Dr Hannay. I applied my apparatus on the sixth day from the receipt of the injury. On the nineteenth day from this I found that he was able to raise his arm pretty freely, when I removed the breastplate, leaving the arm splints. These were soon after taken off, and the man dismissed cured, with the unimpaired use of his arm. The successful issue of this case had a striking contrast in the same patient. He could make little use of his other arm and hand, which had lost their muscularity and vigour nineteen years ago, in consequence of the compression deemed necessary for the cure of a fracture of the humerus of that side. He was at that time treated by a gentleman now deceased, known for the enthusiasm with which he engaged in the management of fractures.

Two weeks since, I assisted Dr Newman, of this city, in applying my apparatus to a groom, who had got his collar-bone broken in two places by a horse six days before. The previous treatment consisted in a roller, with a pad in the axilla, but the fractured surfaces could not be kept in apposition. My apparatus gave complete relief to the patient, by the steadiness with which the broken bone was held in its place. I learn from Dr Newman that the cure is going on satisfactorily, except that the position of the fractured portions was somewhat disturbed by the violence of an intoxicated person, a few days after my visit.

Mr Ebenezer Mackenzie requested my assistance in a case of fracture of the tibia and fibula in a carter, caused a week previously by a cart going over his leg. There was great pain, considerable swelling, and a perceptible bend of the leg at the fracture. The treatment had consisted in the application of fomentations, the limb being supported as well as possible on a pillow. One of my splints was now applied, which immediately brought both extremities of the bones into their proper line. The pain began to diminish, though the leg was cased in metal over two-thirds of its circumference, with only a folded handkerchief intervening between it and the tin; the calf and heel, however, through the intervention of the splint cloth, resting at the patient's pleasure

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<sup>1</sup> John Bell's Principles of Surgery, edited by Charles Bell, 1826.



on the soft pillow. An immediate improvement was likewise apparent in the comparative freedom with which he could permit the leg to be moved. The splint was worn longer than I believe was necessary. The limb is perfectly straight, and the site of the fracture marked by a slight furrow, indicating, I think, perfect stillness of the fractured surfaces during the cure.

Since the publication of my first paper on this subject in November last, I have not effected any improvement in the splint for fractures of the leg. To prevent misapprehension, I shall merely say here, that the splint for this fracture reaches only to the tuberosity of the tibia. In the management of fractures of the humerus, the short splint forming an artificial clavicle may, in general, be dispensed with—the fore-arm splint being in this case fastened to the breastplate by two screws. I have likewise lengthened the peaks of the upper-arm splint so as to reach to the top of the os humeri. The fore-arm splint is slightly shortened, and made fully an inch broader near the elbow. The principal improvements, however, have been effected in the apparatus for fractures of the thigh. The chief difficulty and loss of time in its application were caused in attaching the long metallic straps K to the thigh-splints and breastplate. Instead of the straps K, a metallic rod, bent something like steak-tongs, is substituted. This rod is flattened into plates, where it is screwed to the breastplates, and flattened at its bend, where it passes beneath and is screwed to the thigh-splints. It crosses obliquely beneath the thigh, the outer end of the rod rising from the edge of the splint near the knee, and the inner end a few inches nearer the body; the attachment of the outer rod to the breastplate ought likewise to be higher than that of the inner. It will readily be perceived that this arrangement is to increase the strength of the apparatus. In the case of the boy related in my first paper, and in that of the gentleman related in my present, a pelvic or perineal band were found to be uncomfortable and unnecessary. The metallic strap O is therefore not required in the position represented in the figure, but is very useful when made to connect the end of the breastplate with the upper and outer side of the thigh-splint. To save time in attaching the flat ends of the several connecting rods, each end is pierced with two holes, one small and circular, the other an arc of a circle at the same distance from the first as the holes in the tin splints. The hole at the bend of the long bent rod is a straight slit. By a reference to the figure, (see Number for November last), it will be observed that the angle beneath the knee is not completed; this is to avoid pressure on the hamstrings. For the same purpose, the adjoining ends of the splints on the thigh and leg are slightly trumpet-shaped. For a similar purpose, the splint B over the instep, and G under the axilla, are similarly formed.

In applying the apparatus for a fractured thigh, the leg-splint

and lower thigh-splint are to be first screwed together ; the patient's body ought then to be raised and supported at the proper angle by pillows ; the thigh is now to be extended likewise at the proper angle, and supported, along with the leg, by an assistant, or laid upon a temporary double inclined plane. Before laying down the limb, however, the two splints which have been screwed together may be applied, having the upper thigh-splint laid in loosely. The thigh being now carefully extended to its proper length, this last named splint is to be slid till it reaches beneath the tuberosity of the ischium, so that if the patient were to raise himself to sit, he would, on the side of the fracture, rest upon the splint. Two screws fasten this to the lower thigh-splint. Care must be taken that the inner edge of the upper thigh-splint does not press uncomfortably upon the perineum ; this is easily effected by keeping the outer edge pretty high, thereby protecting the trochanter. The metallic strap or rod O, is next to be fastened to the outer edge of the breastplate, and upper and outer side of the thigh-splint ; the bent metallic rod, forming as it were the main stays between the breastplate and thigh, is to be adjusted and screwed. Lastly, as far as regards the metallic part of the splint, the stirrup P and sole C are to be attached. The cloth band fastened by eyelets to one end of the breastplate, and passed behind the body, is then to be tightly laced to the other end of the breastplate, and the braces buckled. In addition, a strong broad band around both breastplate and body is required. The leg is next to be secured to its splint by a bandage, which steadies the thigh in the position it is to maintain. The length of the thigh ought to be correctly measured, and the line of the bone carefully examined to ensure perfect apposition, and if not sufficiently elongated, the two screws fastening the bent rod, which I have compared to a main-stay, are to be taken out, and the thigh extended. When the two screws just mentioned are again fastened, they will of course be somewhat nearer the body than the holes they first occupied. A little padding is now to be laid between the knee-plates and the knee, and a roller passed around this, and as much of the thigh-splint as is suitable. In none of my apparatus is the limb enveloped in a roller previously to being placed in a splint ; a folded napkin or soft towel is the only material which is placed between the splint and limb. A roller is used over all.<sup>1</sup>

The steadiness of the fractured thigh-bone depends upon the great surface of the breastplate, amounting, in one for an adult, to fully 160 square inches, extending from near the level of the

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<sup>1</sup> I have here described the method I adopted of applying these splints, but, if faintness do not prevent, possibly the best and easiest plan is to place the patient in the sitting position on the edge of the bed, his feet resting on a stool, while the apparatus is being applied.

axillæ to an inch or two from the top of the ilium, thereby, when fastened by connecting rods to the thigh-splints, preventing any approximation of the body to the thigh, or movement of the hip-joint. Owing to the firm rest which the thigh-splints have on the tuberosity of the ischium, they cannot rise against the fractured femur in any part of its length, so as to disturb its continuity. If the thigh has been sufficiently elongated, and the splints upon the thigh and leg adjusted to this elongation, the leg-splint, which is the extending power, can never, by any movement of the patient, get nearer to the pelvis and trunk, so that the thigh-bone cannot be shortened. In addition, the broad knee-plates are made to lay hold upon the extremity of the bone, where it is nearer the skin than elsewhere, and more easily held. In the case related in this paper, nothing slid, nothing got displaced, notwithstanding the movements of the patient, so that when the cure was completed, the splint was taken off unaltered from the time it went on. As the swelling of the thigh abated, I required to add proportionally to the thickness of the padding. By adopting the iron stay-rod, instead of the long metallic straps, it will be quite easy to shift the connecting screws nearer to the posterior side of the thigh, and mould the splints to the lessening thickness of the thigh, without disturbing the bone.

Before concluding, I have only to repeat, more emphatically if possible, than in my first paper, the great benefit and relief given by my splint in disease of the hip-joint. If suppuration has not formed, a cure may very probably be effected by wearing a splint, aided by warm clothing, moderate exercise in the open air, a nutritious diet, and often wine and tonics. If suppuration has occurred, great relief may still be given by the above-named means, but the prognosis is much more doubtful. The younger the patient, the more readily does suppuration occur. It may appear presumptuous to oppose the ordinary and long established practice of issues, blisters, and bleeding. I have formed my opinion upon the testimony of patients, or their guardians, who have consulted me, and in every case of diseased hip-joint, where these measures had been adopted, aggravation of the complaint and of the sufferings of the patient had evidently been the result. I likewise found that the parties had previously arrived at the same conclusion with myself. I cordially agree with Mr Coulson's condemnation of issues, in his excellent work on Disease of the Hip-Joint, and merely wish that he had extended his condemnation farther. The immediate relief from pain, which I have repeatedly witnessed by the application of a proper splint, decidedly proves that the sufferings of the patient are owing to the friction of a diseased head of the bone on a diseased socket. What then can be gained by issues, blisters, and bleeding, while no efficient plan is pursued to prevent motion? If my statement is true, that a splint does relieve the pain, and gives almost perfect ease to a pa-

tient, who, for weeks previously, had spent his days and nights in agony, what need is there for counter irritants? It will be said, that they are intended to remove the disease, which causes motion to be painful. Here I appeal to the experience of patients themselves. Often have I been told by a patient, "I was only slightly lame till I applied blisters and issues, but I have since got much worse, and been scarcely able to be out of my bed;" or watchful and intelligent parents have said to me, "We were directed to apply a blister, and this doing no good, an issue was next prescribed, but since these remedies were resorted to, the pain, which was trifling, has become agonizing."

40 Cambridge Street, Glasgow,  
15th January 1846.

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*On the Connection and Analogy between Erysipelas and Puerperal Fever, with Cases.* By ALEX. KEILLER, M.D. Edin.

IN tracing the connection and analogy between the characters of similar or dissimilar diseases, there are few influences which demand greater attention than those generally ascribed to the peculiarities of what has, aptly enough, been termed the "*Constitution of the Year*;" for, although a knowledge of the true nature of epidemic causes will, in all probability, ever continue without the pale of human scrutiny, yet the practical importance of carefully observing and fully recording the comparative effects of those mysterious periodic influences on particular diseases, cannot well be doubted.

Without presuming, however, to offer any thing new on the inscrutable connection existing between epidemic influence and concurrent diseases, but rather with the view of inviting a more extended inquiry into that interesting subject, I have been induced to record the following cases of two important maladies, the coexistence of which has now so repeatedly attracted the attention of the profession, as to render belief in their intimate analogy, if not in their specific identity, almost compulsory.

Dr Peddie of this city, in whose practice a succession of cases, highly illustrative of the contagious nature of puerperal fever, and of its connection with erysipelatous inflammation recently occurred, has, with exemplary propriety and candour, published the particulars and result of his painful experience in the treatment of a disease, the great fatality so generally accorded to which, naturally renders its appearance, in the practice of the accoucheur, a matter of the most serious apprehension, and too often of the most anxious regret. And as it has alone been from the accumulated evidence of those who have had the misfortune to treat a succession of cases of childbed fever, that the question of its contagiousness, like that of its fatality, has become a settled one; so will

it alone be by the concurrent testimony of accoucheurs and surgeons, that the coexistence of that much to be dreaded malady and erysipelas, or rather the nature of the striking concurrence already referred to, will become more explicitly defined and better understood than it has hitherto been. Believing, therefore, that the recording of such cases as those which lately occurred to Dr Peddie, is the adding to that accumulating heap of corroborative evidence, which, from its practical bearing, will ultimately bring about important and highly useful results, I deem no apology necessary for here reporting the few somewhat analogous cases which came under my observation about the same time, as well as the notices of others of a similar character, which have since been communicated to me.

The first case of puerperal fever that I had occasion to visit, was that of Mrs Peebles, the subject of the post-mortem examination, which I shall, with good reason, have particular occasion to refer to in tracing the contagious connection between this intractable disease and erysipelas—a connection and analogy which these remarks are chiefly intended to illustrate.

*Case 1.*—Mrs P. ætat. 22, a well formed and apparently healthy woman, was taken ill in her second labour, on the 8th July last, and was attended during her accouchement by Mr Figg, medical student, who also delivered the sister of this patient, the particulars of whose case I shall hereafter notice. The stages of parturition, as gleaned from Mr Figg, presented nothing beyond ordinary occurrence. An early examination discovered the os uteri slightly dilated, thin and tense; the membranes unruptured, and somewhat protruding; the head presenting; the pains feeble; pulse ranging about 90; the patient extremely anxious, and much troubled with frequent micturition. These symptoms, indicative of the commencement of labour, continued slowly to progress until the following morning, the pains gradually becoming more frequent and effectual; the membranes, which now fully protruded through the well dilated os uteri, were ruptured during a pain, when the head, which for hours previously, had made very little progress, descended into the pelvis, where it remained for several hours, notwithstanding the continuance of regular and strong expulsive pains. She was here bled to the extent of  $\bar{z}$ xij., which had the effect of reducing the pulse, although little or no influence in subduing the violence of the apparently futile uterine efforts. The position of the head continuing unchanged, notwithstanding the continuance of almost intolerable pains, Mr F. considered the application of the forceps unavoidable, more especially as the patient had been delivered by the aid of instruments at her former accouchement. No manual interference, however, was required, as the head, after a time, became disengaged from the pelvis, and the expulsion of the child thereafter rapidly accomplished—the placenta was readily thrown off by the subsequent pains. With

the exception of a severe lancinating pain in the side, during the latter stages of labour, nothing worthy of further remark occurred.

For the two succeeding days the lochia continued natural, the breasts turgid, and the patient in every other respect, apparently progressing towards convalescence. On the third day, however, she experienced a slight rigor, acute frontal headache, loss of appetite, great thirst, and obstinate vomiting, of dark greenish-brown fluid. These, with severe abdominal and lumbar pains, quickness of pulse and respiration, flaccidity of mammæ, disappearance of the lochia, and obstinate constipation, were the chief symptoms, which gradually became more developed, until the fourth day, when slight delirium and other typhoid features appeared. The abdominal pain and distention, which were previously considerable, at length became somewhat suddenly subdued, and all the other symptoms diminished in severity. The bowels, which before were much constipated, now became free, the thirst and vomiting disappeared, and even the appetite seemed to return. This apparent amelioration of symptoms, however, proved, as usual, false signs of improvement; for after her seeming to enjoy several hours of sound sleep, she awoke delirious—a stage of collapse succeeded, and she gradually sank on the evening of the fifth day after delivery. It is unnecessary for me to specify the treatment that was adopted in this case, more particularly, than by stating that it principally consisted in venesection, with fomentations and poultices, followed by blisters to abdomen, castor-oil, and turpentine enemata, and occasional doses of calomel and opium. A post-mortem made on the day following that of her death, sufficiently demonstrated the marks of peritoneal and uterine inflammatory action; and, as the appearances presented by the structures more immediately involved, were carefully noted during the examination, I deem them worthy of being particularly specified in this report.

*Sectio.*—The abdomen was much distended with flatus, an immense quantity of fetid gas escaping when its cavity was laid open. The peritoneal tunic investing the abdominal walls, and enveloping the contained organs, appeared pale, or rather exsanguine, than otherwise, the vascularity being almost entirely confined to the uterine peritoneum and appendages, there being only a few vascular patches observed on different points of the more general peritoneal investment, which, however, besides being somewhat pale, was thickened, peculiarly pulpy and opaque, the subserous tissue, which seemed unusually infiltrated with fluid, permitting it to be very readily peeled off in shreds from the various organs.

The stomach and intestines were also much distended, and contained a large quantity of greenish fluid, but otherwise exhibited no particular abnormal appearance, except the pulpy, easily

lacerated condition of their peritoneal covering just noticed. The substance of the liver seemed particularly gorged and softened, as did that of the spleen; their serous surfaces, like those of the intestines, being also pulpy, and readily peeled off by the nails.

The uterus was large, soft, flabby, and much congested; several patches of lymph appeared on its abdominal surface under the uterine peritoneum, which, with the ligamenta lata, was irregularly vascular; its walls, together with the ovaries and Fallopian tubes, were much softened, and injected with serum and lymph; its inner mucous surface was also extensively softened. A quantity of dark grumous, gelatinous-like fluid occupied its cavity. On washing and scraping off the thick layer of this matter, which covered and adhered to the internal uterine wall, several dark patches of reticulated lymph were distinctly observed. With the exception of a quantity of serum, mixed with pus, contained in the peritoneal uterine pouches, very little effusion was found in the general abdominal cavity.

*Case 2.*—Mrs M'Culloch, ætat. 27, who, like her sister, Mrs Peebles, was a tall well-proportioned woman, and, with the exception of the trifling maladies usually incidental to utero-gestation, also enjoyed excellent health previous to this her first and fatal confinement, was seized with labour-pains on the evening of the 7th October last, while engaged in her household duties, at which time the liquor amnii escaped; the pains thereafter, however, continuing slight and very irregular, caused her to pass an anxious and altogether restless night. An examination on the following morning, discovered the head presenting, with the face towards the pubes, the os uteri rigid, and slightly dilated, the vagina dry and contracted, and the rectum loaded with indurated fæces; these, with quick pulse, general restlessness, pallor and great anxiety of countenance, were the untoward symptoms early presented in this case. The bowels were freely moved by means of castor-oil, and the vulva fomented at intervals. Towards mid-day, the passages became more moist, the os uteri less rigid, and the pains gradually more vigorous, until, about 11 P.M., when the delivery of an asphyxiated child was effected. On attempting to remove the placenta, the cord, which had previously surrounded and tightly constricted the neck of the child, gave way, close to its placental insertion, although little or no traction was used; the introduction of the hand was thus rendered necessary to remove the placenta, which was found to be adherent to the uterus, its detachment and removal were, however, readily enough accomplished; and all seemed to proceed favourably enough until the eighth day after delivery, when slight rigor, accompanied by intense frontal headache supervened, loss of appetite, furred tongue, thirst, hot and dry skin, rapidity of pulse, mental anxiety, and great general restlessness speedily followed. The secretion of milk became almost entirely checked, but the lochial discharge

continued copious, dark, purulent, and extremely fetid. Venesection, calomel, and antimony, were vigorously employed during the stage of febrile excitement, without however effecting any salutary change on the features of the case, which gradually assumed all the other well-known characteristic symptoms of the true childbed fever—intense headache, with the peculiar and anxious expression of countenance, great rapidity of pulse, clammy perspirations, and slight diarrhœa—these quickly ushered in the stage of apparent alleviation of symptoms, which, in this insidious and intractable disease, seems so invariably to precede dissolution.

Despite the full use of calomel and opium, blistering the abdomen, and the employment of other general treatment approved of by Professor Alison, who saw the case, she died late in the evening of the 18th, being the 11th day after delivery, but only the third from the commencement of the more urgent febrile symptoms.

*Case 3.*—Catherine L., ætat. 22, unmarried, of a healthy condition of body, but, from apparent causes, of a troubled and very desponding state of mind, was delivered by, and in the house of, Mrs B., midwife, on the 20th October last, without any thing remarkable occurring during labour, which, from what I could afterwards learn, was, in every respect, natural and easy. For two days she progressed favourably, but on the third day complained of much general uneasiness, with severe headache. The thirst, white and coated tongue, hurried pulse, and the characteristic derangement of the uterine and mammary functions which afterwards supervened, presented a train of symptoms that sufficiently stamped the nature of the case.

This case of puerperal fever having occurred in a locality of the town very distant from that of the preceding, and the cases of erysipelas, which were more immediately under my observation and care, and between which I purpose tracing a connection, I deem it unnecessary to give any farther report of its symptoms and progress, or to detail the treatment adopted by Dr Cornwall, whose case it was, but for whom, in consequence of Dr C.'s indisposition, I was, during its latter stages, requested to attend.

This patient died on the seventh day after delivery.

In the first case, great abdominal enlargement, with considerable pain on pressure over the region of the uterus, formed prominent symptoms; in the second, however, as well as in the third case, I have briefly referred to, these features were by no means so well marked. The typhus-like malignancy, which is often so characteristic of the disease, appearing to mask the inflammatory condition of the abdominal organs during the progress of the destructive symptoms which frequently advance so insidiously as to lull suspicion, until they are beyond remedial control, thus seemingly verifying the opinion entertained by many good authorities on the subject, that this malady, in its more intractable and ma-



lignant forms, essentially consists in a morbid condition of the blood, produced by the introduction of some deleterious agent into the circulation.

My principal object, however, in drawing up the preceding cases being, as I have already stated, the tracing and pointing out the contagious connection and analogy that appeared to exist between them, and the cases of erysipelas, which, at the same time, came under my observation, I deem it unnecessary to dwell on their individual peculiarities, farther than by stating that that untoward symptom, great mental despondency, so frequently recognized as a concomitant feature in fatal cases of childbed fever, existed in all the three cases, but more especially in the third, it being an illegitimate birth, in most cases of which mental depression is well known to exercise its fullest scope and most injurious tendency.

(*To be continued.*)

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*On the Use of Valerianate of Zinc in Hemicrania and Facial Neuralgia.* By JOSEPH BELL, Member of the Faculty of Physicians and Surgeons of Glasgow, and Lecturer on Botany in the Portland Street Medical School, Glasgow.<sup>1</sup>

ONE of our poets has said, with respect to the employment of new terms, that we should

“Not be the first by whom the new is tried,  
Nor yet the last to lay the old aside.”

This may, in general, apply to the use of new remedies. We should neither rashly employ them, nor yet hastily discard them, especially when old ones are found to be ineffectual.

Few have been in the practice of their profession for any length of time, without having experienced the want of success attending the very varied class of medicines which has been used and recommended in the treatment of neuralgic affections. This is not any matter of surprise to those who are aware of the difficulties and obscurity attending investigations into the pathology of the nervous system.

In consequence of having been repeatedly baffled in the treatment of neuralgic affections of the head and face, as some of the cases which I am about to read will illustrate, I had little hesitation in trying the effects of valerianate of zinc—a new remedy introduced to the notice of the profession by some Italian physicians. I was the more readily induced to give it a trial, as I had

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<sup>1</sup> Read at the meeting of the Glasgow Medical Society, January 20, 1845.

frequently found much benefit result from the use of some of the preparations of zinc and valerian in these complaints.

Without further introduction, I will narrate the cases in which I have employed the new combination of these two drugs.

*Case 1.*—Sept. 18, 1845.—J. C., ætat. 42 years, of a dark florid complexion, complains of severe pain over whole of right side of head, and down superior maxillary bone. Pain most severe above right orbit, and is much aggravated at night, when it is intolerable. He can obtain no sleep; P. 86; appetite gone; T. covered with a dense grey fur; Bs. constipated; dejections said to be dark-coloured.

Pain of head commenced about three weeks since. His medical attendant prescribed at first blue pills and Siedlitz powders; then opium and its various preparations; quinine, and various other internal remedies. He has had several blisters applied to nape of neck. About eight days ago, he came under my care; since which he has had alteratives, gentle laxatives, sol. mur. morph., and sulph. bebeerin.—the latter in doses varying from five grains to a scruple every second hour. No improvement has taken place, however, as respects the pain, and very little as regards his general health.

Hab. hydrarg. c. cret. gr. xxiv. Pulv. rhei opt. ḡiiss. Pulv. aromat. gr. xij. M. et divid. in pulver, xij. st. j. 2nd, q. q. nocte. Hab. valerian. zinc. gr. vi. Extr. hyoseyam. nigir. gr. xxiv. M. ft. mass. et divid. in pill. xij. st. j. 8va q. q. h.

18th.—Pain since yesterday much relieved; got more sleep last night than he has done since commencement of attack. T. improved; bs. tardy. Contr. et hab. ol. ricini. ʒi.

23d.—Pain completely gone; T. clean. This gentleman has continued quite free from pain up till this date, and enjoys most excellent health.

*Case 2.*—Sept. 28, 1845.—Miss L., æt. 35 years; a tall lady; dark complexion; countenance pale; complains of severe pain over brow and front of head; general health very indifferent; T. loaded and appetite impaired; pain is much more intense during the afternoon and night than in the morning; Bs. tardy; Cata. reg. but scanty; attack of two weeks' duration, but during many years she has been a victim to similar fits of suffering, which never lasted less than three or four months; she has undergone almost every variety of treatment—antiphlogistics, alteratives, tonics, antispasmodics, local and general bleeding, mercury, iodine, opium, iron, belladonna, quinine, arsenic, asafœtida, &c. &c. have been most extensively used; has had also counter irritants to scalp and nape of neck, but all without benefit.

Hab. pil. mass. hydrarg. gr. ij. Extr. hyoseyam. nig. gr. iv. omn. nocte. Hab. sulph. bebeer. gr. x. 4ta q. q. h. Hab. sol. mur. morph. ʒi. 8va q. q. h. Hab. ol. ricini, ʒi. p. r. n.

Oct. 16.—Has persevered most regularly with her medicines.

The dose of bebeerine has been increased for several days to a scruple every two hours, without any advantage. At first, she thought, that for an hour after each dose, she felt easier, but now she experiences no relief, except a few hours during the morning, when the pain is lulled, as it were, to break out again with aggravated intensity towards evening. Last night, I was called to visit her about eleven o'clock, when I found her almost in a state of distraction; intense pain shooting from centre of brow, along course of sagittal suture to occiput. She was rolling about in bed in the greatest agony, and incoherent; P. 70. From six o'clock in the evening, she had taken two drachms of bebeerine, and two doses of her morphia. I ordered all her medicines to be suspended, and prescribed half a grain of the valerianate of zinc, and two grains of the extract of hyoscyamus nigri. every eight hours.

18th.—Yesterday evening pain returned, but did not become severe. She slept soundly several hours during night, and has no pain this morning; T. cleaner; some appetite.

21st.—Has had no return of pain. General health improved.

Shortly afterwards, this patient removed to the country. She remained free from pain, till about a fortnight ago, when it returned.

She procured a box of the valerianate of zinc pills from town; and in a note to a friend, she states, "that the medicine was equally efficacious in speedily removing her sufferings, as it was on the former occasion."

*Case 3.*—December 11, 1845.—Wm. W., ætat. sixty years. About two o'clock this morning, I was called to visit this patient, a stout muscular man, of temperate habits. He complains of excessive pain above orbits, particularly that of right side, from which it extends up along to summit of head. It occurs in aggravated paroxysms, there being a transient intermission. T. white; appetite impaired. Complaint commenced on the night of the sixth instant, and is always mitigated during the day, but never absent. He applied to me the day after commencement of attack. He had an alterative prescribed; and has had since mild laxatives—quinine, and saccharine carbonate of iron—along with repeated doses of solution of the muriate and acetate of morphia—the latter of which has been applied to small vesications above right orbit and on nape of neck. Yesterday, he had some croton-oil pills, which have operated freely.

Intermit. medicam. et hab. valerian. zinc. gr. vi. Extr. hyoscyami. ʒss. M. ft. mass. et divid. in pil. xij. St. unam, 8va. q. q. h.

12th.—Pain of head better; he thinks pills produce sickness. Contr.

15th.—Has been almost free from pain since 12th, till about three o'clock this morning, when it returned, and continued for five hours, but much less intense than on previous occasions.

Hab. pil. val. zinc. 6ta q. q. h.

17th.—No return of pain. I saw him again on the tenth of this month; and he stated, that he has remained completely free from pain. His general health has gradually improved from the time he commenced using the pills.

*Case 4.*—January 9th 1845.—Mrs H. ætat. thirty years, of dark complexion; ordinary stature; complains of severe pain of right side of brow, extending down along same side of face to chin, and up to occiput. T. much furred; no appetite. Sleeps none at night, in consequence of pain, which becomes aggravated to an insupportable degree when she lies down in bed.

Has slight tonsillitis; P. 90. Pain of head and face of three weeks' duration. Soreness of throat commenced yesterday. She ascribes it to her being obliged to walk about house during the night in consequence of pain.

Has taken several opium pills; and has had a blister applied to side of face. Has taken several purgatives.

Hab. h. s. pulv. Doveri, gr. xv. Hab. valerian. zinc. gr. ss. Extr. hyoscyam. nigri. gr. ij. t. d.

12th.—Pains gone. They subsided the day after she commenced her pills; throat well; T. clean. Appetite returned; P. 78. I have not seen her since.

*Remarks.*—Such then is my experience of the valerianate of zinc in neuralgic affections of the head and face. I respectfully submit, that the success is such as to entitle the remedy to some consideration in the treatment of these diseases. In cases first and second, almost every remedy that has ever been given in similar instances, had been employed without advantage.

In the second case, the lady had consulted almost every medical man of eminence in Scotland. Had used, most perseveringly, the varied host of narcotics, such as henbane, belladonna, opium, stramonium, besides purgatives, alteratives, tonics, anti-periodics, antispasmodics, &c. but without benefit; the only temporary relief she obtained was from large doses of solution of muriate of morphia. Under the use of the valerianate of zinc, her complaint on two occasions, has been speedily removed.

In the treatment of these obstinate and painful affections, I will yield to no one in my anxiety to improve any disorder of the digestive organs that may exist; impairment of the functions of which protract, if not often originate the local pain. Consequently, attention to these derangements cannot be too strongly inculcated. Though no one can be more deeply imbued than the author is, with every feeling of respect for the doctrines of the illustrious Abernethy, regarding the matter under consideration—impressed as these doctrines have been upon my mind by the talented pupil of that great man—I allude to my friend, Dr Hannay of this city—(whose recent death has cast a sad gloom over both the public and the profession in Glasgow)—yet, how-

ever, it must be admitted, that considerable time is often required to improve disordered conditions of the alimentary functions. For my part, I have always found it a task of very great difficulty indeed, to remove these derangements in such neuralgic complaints as I have described. The very pain itself, and the consequent want of sleep, will keep up the disordered condition of the digestive apparatus, in spite of our utmost endeavours. Though these impaired functions may be the *origo mali*, yet the pain and want of sleep, must react injuriously, and thus not only maintain, but even aggravate, the primary affection. Nay, more, I am not very sure but that I have seen many cases in which derangement of the alimentary organs was secondary, and the neuralgia depended upon some other local cause.

We know that indigestion and depraved secretions from the liver and bowels frequently occur without any neuralgic disease being produced—and that even the same individual will at one time have no such result, whilst, at others, he suffers most acutely. There must be something decidedly wrong elsewhere, as well as in the digestive organs, in these instances of excited sensibility of the nervous system. I strongly suspect that there must be in the constitution some peculiarity, either original, acquired, or accidental, which causes derangement of the digestive organs to be attended with these local nervous pains. Upon any other supposition, it is quite impossible to explain many circumstances in the history and progress of a large proportion of cases. I would again repeat my conviction, that, at least, in a number of instances, the severe pain and want of sleep produce the disordered condition of the assimilating organs. In proof of this, I beg to advert merely to the fact, that a want of sleep, and pain occasioned by even mechanical injuries, invariably cause a greater or less amount of derangement of the digestive functions;—and also to the fact, that this disordered condition cannot be improved, until the pain be removed, and sleep procured. Numerous illustrations, having the same import, must strike the mind of every experienced medical man.

The inferences which I wish to be deduced from these remarks are few, but practical.

*1st*, We should not endeavour only to remedy the impaired digestive functions, even where no other very obvious cause for the neuralgic attack exists, but at the same time direct our efforts to remove the pain, and procure sleep.

*2dly*, As the special remedies usually employed to effect the latter objects tend, even in ordinary circumstances, to impair the digestive process, and to deprave the secretions from the liver and the alimentary canal, their use is quite inadmissible in any thing like a rational mode of treatment.

*3dly*, Judging from the recorded experience found in the history of our profession, the white oxide of zinc and valerian, are

entitled to great consideration, as remedies of considerable importance in the treatment of nervous affections, especially in neuralgia of the head and face, or hemicrania. Neither of these drugs have the effect of causing gastric disorder. Both have been acknowledged to possess great influence over the nervous system. In neuralgic disease, Meglins pills<sup>1</sup> have been long celebrated; and my experience of them, especially when combined with the use of valerian, enables me to affirm that their reputation is not unfounded.

From these considerations, as well as from my direct experience of the effects of the new combination of these two drugs, I can speak most favourably of it, and strongly recommend it to your notice as a medicine well calculated both to remove the pain, and to improve the disorder of the digestive organs.

On the Continent, the valerianate of zinc has been employed in various nervous diseases. Dr F. Devay, in a memoir published in the *Gazette Medicale* for June 1844, states that he has used it principally in facial and hemicranial neuralgic affections. In uncomplicated cases, its employment was attended with marked and continued efficacy. He remarks, however, that it had little or no beneficial effect in cases having a rheumatic, syphilitic, or intermittent taint. On the other hand, when the pain was connected with chlorosis, he found the valerianate exceedingly useful after a course of some ferruginous preparation. He also employed it in epilepsy, but with no flattering result. The memoir contains eight cases. Three of hemicrania; three of facial neuralgia; one of intercostal neuralgia; and one of satyriasis. In all these instances, the action of the remedy was most beneficial. Dr Devay administered it in doses of about  $1\frac{1}{2}$  grain, divided into two pills, one of which was taken morning and night, but he thinks that the dose may be much increased.

The Italian physicians give it in doses of  $1\frac{1}{2}$  grain daily.

M. Cerulli de Parme has obtained several cures, by causing the patient to take  $1\frac{1}{2}$  gr. at the moment of the accession of the pain.—(*Rev. Med.* tom. ii. 1844, p. 410.)

I have never given more than  $\frac{1}{2}$  gr. every six hours, and have combined it always with the extract of hyoscyamus, which may possibly have contributed in some degree to effect a cure.

In British practice, so far as I am aware, the valerianate of zinc has been little, if at all employed; hence one reason why I took the liberty of bringing my limited experience of its effects before your notice to-night.

I beg to be most distinctly understood, that I by no means look upon it as a specific—a name which now, fortunately for medical science, is becoming obsolete in our phraseology. I consider,

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<sup>1</sup> These pills are composed of one grain of oxide of zinc, and one of extr. hyoscyam. nigr.

however, that the preparation possesses a property by which the diseased condition is overcome. At the same time, it seems to improve the digestive organs. This is tolerably well illustrated in the cases which I have read. Hence I am induced to view it as having tonic and alterative, as well as anti-neuralgic properties.

It may be said, that in my cases the valerianate had no connection with the relief which took place. I admit that it is quite possible that the patients got better independent of its influence. Still I do not think it probable that such was the case, especially when we consider the circumstances under which the amendment occurred. I think that they were such, as to authorise us to believe that the drug must have had a curative influence, and to entitle us to give it a fair trial in similar cases.

With regard to the physiological effects of the valerianate of zinc, I can say little. The physiological properties of any remedy cannot be very accurately deduced from its therapeutical action. M. Devay states, that in medicinal doses, it produces slight headache, vertigo, and indistinctness of vision. In a case of hysteria, in which I ordered it uncombined, in half grain doses every six hours, the patient complained of the above symptoms, along with nausea, during the time she was using it, but upon its discontinuance, the unpleasant feelings disappeared.

In concluding these few hurried remarks, I have one or two observations to make respecting the sulphate of bebeerine—an article which has lately been introduced to the materia medica, and highly recommended by several most respectable authorities, as very efficacious in periodical, or intermittent, and neuralgic diseases. In two of the preceding cases it was administered most freely, without any obvious benefit. I have used it as freely in other analogous affections, and I am sorry to say that I have been disappointed in the expectations which I had formed of its probable efficacy, from the flattering recommendations to which I have alluded. Perhaps the specimen which I used may have been impure, and hence its failure in my hands.

I may mention, however, that its use seemed to be followed by a cure, in a very severe case of gastralgia. The patient had employed most liberally alteratives, trisnitrate of bismuth alone, and in combination with soda carb., ferri, c. sacch., and columba respectively. He also used hydrocyanic acid freely, without any advantage. I ordered him to take five grains of sulph. bebeerin. every eight hours. He had used it only for a few days, when the pain ceased, and has not returned. Out of a great many instances in which I have prescribed the bebeerine, this is the only one in which I could ascribe to it any decided curative effects.

It seemed, however, to possess in some cases of dyspeptic hypochondriasis, connected with a deposit of oxalate of lime in the

urine, considerable tonic properties. In one case of this nature, in which the sulphate of quinine disagreed with the patient, the bebeerine formed a most admirable substitute.

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## PART II.—REVIEWS.

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*Confessions of an Homœopathist.* Dublin, 1846, pp. 396.

A MEDICAL novel! and yet why not? We have religious novels, temperance novels, political-economy novels, law novels, Young England novels, and why should not Young Physic lay aside his club awhile to play with the lighter weapons which these have not disdained to handle? And truly there is much reason why he should do so. In the novels of each one of those sects whom we have mentioned, we see the mysteries of the craft laid open to public view. The increased and still increasing force of public opinion, renders an appeal to that tribunal almost essential; and in that court there is now, alas, but one dress in which the pleader may appear with any chance of obtaining an audience. For to drop all metaphor,—with the great mass of the public, it is the very lightest form of literature which alone is now regarded; and it has been thought expedient, whether wisely or not it is not for us to determine, to obtain an entrance for solemn and important truths into circles where they would not otherwise have been received, by inculcating them among the ordinary and common place frivolities of a modern novel. Such is the march of intellect of the present day. But this “philosophy in sport made science in earnest” sort of system, has not as yet meddled much with medicine; and therefore we are the more inclined perhaps, to watch narrowly, and censure freely, its first manifestations; and judging from the specimen before us, we cannot augur very favourably as to the chances of its success.

We feel somewhat awkward in this, our first attempt, to review a novel. Medical books not a few, and of various complexions, we have criticised, and the voice of the profession has in general ultimately given its verdict with us. But we know not the approved style, method, and manner of dissecting a novel, and are somewhat puzzled how to commence. As the story struck us as being somewhat tedious, we shall merit the thanks of our readers by sketching the outline for them. The Count Von Eisenberg falls down the shaft of a mine, from which he is fished up by two English travellers, who seem moved to the enterprise by native heroism, and the entreaties of the Count's young and beautiful wife. He is carried to a way-side inn, with broken, mutilated



limbs, and a cracked crown; and the Englishmen, one of whom chances to be a doctor, remain to attend him. What between the Count's weakness, his broken head, and the kindness of his attendants, he resolves to make a clean breast of it, and then and there, in the presence of his wife and the two stranger gentlemen, he details as pretty a tale of roguery and imposition as the genius of one man could ever invent, or that of another put in practice.

The son of a poor peasant, he was sent to school, and there, by all sorts of low tricks, he obtained the favour of his masters, and finally, an exhibition to the university. The lesson of dissimulation early acquired, soon became a habit; meanness and cunning succeeded in the university, as they too often do in the world; and having by lying, hypocrisy, and imposition, obtained the favour of his professors, he became the leader of the students in riot and debauchery. About 145 pages, or one-third of the whole book, are now almost entirely occupied with a detail of college pranks, which might delight the heart of Bransby Cooper, and are related with such evident gusto by the author, that we are inclined to believe he must have revelled, if not in reality, at least in imagination, very recently among the insubordinate students of a German University.

Fully sensible of the rich endowments of cunning and hypocrisy which nature had bestowed upon him, and which he had cultivated with no ordinary zeal and success, our hero seeks to turn them to advantage, by becoming one of the order of Jesuits. But being involved in a duel, he is forced to abandon his intention, and leave the university; and finding in a Diligence, a copy of the Organon of Hahnemann, which the conducteur used for lighting his pipe, he soon perceived the great facilities for deception, which such a system afforded, and at once decided on its practice. He entered as a student of medicine at the University of Munich, and soon obtained a sufficient smattering of that science to enable him to practice Homœopathy, and then sought poor John Bull to reap from him a golden harvest.

Having engaged a servant, a greater scoundrel than himself, he commenced business in Manchester. The most artful and impudent impositions are resorted to to give him a name; they prove successful; patients flock in, and with them wealth. An eccentric gentleman brings a consumptive daughter to be cured; his hopes are encouraged; he pays with liberality, or almost prodigality, and for some time appears a windfall to the quack. At length, however, he meets with an accident, and is attacked with inflammation of the knee-joint. Treated with globules, the disease increases, a surgeon is sent for, and the leg amputated. Soon after his daughter dies. While this is going on, our hero has been paying his addresses to one of his patients, beautiful, rich, and of a high family, and is successful in the object of his suit. But his eccentric patient turns out to be uncle to the lady,

and with his wooden leg at once forbids the banns, and breaks the doctor's head. To most men this would have been sufficient revenge, but the implacable Smith Smithson Smith, becomes a tormentor of no ordinary kind. He drives him from one town in the kingdom to another, forcing him in each to assume a different name; half drowned him in the Mersey; birched him in Paisley; threw him into Loch Katrine, and hooked him out again with his salmon rod and goff; and having cut the hooks out of his flesh, tied him and his servant, like Samson's foxes, tail to tail, and left them to enjoy the solitude of Ellen's Isle. This was the finishing stroke. Our hero fled to the Continent, and married into a noble family; but there his old tormentor appeared again, and in endeavouring to escape from him, he met with the accident, which, as we have before hinted, opened both his head and his heart, and of which he died,—Smith Smithson Smith bathing his temples with vinegar and water the while.

Such is an outline of the story; and low as is the estimate which we have formed of the mental capabilities of those who have become the victims of homœopathy, we should be inclined to form even a worse opinion of their sense than we have done, were we to believe that the book would be successful in opening their eyes to the impositions that are daily practised upon them. It is right, however, to state, that the story is by no means entirely fictitious, as the following extract from the preface explains:—

“Circumstances, of a peculiar nature, made the author acquainted with the history of one of the most successful of the disciples of Hahnemann. Its details were given by a dying man, painfully aware how near he stood to the barrier which intervenes between time and eternity—who no longer wished to deceive others, and whose awakened conscience told him he could no longer deceive himself.

“The author has pondered for some years on the propriety of placing these Confessions before the public; and he does so now, from a feeling that the time demands them, and a conviction that they will prove useful.

“The characters and incidents described, are not the mere creations of fancy, but the grouping together of realities. Obvious reasons have necessitated the employment of fictitious names; the localities, also, both in Germany and Britain, are altered, to avoid the imputation of personality as much as possible.”

*We* are not likely to be suspected of any bias towards homœopathy, and yet we confess, that if the author of this volume intended, as we may infer he did from his preface, that the scoundrel Gruber, soi-disant Count Eisenberg, should stand as the representative of the homœopathic practitioners as a body, we think he has widely overshot his mark. The book, too, fails altogether in proving homœopathy to be an imposition; for the hero was an

impostor long before he ever dreamed of being a homœopathist ; and in whatever profession he had entered, he would have exhibited his inherent disposition. It is true that it does show what admirable facilities for deception homœopathy possesses, and how easily these may be made available by a cunning rogue ; but still this does not prevent the possibility of a man being weak enough to believe homœopathy to be true, and to practise it, being himself as much the victim of deception as his patients. That many of the homœopathic practitioners are dishonest, there can be little doubt ; nay, we can convict them out of their own mouths ; for is it not notorious, that among the most eminent homœopathic practitioners, are to be found those who practise either homœopathically or after the regular method, as best suits their own ends, or the caprice of their patients ; and yet one who should well understand such matters (Dr Black himself), has expressed his unbiassed opinion of them in the following not very complimentary terms :—“ There are a class of practitioners who merit the indignation of every right-minded man ; a class, who viewing medicine only as a trade, a mere barter of pounds, shillings, and pence, act obsequiously as the patient wishes ; at his desire their practice is either homœopathic or allopathic ; such unprincipled procedure admits of no apology.”<sup>1</sup>

If the author of the volume before us thinks that homœopathy is more likely to fall before his pen than that of those who have, according to him, ably combated its doctrines in various medical periodicals, we confess we cannot agree with him. Fiction putting down fiction savours too much of *similia similibus curantur* ; and we would strongly recommend this inexperienced, but not unpromising author, to forget, as soon as possible, the juvenilities of his College career, and betake himself in earnest to the more sober walks of philosophic study.

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*Lectures on Parturition.* By EDWARD MURPHY, A.M., M.D.,  
Professor of Midwifery, &c. &c. University College, London.  
Pp. 263. Taylor and Walton.

OF all the works in this department of medicine that have lately issued from the press, we know not of any, the perusal of which has afforded more pleasure or edification than the one now before us. It would be surprising indeed were it otherwise ; for Professor Murphy has studied his profession in a great school. From personal knowledge, we hesitate not to say, *the first school* in

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<sup>1</sup> A Treatise on the Principles and Practice of Homœopathy. By Francis Black, M.D., p. 163.

Europe for obstetric medicine, viz. the Lying-in Hospital of Dublin.

The lectures are clear, simple, and copious, containing all that a student ought to know, neither drawing out the subject with tedious verbosity, nor cutting it short with meagre abruptness. There are a few inaccuracies, and a few rather odd illustrations, such as comparing the passage round the promontory of the sacrum by the foetal head to the doubling of the Cape of Good Hope, &c. ; but these are the Professor's *επεα πτερόεντα*, and, in that light we excuse them. We trust, however, that when the next edition of the lectures is called for, which we hope will not be long, these excrescences will be lopped off; for, although a simile may be good and strong to impress when spoken, it may be improper and pointless, perhaps absurd, when read.

The 1st and 2d lectures contain nothing new or remarkable. In the 3d lecture there is an excellent account of the uterine muscles; and the manner in which they severally and jointly conduce to the extrusion of the foetus, is thus described:—

“The fibres *on the external surface* form two broad fan-shaped muscular layers, spreading from the round ligaments over the fundus uteri. *On the internal surface*, there are three distinct sets of fibres; two of these surround the Fallopian tubes in a concentric arrangement. The third set pass circularly round the body of the uterus, and the outer fibres of the two former layers gradually pass into and intermix with those of the latter. The mass of fibres lying between the external and the internal layers have no determinate direction, but may be supposed to give increased power to those we have described. Sir C. Bell, in his valuable paper ‘On the Muscularity of the Uterus,’ has mentioned fibres which pass in a ‘vortiginous’ direction from the fundus to the mouth of the uterus. Such, then, is the arrangement of the muscles or muscle of the uterus, as far as it has been demonstrated. Let us now consider their action. *The external muscular layer* slowly contracts for some time before labour has actually commenced, and draws the uterus gradually towards the pelvis. By this means, also, the fundus is maintained in its proper direction, and prevented from inclining too much to either side. The gradual contraction is unaccompanied by pain, and therefore is not taken notice of; but its effect in altering the size of the abdomen, and making it less prominent, has always been observed, and noted as a premonitory sign of labour. These fibres also serve a useful purpose when the dilatation of the os uteri commences: the fundus being thus supported, the fibres on the internal surface contract more efficiently.

“The action of *the internal sets of fibres* requires a more careful examination, inasmuch as different, and, it appears to me, incorrect explanations have been given both of the arrangement of these fibres, and of the manner in which they contract. Be-

sides this, it is necessary for you to have a correct view of uterine action, and the order observed in these contractions, to enable you to notice the deviations from it that occur. We shall therefore consider each separately. *First, The effect produced by the contractions of the different sets of fibres. Secondly, The order in which these contractions take place.*

“ *When the fibres surrounding the Fallopian tubes contract together, the fundus uteri is equally diminished on all sides, and their combined effect, conveyed through the medium of the liquor amnii, is precisely the same on the mouth of the uterus as if the fibres passed down vertically and acted directly upon it. In order to render this intelligible, I shall have to ask your patient attention for a few moments.*

“ Let us suppose a line to pass from the opening of the Fallopian tube of one side of the uterus to the opposite, in such a manner as to represent the direction of the force of the fibres surrounding it. This line would pass obliquely downwards to the opposite side. If, therefore, these fibres alone acted, the fundus on that side would be diminished in its size, and the contents of the uterus pressed toward the lower section of the opposite side, but not against the os uteri. If, further, two such lines passing from the orifice of each Fallopian tube represented the force of each set of these concentric fibres, the intersection of these lines would be the common point where these forces meet, and, to a certain extent, are opposed. The combined force must, therefore, take an intermediate direction equi-distant from both lines, which would be represented by a line passing in the axis of the uterus, and through the os uteri. It follows, therefore, that when the fundus of the uterus contracts equally, the resulting force must be communicated to the os uteri, as perfectly as if the fibres passed vertically from the fundus to the mouth of the uterus.

“ *When the circular fibres of the body and cervix contract, their tendency is to render the uterus more and more cylindrical, according to the degree of their contraction, at the same time that they close in the cervix. Again, if the uterus were emptied of its contents, the simultaneous action of all these different sets of fibres would be, to draw the parietes equally towards the centre of the cavity. But when the uterus is gravid, and makes an effort to expel the foetus, they cannot all contract in this manner.*

“ *The fundal muscles are those which chiefly effect the dilatation of the os uteri and the expulsion of the child, the fibres of the body and the cervix remaining comparatively passive. It has already been explained to you, that their united action is in the direction of the os uteri; but there is still a necessity for a means by which the result of that action should be perfectly conveyed to it. This is accomplished by the fluid inclosed within the amnion, which acts with a distending power upon the os uteri ex-*

actly equal to the combined force of these muscles. The muscular bands, described by Sir C. Bell, must also have the effect of expanding the os uteri by drawing it upwards. The circular fibres of the body and cervix resist the efforts of the fundus to distend them; and the force of their resistance is also communicated to the contained fluid. This force is therefore, as it were, reflected upon the os uteri, so that the whole uterus might be said to act as one muscle in dilating the mouth."—Pp. 45—48.

The Professor next proceeds to point out the use of the liquor amnii, and to combat the statement made by Wigand, that true uterine contraction never commences in the fundus, but always in the os uteri.

The 5th and 6th chapters well deserve an especial perusal from those about to enter the profession, as in them they are initiated into those "*certaines petites politesses et attentions*," which serve to make the practitioner agreeable to the patient, and are thus the first step towards gaining her confidence.

The 7th chapter treats of the causes which render labour tedious. In cases of obliquity of the uterus, the Professor is opposed to the incorrect practice, that is sometimes advised, viz., "that the forefinger be passed within the opening, and the os uteri drawn towards the centre of the pelvis. How is it possible to alter the pendulous fundus by such means? But if, in order to correct the position of the fundus, it is also necessary that it be raised by the opposite hand, the introduction of the finger is not required, for then it will correct itself."—P. 107.

A good illustration of the influence exerted on labour, by mental despondency and other affections, is given in the following cases:—

"A poor emaciated woman entered the Dublin Lying-in Hospital, January 1834, to be delivered of her eighth child. 'Sharp misery had worn her to the bones;' her pulse was feeble, the action of the uterus weak: notwithstanding this, she was delivered in an hour after admission; no hemorrhage took place, and the placenta was separated without any difficulty; but her delivery was followed by the most alarming depression, which required the utmost care and attention to prevent her sinking altogether. Fortunately, strong beef-tea and other nutritious diet had been given to her from the time of admission, so that, with the addition of stimulants, and maintaining the temperature of the surface, she gradually recovered. This was a case where poverty and starvation produced their usual effects, and consequently one more under the control of treatment than those melancholy instances, in which some cause operating on the mind alone produces some extreme nervous shock which we cannot relieve, because we cannot 'minister unto a mind diseased.' An instance of this kind occurred in the same institution the following year, January 1835. A young woman was admitted in labour of her first child. She

was evidently above the class of persons usually admitted into that establishment. She seemed rather to shun observation; and there were no symptoms attending labour that required interference. It proceeded to its conclusion without any interruption, and terminated within ten hours from its commencement. The pains were feeble, but they were sufficiently strong for the purpose: the patient herself appeared also weak. She was delivered of a girl; and in about half an hour after, the placenta was expelled; but the pulse instantly sunk, syncope followed, and every means that could be used failed to prevent dissolution, although the discharge from the uterus was not increased, nor was there the least evidence of hemorrhage, either externally or internally.

“ An inspection was made twelve hours after death, and no cause could be discovered to explain an event so unlooked for; her history, however, may do so. She had been one of a respectable family, delicately reared, and educated in the strictest moral principles. She had been seduced, betrayed, and deserted; and, to complete her miseries, had to endure her hour of trial in the reception-ward of the Dublin Lying-in Hospital. I shall only mention another instance of this kind, which will, perhaps, more distinctly illustrate the effect of extreme nervous shock.

“ In the beginning of the year 1834, a poor woman had walked some distance to the Dublin Lying-in Hospital, and when near it, was suddenly seized with the pains of labour. She was delivered in the street, and with much difficulty brought into the house before the placenta separated. It came away, however, without difficulty; and the trifling hemorrhage that followed was easily arrested. Her alarm was very great, but after some time it subsided: she slept, and nothing further occurred out of the usual course until the following day. On that morning a patient was brought into the same ward to be delivered, who was extremely boisterous: she occupied the next bed to this woman, who lay so quietly that she seemed to pay little attention to the disturbance. In the course of the day, however, she complained of being overcome by her cries. She felt faint, as if she were sinking; she had slight pains in the epigastrium, some sickness of stomach, pulse rather rapid, compressible, and soft. The woman who caused this was fortunately delivered, and thus all further annoyance was removed; but this patient did not recover from the effect that it seemed to produce on her. Stimulants were given to her, the extremities and surface kept warm, and the most perfect quietness observed in the ward, but all to no purpose. In the evening she was seized with syncope, so alarming as to excite the greatest apprehension for her safety: the extremities became cold, her motions passed involuntary, and she died in about three hours. The uterus was perfectly contracted; there was not the slightest appearance of hemorrhage from the vagina, nor any symptom present to explain the cause of dissolution.

“ A very careful inspection was made after death : all the viscera of the abdomen were quite healthy ; the uterus firm, and contracted to its usual size. There was some old adhesions in the lungs ; the heart was small, and contained very little blood on the right side ; the vessels were all sound ; and the only alteration in the brain was an increased quantity of serum in the ventricles and at the base. No other explanation therefore was left, but the probable one, that she sunk in consequence of extreme nervous shock. Her own sudden delivery produced a strong impression on her mind, in the first instance. This was again excited and increased by the violence of the patient alluded to, and hence the effect. It is probable that she would have recovered from the first shock, had it not been again renewed by this accident.”— Pp. 109—112.

Rigidity of the os uteri, and its treatment by incision, the Professor speaks of in the following terms :—

“ The last kind of rigidity to which I shall have to allude is that in which *the os uteri is like cartilage*, and will not yield to the most powerful and constant action of the uterus ; the membranes are usually broken and the waters discharged early in this stage, and therefore the uterine action is increased to its full extent. Inflammation is the almost certain consequence of the struggle that ensues ; you have, therefore, complications of the worst description to contend against. The issue of a case of this kind is the spasmodic and irregular contraction of the uterus about the body of the child, and frequently its death, before the uterus is opened to any extent. It therefore becomes a case for delivery by perforation. But there are some instances in which the dilatation is brought to a successful termination by extreme care in the management of the case. As a preliminary treatment, the frequent use of the warm bath, although an exception to ordinary rules, is found to be very beneficial. When labour begins, warm emollient enemata should be given from time to time, and the patient placed at once under the influence of tartarized antimony. General depletion may be employed if the patient be robust ; if otherwise, local depletion is preferable, and it is indicated as soon as the least tenderness of the os uteri is observed.

“ If these means fail, it becomes a question whether we should wait for the death of the child, in order to remove it by the crotchet, or incise the unyielding cervix. The former practice involves a sacrifice of life, but generally secures the mother from the injurious effects which may follow. The latter may be the means of preserving the child, but if the incision lead to a laceration of the uterus, the mother is at once placed in the most imminent danger of her life. The fear of such a consequence, it appears to me, has prevented any attempt being made thus to cut through this Gordian knot of difficult labour in its first stage, but



whether this, like other operations, is only surrounded by chimeras of the imagination, which some bold spirit will dissipate, remains yet to be proved. Incision has been performed without accident; the same may happen again, and I confess, in a case such as I have described to you, I should be more disposed to adopt the shorter course, in the hope of saving the child, than to wait until its death enabled me to remove it. This, however, is but an individual opinion, and needs support.”—Pp. 118, 119.

The remaining lectures contain nothing new, or particularly worthy of remark.

The volume is concluded by the pith of the lecturer, summed up in a series of admirable aphorisms.

As a specimen of the aphorisms, we extract a few taken at random:—

“XVI. The ‘show’ is a slight sanguineous discharge, arising from the ruptured vessels of the mouth of the uterus, when it first dilates. As soon as this takes place, labour properly begins. The patient has now entered upon the first stage, p. 78.

“XVII. When called upon to attend a patient, *the summons should be instantly responded to*. Your introduction should not be abrupt; and if called to a patient for the first time, still greater caution should be exercised, pp. 79, 80.

“XVIII. During the early part of the first stage, it is not necessary nor advisable to remain in the room with your patient. It will be sufficient to remain in an adjoining room, until there is occasion to make a vaginal examination, p. 81.

“XIX. When the pains have continued for some time regular and frequent, an examination may then be made. The patient, loosely-attired in her night-dress, should lie on the bed on her left side, as near to the edge as possible, having the knees drawn up towards the abdomen. You should then wait until the pain returns, and when it is about to cease, pass the forefinger of the right hand, anointed with cold cream, or any unctuous substance, within the vagina. Examine whether it be rigid or relaxed, dry or moist. Examine the rectum through the posterior wall, and fundus of the bladder through the anterior. Introduce the middle finger, in order to examine the os uteri. Pass both fingers along the sacral side of the vagina, and when you cannot advance them further, direct them forward toward the pubis, you then feel what seems to be the irregular folds of a flaccid bag projecting into the vagina; examining this with caution, the edge of the os uteri may be traced; if the finger be passed within it, you will sometimes feel the head; you may often fail, and yet the head present. The dilatability of the os uteri, its direction, and the degree to which it is opened, should be ascertained, pp. 82, 83.

“XX. If the membranes are ruptured early, an examination should always be made, lest the funis or the shoulder present.

Before the fingers are withdrawn from the neighbourhood of the os uteri, examine the distance of the sacrum, and as they are being withdrawn, ascertain if possible the space in the pelvic cavity, p. 83.

“XXI. In order to make a sufficiently careful examination, a little time may be required, during which the pains may return; you should then cease until they subside, noting only those points which have been mentioned; but make it a rule not to withdraw from your examination, until you have perfectly satisfied yourself as to the character of the labour. Having accomplished this, a second examination during this stage, unless it be prolonged, would be unnecessary, p. 83.

“XXII. The first stage of labour is not always completed before the second begins. The grinding pains merge into the bearing pains so gradually as to require some attention to observe the change. When the bearing pain comes on, the patient is obliged to grasp firmly whatever is within her reach, she retains her breath more than before, and sometimes makes an involuntary effort to bear down. Her voice also alters, its tone is more subdued, and she seems more patient of her sufferings than before. Sometimes the complete dilatation of the os uteri is marked by constitutional symptoms; there may be a slight rigor or vomiting, perhaps a strong inclination to go to stool, p. 87.

“XXIII. The patient must now remain in bed, which should be properly prepared for her reception. A skin of Morocco leather, or a broad piece of India-rubber cloth, must be placed next the bed, to protect it from being stained, and a blanket folded very wide, add enclosed in a soiled sheet, placed underneath the hip of the patient as she lies upon her left side. They should be so fastened together, that the whole may be removed at once, p. 87.—Pp. 239—241.

These aphorisms are admirable. To students we would say,—“read them by day and study them by night.” In conclusion, we consider the work as one admirably adapted, as far as it goes, for students. It is thoroughly practical. They will not find themselves perplexed in the mazes of theoretical disquisition; but it is so lucidly arranged, and so clearly written, that they will be able, at a moment's notice, to find sound advice how to act on any emergency that may occur in their practice. We are much pleased, too, with the forbearance and gentlemanly style in which the professor speaks of those of his brethren with whom he disagrees; for monographs are now-a-days generally written with one of two objects, viz. either to serve as an advertisement, or as a vehicle for abuse; but Professor Murphy is not of those who would exclaim with one of old, “My desire is, that mine adversary had written a book.”

## PART III.—PERISCOPE.

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### PHYSIOLOGY.

*On the Effects of Food on the Blood.* By DR BUCHANAN.

Dr Buchanan has drawn the following conclusions on the state of the blood after taking food :—

1. The serum of the blood of a healthy man fasting, is perfectly transparent, and of a yellowish or slightly greenish tint.

2. A heterogenous meal, such as that usually set on the tables of the rich, renders the serum white.

3. The whiteness may commence as early as half-an-hour after eating, and may continue ten or twelve, and sometimes as long as eighteen hours, according to the kind and quality of the food, and the state of the functions of primary and secondary digestion.

4. *Starch* and *sugar*, probably all vegetable substances destitute of oil, give no whiteness to the serum of the blood.

5. *Fibrin*, *albumen*, and *casein*, and probably *protein-compounds*, in all their forms, if destitute of oil, give no whiteness.

6. Oils combined, whether naturally or artificially, with protein-compounds, or with starch, render the serum of the blood white ; probably, therefore, oils produce that effect in whatever way taken.

7. Gelatin seems to render the serum of the blood white ; this, however, cannot be considered as certainly established, as there may have been some fat in the beef-tea which was taken along with the calf-foot jelly in both experiments on which the above conclusion rests.

8. The coagulum of the blood very frequently exhibits, after taking food, a crust of pellucid fibrin, or of pellucid fibrin dotted with more opaque particles, and with little of the contraction technically named “cupping.”

9. The appearances of the coagulum just mentioned are much more common after azotized than after non-azotized food.

These conclusions relating to the visible characters of the blood may be considered, with the single exception above mentioned, as well established. The conclusions which follow relate chiefly to the chemical properties of the blood, and are not worthy of the same reliance ; but the evidence on which they rest has been laid before the reader, and he must judge of them for himself.

1. The substance defined above under the name of Pabulin,<sup>1</sup> is most abundant in the blood a few hours after taking food, sooner or later, according to the rapidity of digestion.

2. It is less abundant as the time when the food has been taken is more remote, and is small in quantity after a fast of twenty-four hours.

3. It is much more abundant after azotized, than after non-azotized food.

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<sup>1</sup> A white substance obtained by precipitation either from limpid or opaque serum, on dissolving in it common salt to saturation. Neither phosphate of soda nor bicarbonate of soda threw down this body from serum.

4. It varies in quality, floating or subsiding, according to the kind of food taken.

5. It is probably analogous in nature to the white substance which gives colour to the serum of the blood.

6. The difference between these two forms of this substance probably is, that it is sometimes combined with an alkaline, or earthy salt (chloride of sodium, sulphate of soda, &c.), and sometimes with an oily body (stearate of glycerine, &c.) In the former case it seems to dissolve completely in the blood, while in the latter it is only partially dissolved, and renders the serum opaque.

7. The azotized principles of the food are probably made to combine, in the digestive tube, with the alkaline, earthy, and oily salts mentioned above; and thus become capable of being absorbed into the blood.

8. The alkaline and earthy compounds are probably absorbed directly by the blood-vessels, while it seems to be well ascertained that the oily compounds are absorbed through the lacteals.—*Medical Gazette*.



## SURGERY.

### *Extirpation of both Superior Maxillary Bones.*

Two cases of this operation have been placed on record—one by Royers; and a second by Mr Liston (*Lancet*, Nov. 1836); a third is given by Professor Heyfelder, in Walther and Ammon's *Journal für Chirurgie*, t. iii. f. 4. p. 633. The following account of the latter case is given in the *Archives Générales* of last November:—

“ A man of twenty-three years of age was affected with a tumour, which occupied the palatine arch, and extended to the two superior maxillary bones. The nose was raised and flattened, the velum palati pushed against the tongue. The face was edematous and disfigured, the respiration impeded, the voice almost obliterated, sleep disturbed, the teeth loose, the tumour was hard and devoid of sensation. The patient, however, did not present the characters of cancerous diathesis. It was evident that the only chance of safety for this patient remained in the complete removal of the two superior maxillary bones. This operation was performed on the 23d of July 1844, in the following manner:—The patient being firmly seated in a chair, and the head supported on the breast of an assistant, the operator made two incisions, which, commencing at the outer angles of the eyes, terminated in the commissure of the lips: in this manner a quadrangular flap was found, which was dissected and turned back on the forehead: a chain-saw (of Jeffroy) was then passed into the left spheno-maxillary fissure, and the maxillary bone detached along with the os malaë; the same proceeding was followed on the right side, and finally, the maxillary bones were separated from the frontal, unguis, and ethmoid bones, all by means of the chain-saw. The vomer and the other points of attachment were separated by scissors; it only now remained to remove this osseous mass, which was easily effected by slight pressure. The operation lasted three quarters of an hour; the patient lost little blood, but fainted three times, which interrupted the operation for a few minutes. The flap was replaced and attached to the neighbouring parts by twenty-seven points of suture—slight fever supervened; four days afterwards, cicatrization was complete, and the patient swallowed with facility. On the 25th of August he was dismissed perfectly cured. The deformity was not great. In the median line of the palatine arch, a fissure about fifteen lines in length was seen; the uvula and velum palati occupied their normal position; the patient had free power of swallowing, and spoke so as to make himself easily understood.

*Restoration to a straight position of a knee-joint ankylosed at a right angle, by the excision of a wedge-shaped portion of bone.*

This case is reported in the American Journal of the Medical Sciences by Dr Buck, one of the surgeons to the New York Hospital. The patient was a farmer, of twenty-two years of age, of robust constitution, whose right knee-joint was ankylosed at a right angle, from the effects of a wound inflicted seven years previously with an axe. He enjoyed excellent health, and being very desirous to obtain the use of his limb, Dr B. was induced to perform the above-mentioned "operation de complaisance." After making the requisite incisions, "with the amputating saw, a section of the tibia was made at three-fourths of an inch below the joint anteriorly, and directed with a slight obliquity upwards, so as to terminate at the margin of the articular surface posteriorly. Two-thirds of this section was accomplished with the amputating saw. The second section was then commenced through the upper part of the patella, parallel with the first, and on a plane forming an angle with it, less than a right angle, and continued to about the same extent as in the first section with the same saw. The remainder of the section through the tibia, as well as through the condyles, was completed with a metacarpal saw and chisels. The included wedge-shaped portion of bone being removed, it was found the section had not been carried far enough backwards, the posterior portion of the condyles still remaining consolidated with the tibia. To include this, a new section was undertaken, commencing upon the cut surface of the femur, three-fourths of an inch anterior to the angle at which the sections already made, met, and directed backwards and upwards on a plane more oblique in reference to the axis of the femur. This new section being removed, the remaining points of connection were ruptured by cautiously flexing the leg on the thigh, after which the irregular prominences were pared away with the bone forceps."

The operation and subsequent recovery were tedious and extremely painful, but owing to the iron constitution of the patient, and the great care bestowed on him by his medical attendants, he was enabled, in the beginning of the following year, about three months after the performance of the operation, to leave his bed, and shortly afterwards to support himself on crutches.

Six months after the performance of the operation, he returned home much pleased with the improved condition of the limb. From long disease, the limb had been atrophied, and consequently, when brought to the straight position, was found to be five inches shorter than its fellow. The difference in length, however, was compensated for by a stirrup-shaped frame, secured to the sole of his foot by means of an iron plate. It should be mentioned, that a few days previously to this operation, the tendons of the flexor muscles were divided by subcutaneous incision.

We cannot accede to the propriety of this operation. It is one, which not only in the performance, but for a long subsequent period, entails extreme suffering and danger of life to the patient, and, in the end, the limb is probably not so useful as an artificial one would have been. In such cases, we should be averse to any interference, and, if strongly urged by the patient, we would not hesitate to recommend amputation in preference to the operation above described.

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*Gunshot Wound.—Secondary hemorrhage.—Ligature of both Carotids at an interval of four and a half days.—Recovery.*

In the New York Journal of Medicine, of September 1845, a case is reported by Dr John Ellis, of Grand Rapids, Michigan, of a man of twenty-one years of age, who was accidentally shot with a rifle, the bullet entering "near the centre, and immediately above the spine of the scapula of the left side, passing out, after making a flesh wound of about two inches and a half, towards his neck, and, after about the same space, it

entered his neck over the centre and posterior edge of the sterno-mastoid muscle, passing up through the centre of his tongue, and out of it to the right of the mesian line, struck the lateral incisor, cuspidatus, and bicuspidatus of the right side, knocked them out, and the alveolar process, external to them; passed then through the upper lip, leaving a ragged opening through it."

The edges of the wound in the lip were brought together by adhesive plaster, and the other wounds dressed with cold applications. The patient progressed favourably, being fed by means of a flexible catheter passed into the œsophagus, and on the fourth day after the accident, this was dispensed with, the patient having partially regained the power of swallowing.

On the night of the seventh day, after the occurrence of the injury, hemorrhage took place from the wound of the tongue, which was arrested by pressure on the left carotid artery. The bleeding, however, returned on the following day; and as pressure now caused great pain to the patient, a ligature was applied by Dr E. to the left common carotid artery, "an operation attended with a good deal of difficulty, owing to the swollen state of the parts, the necessity of keeping up pressure, the bad position of the parts owing to the necessity of keeping the mouth in a certain position to prevent his being strangled by the blood, and the necessity of operating by candle-light."

The patient now went on well till the eleventh day, when he had a return of the hemorrhage, which was repressed by pressure on the right carotid, and the two orifices of the wound. The bleeding, however, returned the next day, and several times during the night; and four and a half days after the first operation, Dr E. placed a ligature on the right common carotid. No disagreeable effects followed the tightening of the ligature, the only perceptible change being a slight paleness of the face, and a cessation of pulsation in both temporal arteries, and of the hemorrhage. Immediately after the operation, the pulse increased in frequency, but there was no difficulty of breathing for twenty-four hours, when he suffered from a hacking cough and impeded respiration, with pain in the chest and heaviness. This was relieved by venesection and cupping, and the administration of tincture of aconite and belladonna. No further untoward symptoms appeared. The ligature from the left carotid came away on the 17th day, and that from the right on the 14th from its application. The wound on the left side continued to discharge for several weeks, when the portion of the artery between the ligature and wound sloughed, and came away in three pieces at different times. The young man now enjoys comfortable health, and is attending to business. No perceptible pulsation can be felt in either temporal artery.

[This is by no means the first case in which ligature of both carotids has been followed by a successful result, but we believe that it is the nearest approximation on record to the simultaneous obliteration by ligature of both carotids, in which a fatal issue has not ensued; and as such we congratulate the operator on the success of the case. We cannot help thinking, however, that ligature of the lingual arteries might, in this instance, have proved sufficient to arrest the bleeding. Mr Liston tied both lingual arteries in a case of erectile tumour of the tongue, with partial success. The present case, however, was much more favourable for the performance of the operation, as the obliteration of the lingual branches would probably have been followed by coagulation of the blood in the torn extremities of the vessels, and the rapid cicatrization of the wound, which usually follows operations performed in similar circumstances. The operation is one of no great difficulty, and is evidently attended by very slight risk to the patient. In a case, such as the present, should it have failed in arresting the hemorrhage, recourse might then be had to the operations performed by Dr Ellis, and with no less favourable prognosis than before the performance of the minor operations.]

## THERAPEUTICS AND DIETETICS.

*Note on the Absorption of Emetic Tartar and the Elimination of Antimony by the Urine.* By MM. MILLON AND LAVERAN.

At the sitting on the 12th August 1844, we had the honour of drawing the attention of the Academy to several experiments on the absorption of medicaments, and their elimination by the urine. Since our first labours, we have continued our observations in the hopes of discovering some useful indications, when we should have connected by degrees, as far as medical observation and chemical analysis would permit, the physiological circumstances of their absorption, and the time and duration of their elimination by the urine.

We shall shortly communicate the results we have obtained, by applying this method to the exhibition of emetic tartar. On the present occasion we shall separate from our complete work a particular fact, which has been exhibited in connection between the animal organism, and this medicament. This fact has particular interest in regard to every important point in toxicological researches.

In a series of numerous observations, when our patients had taken emetic tartar once, or twice at the furthest, in the usual dose of one decigramme, which sometimes was raised in particular cases to three decigrammes, we noticed, first, that the antimony was constantly found in the urine. The elimination of the metal was, in many cases slow, and we had, therefore, to follow its passage in the urine, not only for some days after it had been taken into the stomach, but some days after it had ceased to show itself in the urine. We have thus seen the antimony re-appear, following a true intermittent state in its elimination, and remaining in the animal economy for a time beyond all previous calculation.

The cure of the patients, and their leaving the hospital, were opposed to our giving the absolute time during which antimony instals and fixes itself in our organs. Nevertheless, in the case of two patients, we were enabled to find it twenty-four days after it had been administered. One of these patients, who died from a phthisis of long standing, retained metallic antimony in his body, which was proved to exist in his liver, when submitted to chemical analysis. We have also extracted from our book of experiments, a case in which antimony has been recognised in the urine at the expiration of twenty days; two other cases after nineteen days; three after sixteen; and seventeen after eighteen days.

Desirous to facilitate the researches these first facts may give rise to, we decided on pointing out, in continuation, our mode of proceeding to prove the presence of antimony. We added ten cubic centimetres of pure and smoking hydrochloric acid to one decilitre of urine; we mixed the two liquids together with a little piece of well-cleaned tin, which remained in the acid urine. The tin becomes black at the end of a few hours, if the antimony abounds; but it is necessary to wait three or four days when the quantity of antimony is small. An ordinary temperature is sufficient, but the deposit is sensibly quicker on warm days. You must plunge a fresh piece of tin into each new quantity of urine, for fear of seeing the antimony arising from a previous precipitation re-appear, notwithstanding the cleaning and scraping of the tin.

Before we leave the fact of permanence, we must add that the periods of intermission which are observable in the elimination of antimony, are longer in proportion to the length of time that has elapsed since it was administered. The interval, which in the beginning never exceeds two or three days, lasts from six to seven, when the time of taking the antimony into the stomach dates eight or ten days back, and the time for the antimony's remaining is sensibly prolonged when the dose has been repeated twice.

It was under the latter circumstance we were able to detect the presence of the metal after four and twenty days. What would be the limits, if the organs had received arsenic, which, as all toxicologists acknowledge, is eliminated more slowly than antimony? When, instead of a weak dose repeated twice at the most, the quantity of the medicament, or poison, shall have been great, and the exhibition of it reiterated.

The fact of intermittence attracted all our attention, and we are not without some hopes of being able to establish tolerably extended relations between this peculiar progress of the elimination of a metal, proved by chemical analysis, and the completely parallel intermittent progress, of many phenomena, that frequently occur in pathology, and still are very obscure. But it will be by producing and revising all the facts which attach themselves to the passage and elimination of antimony in the animal economy, that we shall have the right to raise this discussion.—“*Comptes Rendus.*”

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*Substitutes for Potatoes as Food.*

We have been requested by several correspondents to state what kinds of food may be used instead of potatoes. In order that an efficient substitute be provided for any kind of food in general use, it is necessary that the nature of foods generally be understood. Chemical and physiological science have succeeded in pointing out the fact that there are two great classes of secretions elaborated by the vegetable kingdom that are essential to the food of man and of all other animals. The one class of these secretions contains carbon as a distinguishing ingredient, and may be called carbonaceous; the other, in addition to carbon, hydrogen, and oxygen, contains nitrogen, and is called nitrogenous or azotized.

The first class is taken into the stomach as food, and being carried into the blood, meets there with oxygen gas, unites with it, forms carbonic acid gas, and, during this process, gives out heat. This is the source of animal heat. Unless this heat is developed in due quantities, the animal perishes.

These secretions and their composition are as follows:—

|                 | Carbon. | Hydrogen. | Oxygen. |
|-----------------|---------|-----------|---------|
| Starch.....     | 12      | 10        | 10      |
| Sugar .....     | 12      | 9         | 9       |
| Oil of Fat..... | 11      | 14        | 1       |

These substances enter largely into the food of the whole animal kingdom. Starch is contained in the seeds of most plants, as of the wheat, barley, maize, rice, &c., and in the various other parts of plants used as food by man. It can easily be separated from plants, and is done so for use as food, in the form of tapioca, arrow-root, potato-starch, wheat-starch, sago, &c. Sugar is also separated from the sap and fruits of plants, in which it is so generally contained. Oil is secreted by, and separated from, a number of plants, as the olive, almond, &c., and is also formed from starch and sugar by the animal, and deposited in its body in the form of fat.

The nitrogenous secretions are found not only in plants but in animals. The fact is, they are simply conveyed from the plant to the animal in its food, without undergoing any change. The nitrogenous secretions form the fabric of the body. Nerves, muscles, blood, &c. are principally composed of them. Their object in food is not the keeping up of animal heat, but the nourishment, the building up of the body. It is only as food contains these secretions that it is nutritious, that it can fulfil the demand for supply by the continual waste of the body in the actions of life. These secretions, though called by different names, as fibrine, albumen, and caseine, and varying somewhat in their physical properties, are modifications of one substance, protein. Protein



is composed of 48 parts carbon, 36 hydrogen, 14 oxygen, 6 nitrogen. The other substances are easily convertible, one into the other, and only vary in possessing different proportions of sulphur and phosphorus, in addition to the elements of protein.

In all the food man eats, he requires that it should possess, in one form or another, these two classes of secretions. The carbonaceous secretions are constantly needed in all food, to keep up the heat of the body; the nitrogenous for building up its fabric. The quantity of the latter required depends on the waste going on in the system, and when this is great, as in severe bodily exertion of any kind, the demand for them will be the greatest. As an average, it has been stated that man requires 80 per cent. of carbonaceous matters, and 20 per cent. nitrogenous. This is about the proportion of such secretions found in wheat flour, and it is undoubtedly this relation of the two classes of alimentary matters that render it the staple food of man in so large a proportion of Europe. Of other things eaten as food by man and animals, the following table, from Dr Playfair, gives the relative quantities of carbonaceous and nitrogenous matters:—

100 parts contain—

|               | Water. | Nitrogenous Matter. | Carbonaceous Matter. | Ashes. |
|---------------|--------|---------------------|----------------------|--------|
| Peas.....     | 16     | 29                  | 52                   | 3      |
| Beans.....    | 14     | 31                  | 52                   | 3      |
| Lentils.....  | 16     | 33                  | 48                   | 3      |
| Oats.....     | 18     | 11                  | 68                   | 3      |
| Barley.....   | 16     | 14                  | 69                   | 2      |
| Potatoes..... | 72     | 2                   | 25                   | 1      |
| Turnips.....  | 89     | 1                   | 9                    | 1      |

It will be seen from this list how low in the scale of nourishing and respiratory elements the potato stands. It does not contain more than a fifth of the nutritive matter of oats, a tenth of wheat, and a fifteenth of peas, whilst its carbonaceous or respiratory elements are not more than one-half of those seeds. It will be found, then, that although potatoes are cheap, yet in as far as they serve the purpose of food, they are really as dear as any other article on the list. If potatoes are a penny a pound, and bread twopence halfpenny, which is about the price they are in London just now, bread containing 10 times the quantity of nitrogenous matter, and twice the quantity of carbonaceous matter, is the cheaper article of diet. Bread, then, under such circumstances, may be successfully substituted for potatoes. But there are other articles on this list cheaper than wheat and its flour. Peas may be obtained at 6s. a bushel, half as cheap as wheat, and contain 15 times the quantity of nutritious matter found in potatoes. A pound of peas at 1d., and a pound of tapioca at 4d., would contain (together) as much alimentary matter as 15 lbs. of potatoes.

The flesh of animals is composed chiefly of protein (fibrine), and is consequently more nutritious than vegetable food. It needs, however, carbonaceous matter with it, and this is the reason that potatoes, and other vegetables containing starch, are so frequently eaten with it. The tables in the Athenæum, in the review of an absurd book, recommending a vegetable diet, referred to by "Veritas," in the Gardeners' Chronicle of November 22, are not now to be relied on, as they contain no distinction between carbonaceous and nitrogenous principles, and are in many points evidently incorrect. With regard to the use of blood as food, there can be no doubt of its being available for this purpose. It contains about 10 per cent. of protein, which, by proper cooking, may be made as available to the system as any other kind of food.

In the above table there are one or two substances omitted, which might be used as food.—Maize has a composition closely resembling oats and barley. It contains more oil than either; and thus, in proportion to its protein, more carbonaceous or combustible matter than either of those grains. It is the food of a large class of the community in America, although they prefer feeding pigs on it, and thus obtaining its protein and oil second-hand, in the form of pork. It may be obtained in London at about two-thirds of the price of wheat. Rice is another grain used as food. It contains only two per cent. of protein, and in this respect is not more nutritious than the potato itself. It could only be the food of an indolent people, unless it was eaten in the quantities that potatoes are in Ireland. It would, in this way, be a very expensive substitute for the potato.

There is a class of foods which are not often eaten in this country on account of their presumed indigestibility, which, however, when cooked properly, are not exposed to this objection, viz., nuts which might be eaten. All the forms of nuts, as the walnut, chesnut, cocoa-nut, &c., contain large quantities of oil, and also starch and protein. On account of their price, there is but one of these which could be used extensively in this country, and that is the cocoa-nut. This nut is the entire support of the inhabitants of many countries where it grows. It may be purchased in Ceylon at the rate 12s. per 1000. The cost of carriage could not be much, and they might, therefore, become a cheap article of diet. The average amount of meat in the nut is about ten ounces; but we have no accurate analysis of its composition, so as to be able to compare it with potatoes or other foods. We have recently heard of a gentleman in England, who has lived on these nuts for a twelvemonth, and who finds himself in stronger and better health than ever he was in his life. This proves that such things might be eaten with safety, was there need.

Amongst the carbonaceous and nitrogenous substances used as food, there are two, gum and gelatine, which resemble the others in composition, the first belonging to the carbonaceous, and the last to the nitrogenous class, but which either do not enter the blood at all, or when they do, neither serve to keep up the animal heat, nor to build up the fabric of the body; gummy and gelatinous substances, therefore, cannot become substitutes for the other forms of carbonaceous and nitrogenous matter. Gelatine is found abundantly in the growing parts of animals, in the skin, in the bones, and cartilages; and these parts of animals are used for making soups, jellies, &c. It should, however, be remembered, that although gelatine contains nitrogen, it does not contain protein, and it is questionable as to whether it can in any way be used as a nutritious agent. The experiments of the French Commission satisfactorily proved this. Dr Buckland is therefore wrong when he states that bread made with powdered bones, which contain gelatine, is more nutritious than before; nor is bone-broth so nutritious as it has been sometimes regarded.—Agricultural Gazette.

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## PATHOLOGY AND PRACTICE OF PHYSIC.

### *Combination of Cerebral and Cardiac Disease.*

Dr James F. Duncan presented, at a meeting of the Pathological Society, the recent specimens of two cases of heart disease, as also drawings illustrative of one of them. They were both examples of contraction of the left auriculo-ventricular opening, which, in one of the cases, had advanced to a very great degree; but the remarkable circumstance connected with their history was the great dissimilarity of their relative symptoms during life, so much so that no one, judging from those alone, would imagine the affec-

tion in each to be identical. The subjects of the cases had been inmates of the North Union Workhouse, where Dr Duncan had an opportunity of watching their progress for some time before death. The physical signs were the same in both, viz. increased dullness of the precordial region, particularly in the situation, and beyond the base, of the heart towards the origin of the great vessels on the right side. A soft bruit, with the first sound most audible at the apex of the heart, and a normal double sound at the base near the arterial orifices. Such were the signs observed at first, but towards the termination of the cases the sounds underwent a modification, which the post-mortem appearances easily explained, but which derives considerable interest from its bearings on the question of the sounds of the heart in general.

The history, in reference to the first case, was as follows :—Eliza Mills, aged thirty, about two and a-half years before her death received a blow of a stick on the back, previous to which she had enjoyed excellent health. About three months after, she began to complain of palpitation of the heart, and about the same time a cough set in, accompanied by frequent attacks of hæmoptö upon the slightest exertion, so that, from merely stooping, mouthfuls of blood were spit up. This palpitation gradually increased in violence till she was unable to ascend a flight of stairs. This latter aggravation of symptoms being observed about twelve months since, and accompanied by pain in her head, so severe that on one occasion she fell down insensible, and remained in that state for two or three days. On recovering consciousness, she found herself paralysed on the right side, which continued during the rest of her life, though she regained in a few months a slight degree of power over the corresponding leg and arm. The wrist and arm were both flexed, the former extremely so, but she was able to raise her hand to her head, though not to use it. Her speech was unaffected ; vision of the right eye was not so good as the left. The pulse at the wrist was feeble as compared with the stroke of the heart in the precordial region. Her face was remarkably pale, though it occasionally presented a small patch of colour on the centre of the cheek. She had also a semi-jaundiced hue, and suffered constantly from vertigo and a fixed pain in the left temple. There was a distinct *fremissement cataire* on the application of the hand over the region of the heart, and on one occasion a slight, but distinct, pulsation could be detected in the jugular veins. The heart's action, as well as the pulse at the wrist, was exceedingly irregular and intermitting. Towards the close of life, a change of sounds took place, very different from what was observed in the beginning. The bruit de soufflet, previously audible with the first sound over the ventricles, was completely lost, but the sounds did not resume their original and natural character. There were two sounds audible, and perfectly distinct from each other, but the first was not so dull nor so prolonged as in the healthy heart ; it was shorter and more abrupt. In fact, both the first and second sounds had very much the character of those of the foetal heart. The patient lingered a considerable time in this state, and at last died of gradual exhaustion, without the development of dropsy or general anasarca.

The post-mortem appearances were as follow :—The pericardium distended, and containing about four or five ounces of clear serum ; both the auricles and the right ventricle of the heart were enormously distended ; the left ventricle remained of the natural size, presenting a marked contrast to the strength and thickness of the muscular structure of the right. There appeared to be hypertrophy as well as dilatation of the left auricle, on making a section into the cavity of which, a large, firm, yellowish-white coagulum, about the size of a walnut, was discovered adhering to the parietes ; the remainder of the auricle being filled with semi-fluid dark blood. The orifice of the mitral valve was found contracted to a mere slit, incapable of admitting the passage even of the little finger, owing to the deposition of a whitish semi-cartilaginous substance uniting together the chordæ tendineæ. The two lips, however, fitted so closely as to prevent

regurgitation taking place. The right lung contained several nodules of pulmonary apoplexy. The brain was peculiarly pale, and free from vascularity. On removing the upper part of the left ventricle, the corpus striatum of that side was observed to be discoloured and soft to the touch. The colour was of a light-brown hue, and, on making a section of it, the central substance was found so disorganized that it flowed freely out, leaving a cavity which would about contain a small hazel-nut. There was no evidence of softening any where else on that side; but on the right, the optic thalamus was a good deal softened, though not nearly so much as the corpus striatum of the left, thus accounting very satisfactorily for the difference in the power of vision of the two eyes.

Mary Saynes, the subject of the second case, was a young girl, aged fifteen, of whose history nothing satisfactory could be learned. She merely stated that she had had palpitation at the heart for so long a period that she did not recollect ever having been free from it; she stated, also, that she never had rheumatism. Over the precordial region there were marks of cupping, which she said had been performed on her at Cork-street Hospital. The physical signs were dulness on percussion in the precordial region, particularly at its upper and inner portion; distinct double bruit of a rough character heard over the situation of the ventricles, and not audible over the arterial orifices. The pulsations at the wrist, as contrasted with the heart's action, were feeble, though not remarkably so, in consequence of the former not being much increased. Her face was of a dusky hue; the lips livid and thick, as if the blood circulating there was imperfectly arterialised; the jugular veins were distinct and turgid. She had dyspnoea so intense, that she could scarcely control her breathing for a moment to let the heart be examined; but the dyspnoea did not compel her to sit up in bed for relief, as in the case of Mills. On the contrary, she seemed to prefer lying down on her left side, with the chest bent forward, and wished to be left as quiet as possible. Œdema set in early, involving, not only the lower extremities, but the head and face also; ascites ultimately became established. Towards the close of life, the sounds over the heart, in this case, as in the other, underwent a change, though a different one; the bruit de soufflet, which was at first rough, became soft in the situation corresponding to the ventricles, and over the arterial orifices, where there had previously been none, a distinct double sound of a rough character was heard.

The post-mortem appearances were, general anasarca, effusion to a great extent into the pericardium and peritoneum. The lungs remarkably small, and adherent to the ribs, the left by old adhesions, the right by recently formed lymph. The pulmonary texture was sound. The right cavities of the heart and the left auricle were considerably enlarged, but the right auricle particularly. There was considerable contraction of the mitral orifice; immediately above which there was, on the auricular aspect, a good deal of roughness from the springing up of cartilaginous vegetations. One patch of distinct bone, about the size of a sixpence, was observed below the lining membrane of the left auricle. The calibre of the pulmonary artery, at its insertion into the right ventricle, was somewhat dilated, though the valves were sound—a certain but limited degree of regurgitation was thus admitted, as proved by pouring water into the vessel.

Dr Hutton exhibited a specimen of softening of the spinal marrow; it occurred in a sailor, aged thirty-six, of regular habits, who left Lisbon in tolerable health on the 3d of Nov. in a small vessel laden with fruit. A storm arose on the 7th, which continued three days, during which time he was obliged to remain on deck, exposed to cold and wet, and exhausted with fatigue. On the 10th the storm ceased, and that night, on going to his berth, he was seized with severe pain in the lumbar region, which continued for about an hour, and he then fell asleep. On the following morning he was surprised to find his limbs numb and powerless, and he was unable to pass water. The captain gave him some purgative medicine, which acted freely, but his motions escaped without

his knowledge or control. On the 14th the abdomen was observed to be greatly distended, and the urine began to dribble away slowly. In this helpless situation he remained until the arrival of the vessel in Dublin on the 25th of Nov., when he was conveyed on a pallet to the Richmond Hospital, and presented the following conditions:—His complexion was sallow, and the expression of the countenance dejected and anxious. The extremities were cold; pulse 60, and very feeble; voice faint; tongue dry and furred, with a red margin; thirst excessive; respiration natural. The abdomen was very prominent, and the outline of the over-distended bladder could be distinctly seen extending to the umbilicus; the prepuce has excoriated from the constant dribbling of the urine, which flowed in a stream when pressure was made upon the abdomen, and was of a dark colour with an ammoniacal odour; the fæces also passed involuntarily; there was complete paralysis of the lower extremities, with loss of sensation extending up to a level with the umbilicus. A large slough, about five inches in diameter, covered the left trochanter. No reflex action could be excited in the paralysed limbs, which were passive and flaccid. The patient complained chiefly of weakness, and a sense of pain and constriction at the precordia. The treatment, which was directed to the raising of the vital powers, was of no avail. The catheter was passed frequently, the secretion of urine being excessive. These symptoms continued with little variation till the 30th of Nov., when he was seized with vomiting, accompanied by some discharge of blood from the stomach; a considerable quantity also escaped with the urine. On the following day the pulse could hardly be felt, and mucus began to accumulate in the bronchial tubes. He died next day.

At the autopsy, the spinous processes and laminae of the vertebræ having been removed, the theca vertebralis was found to contain between two and three drachms of serum slightly tinged with blood; but the membranes presented no appearance of inflammation. The medulla spinalis seemed healthy externally, but when laid open by a longitudinal incision, its central portion was found quite softened and pulpy from its lower extremity up to the third and fourth dorsal vertebræ, at which point the morbid condition terminated; the softening was most marked at the lower point, but was apparent throughout the whole of the above-mentioned tract. The bladder was much enlarged, and presented on its internal surface signs of intense inflammation; the mucous membrane at its inferior fundus was of a deep purple colour; the sides and upper part were covered with a thick layer of lymph intermixed with pus. The whole surface was dotted with ecchymosed spots; the kidneys were very much congested, and in their pelves were found particles of lymph mixed with urine, which had an ammoniacal odour, and was tinged with blood. There was also considerable congestion of the liver. The other viscera were healthy. It seemed to Dr Hutton worthy of observation, that though this patient lived twenty-two days from his first seizure, yet the paralysis seemed to have been complete in less than twelve hours. Was this effect produced by the effusion of a larger quantity of serum than was found after death, and which was absorbed in the course of the disease?—or was the softening of the bulbous extremity of the medulla spinalis the commencement of the disease, and the immediate cause of the paralysis? The membranes of the spinal marrow presented no appearance of previous inflammation, nor did the patient complain at any period of that rigidity of the muscles of the back and lower extremities said by Ollivier and other writers to indicate this form of spinal disease. The loss both of sensation and motion, taken in connexion with the softening of the central portion of the spinal marrow, whilst the external surface of the chord indicated no disease, was also worthy of observation. With respect to the urinary organs, it is to be remarked, he said, that the kidneys presented signs of inflammation as well as the bladder. The inflammation of the latter viscus in cases of diseased spine has been attributed to the irritation of retained and altered urine—a circum-

stance which Dr Hutton believed had some influence ; but having observed in one or two cases that the disorganisation of the bladder, and the tendency to slough in the paralysed limbs, occurred nearly at the same time, he was inclined to regard the affection as mainly depending on the impaired or interrupted innervation. The respiration in this case was not sensibly affected till the last day or two of the patient's life, though, as already observed, the softening of the medulla had extended to the fourth dorsal vertebra.

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*Anatomical and Pathological Researches on the Deposits of Black Matter found in the Respiratory Organs of Man.* By N. GUILLOT, D.M.P., Physician to the Hospital of La Salpêtrière.

Dr Guillot, whose discovery of a new organ of circulation in the skate we recently communicated, has directed his attention towards the deposits of black matter so frequently met with in the lungs of the human subject, and has found a rich field of inquiry in the wards confided to his care at the Hospital of La Salpêtrière. The subjects of his investigation were aged seventy at least, and, in all, the cause of death had been the more or less gradual suppression of the pulmonary circulation. Many opinions have been brought forward relative to the nature of this black matter. According to Bichat it is the result of the secretion of the bronchial glands ; Breschet and Trousseau consider it formed by blood ; Heisinger looks upon it as a kind of pigment ; Andral as the characteristic morbid feature of chronic pneumonia. Many authors, amongst whom we may name Laennec, Graham, Marshall, Gregory, Gibson, &c., attribute the deposit to the inhalation of the smoke of lamps, and of the particles of carbon suspended in the atmosphere ; Bourgery and A. Bésard conceive its colour to be due to carbon. M. Guillot agrees with none of the above opinions ; in his opinion the melanotic pulmonary matter is pure carbon, its accumulation produces symptoms easily detected during life, and it may become the cause of death by its interference with the circulation of the respiratory organs. Chemical analysis has proved to our author that this black matter is exclusively formed of carbon. The first appearance of the substance under consideration, is in the shape of amorphous, minute black particles, the agglomeration of which obliterates the extremities of the blood-vessels—a fact demonstrated by injection, and by the remarkable circumstance that when death has been produced by pneumonia, those parts of the lungs which are the seat of the black deposit are not in the least modified by the morbid action which has sometimes invaded their immediate neighbourhood. The size of the accumulation of carbon may vary from that of a grain of hempseed to the volume of a chesnut, and the black matter never contains any vascular ramifications belonging to itself. Compressed by its presence, the small air tubes in the vicinity become gradually obliterated, and the local disorder occasionally acquires such extent, as to incapacitate one-third of each lung from performing its important functions. These productions chiefly occupy the summit of the lungs ; they are never surrounded by cysts, and it is not the least interesting part of their history, that when tubercular matter in its various stages of development is found in the lungs of the aged, and the proportion of bodies on which tubercles are detected after death is as great as four-fifths at La Salpêtrière, the tubercles are found constantly surrounded by this black matter, which seems to have arrested their progress. In a former publication, Dr Guillot has demonstrated, by repeated injections, that new vessels are formed around tubercles in a state of ramolissement, communicating with the bronchial arteries, and constantly bringing to the diseased spots a fresh supply of arterial blood—a new element of inflammatory action. It is by the obliteration of this morbid circulation that Dr Guillot fancies the melanotic deposits of the lung arrest the future progress of tubercular consumption—an explanation which gathers strength from the immense proportion of cases in which

he has found tubercular matter in the lungs of the aged. The symptoms produced by this variety of melanosis are the following :—Cough is observed in all, and sometimes has existed for a long period ; the expectoration occasionally streaked with blood is not in general characteristic ; dulness on percussion is detected in those parts of the chest which are occupied by the black deposit in any abundance ; on auscultation a tubular respiration is heard, and is in many instances erroneously attributed to a supposed dilatation of the bronchi ; pectoriloquy and bronchophony are frequently present ; and the value of these signs is increased by their simultaneous appearance in the aged.

DAN M'CARTHY, D.M.P.,

President of the Parisian Medical Society, late

Interne of the Hospitals in Paris.

—*Medical Times.*

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MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Placenta Prævia.

In the Prager Vierteljahrschr., 1844, Rahler recommends, that, instead of the *accouchement forcè* at an early period, plugging should be employed. The mode adopted by him is to take a square piece of cloth to push the middle of it high up into the vagina, and then fill it with balls of charpie. This sort of tampon has the advantage, that it can be very quickly withdrawn at one effort.

In the Raccoglitore Medico, No. 46, 1844, Bellini orders, that, in cases of placenta prævia, on the occurrence of dangerous hemorrhage before the os uteri is sufficiently dilated to admit of the introduction of the hand for turning, the uterine orifice should be cut up with a pair of curved scissors, and an opening made sufficiently large for the purpose.

Placenta Forceps.

In the American Journal of Medical Science for April 1844, a new pair of forceps for the removal of the placenta, in cases of early abortion, where the os and cavity of the uterus are too small to admit of the introduction of the hand, is recommended by H. Bond. There is no novelty about the instrument, except that its edges are furnished with hooks, to enable it to retain a firmer hold.

Interval of Seven Days between the Birth of Twins.

A case is recorded in the Oesterreich Med. Wochenschr., No. 14, 1844, where, on the birth of the first child, the medical attendant discovered a second presenting in a transverse position. The second child was not born until seven days after the first.

Fractures in the Foetus during Labour.

In a thesis published by Meine de Osteomalacia Pelvis et ejus in partum Actione, there is recorded an instance where, in consequence of deformity of the pelvis, the right parietal bone of the foetus presented a deep impression, and the cranium was fractured in several places. The preparation is placed in the obstetrical museum of Marburg.

Recovery of a Child after Interment.

Walter describes, in the Neue Zeitschr fur Geburtskunde, Bd. 16, Hft. 2, the case of an illegitimate child which had been buried by its mother between a foot and a half

and two feet deep in the sand, and recovered after it had lain there ten or twelve hours. It was said to have cried while under ground. In 1838, in a number of the *Preuss Med. Vereinsz*, Wagner recorded an instance of the recovery of a child that had been buried for half an hour.

Laceration of the Symphysis Pubis.

Treffurt, in his *Geburtshulfi Abhandl*, mentions a patient in whom the symphysis pubis was torn directly through the middle, and the bones of the pubis separated to the extent of two inches. At the sacro-iliac synchondrosis, there was great facility of movement, more particularly at the left side, and the joint on this side contained pus.

Pregnancy and Delivery during complete Prolapsus of the Uterus.

In the *Bull delle Sc. Med. di Bologna* is recorded the case of a female, who first suffered from prolapsus of the uterus at her 15th year; in her 22d year she became pregnant, and her pregnancy proceeded to the 7th month, without any particular inconvenience. In the 7th month the uterus began to sink, and in the commencement of the 8th month it projected as much as six fingers' breadth beyond the vulva. The author was not called until the patient had been four days in labour. When he arrived, he found the woman much exhausted, and the organ, of a dark brown colour, hanging as low down as the middle third of the thigh. Labour proceeded in the usual way; the child was extracted with forceps; and on the twentieth day the woman was able to leave her bed.

Recovery from Rupture of the Uterus.

A woman, *ætat.* 24, became pregnant, and the foetus required to be extracted by means of turning. After removal of the placenta, Dr Bruhl discovered a rupture of the uterus, through which the intestines projected. These were returned and kept in their place by means of a piece of sponge, and the patient treated in the usual antiphlogistic manner. At first, on account of the putrid condition of the uterus, baths of a solution of chloride of lime, and afterwards of a red wine infusion of aromatic herbs, were employed. The patient suffered from vomiting, meteorismus, and constipation; but these were successfully combated, and she ultimately recovered completely.—*Caspar's Wochenschr.*, No. 20, 1845.

FORENSIC MEDICINE AND MEDICAL POLICE.

Health of the Manufacturers of Detonating Powder.

The detonating powder is made by dissolving metallic mercury in nitric acid, and precipitating with alcohol. This mixture is very volatile; and Chevallier observed the persons engaged in its manufacture to suffer from its effects in the same way as other workers in mercury, or persons put under its influence medicinally. They laboured under sponginess of the gums, ulcers in the mouth, salivation, and frequently diarrhœa. The workers were never affected with itch or syphilis. Maase observed, that when persons came to the work affected with syphilis, after a residence of several days in the factory they became covered with large pustules, which disappeared in the course of three or four weeks. Gavelot Fils observed that the workmen engaged in the mixing, granulating, and sifting of fulminating mercury and nitrate of potass, suffered from a nervous trembling, more especially in the hands, which diminishes if they leave off their occupation. The dust which is produced during the sifting, attacks and blackens

the teeth. With the exception of this trembling of the hands, they suffer from no other complaint. One man had worked in the factory for twenty years, and felt no other inconvenience. Chevallier thinks that the use of baths from time to time, containing sulphuret of potass, might prevent the bad effects of the mercury; and that regular living exerts the greatest influence in maintaining the health, even in the most unwholesome occupations.

Health among Workers in Copper.

The copper colic happens very seldom. The smelting of the metal can only be performed with the labour of adult workmen, and the same person cannot continue very long at a time engaged in the operation, but, if they would preserve their health, must only recur to it by long intervals. The green colour communicated to the hair and skin of copper-workers is very remarkable. This colouration occurs most strikingly in persons having fair hair.

Death by Drowning.

In Henke's Zeitschr., Hft. 1 and 3, 1844, is contained an excellent paper on drowning, by Dr Löffler. He shows that death does not take place through apoplexy, but that it results from suffocation, caused by the stoppage of the breath in consequence of breathing being attempted in a fluid medium. The phenomena of drowning are—stillness and cessation of the violent voluntary movements of the limbs; stoppage of the respiratory motions; the contractions of the heart still continue; the circulation of the blood goes on, although the object of respiration, viz. the conversion of venous into arterial blood, is no longer performed: the blood in the arteries gradually more and more resembles that in the veins, until dark blood alone circulates through all the organs, and the circulating medium is incapable of supporting the living action of the organs.

Spots of Blood. By LESIEURE DESBRIERE.

On a recent criminal trial, Lesieure Desbrière proved, by the process of Orfila, that certain stains upon cloth, as also upon a hammer and a knife, were caused by blood. On laying the stuff in distilled water, there were seen falling to the bottom of the glass tube reddish streaks, which ultimately formed themselves into a rose-coloured stratum. This, when heated to a temperature of 100 deg. V. Ranm., became opalescent, and greyish flakes were precipitated. These flakes, when treated with a solution of caustic potass, gave a solution, which appeared green by reflected, and reddish-brown by refracted light. With regard to these colours as distinctive of blood, Boutigny remarks that they are not to be depended on, because they may appear different to different observers. Thus, for example, Orfila characterizes the colour, as seen by refracted light, as reddish brown; Devergie, as rose red. Boutigny, again, affirms that the colour is a tint *sui generis*—verging towards red when seen by reflected light, and towards green by refracted light. For more minute inspection, Boutigny recommends, that, after the spot is dissolved out with distilled water, the solution be placed in a shallow silver cup, previously made red-hot by a spirit-lamp; the fluid will immediately lose its transparency, and the greyish-green colour observed by the author will become distinct. If a few drops of solution of caustic potass are added to this, and the mixture stirred with a glass rod, it will resume its transparency, and present the greenish or reddish colour, according to the light, as mentioned above. The transparence may again be destroyed by a drop of muriatic acid, and again recalled by a drop of caustic potass;—it may be destroyed or recalled according to pleasure.—Journ. de Chimie Med., Aout 1845.

PART IV.—MEDICAL MEMORANDA.

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY.

Wednesday, 17th December 1845.—Dr GAIRDNER, President, in the Chair.

(Partly from Cormack's Journal of Medical Science, and partly obtained from Professor Simpson.)

The President, after some general remarks, called on Dr Cormack.

Dr Cormack said that his object in proposing an adjournment was, that he might hear others speak. He had no expectation of being called upon thus formally. However, he was not unwilling to mention in a few sentences, the grounds upon which he thought that it was proper to elicit a free and full expression of professional sentiment on Ovariectomy. He would deprecate, as much as any member, the converting of the Medico-Chirurgical Society of Edinburgh into a Debating Club: if by that term was meant an arena for mere dispute, in which Victory rather than Truth was the object. He did think, however, that the subject of ovariectomy had of late excited so much discussion in medical circles, both here and elsewhere, it would be important that other, and perhaps corrective opinions, should go forth along with those of Dr Bennett. As that gentleman was unfortunately absent from indisposition, he (Dr C.) would not venture to quote from, or comment upon his paper: he had no detailed report of it in his hands; and as there were others in the room fully conversant with it, he would, therefore, with reference to it only say, that nothing had fallen from Dr Bennett to change his (Dr C.'s) previously formed conviction, that the great surgeons of the day rightly denounce ovariectomy as an operation which is almost in every case unwarrantable.

What is the nature of the facts at present before the profession? Do they sanction the operation?

Up to May 1845, there were published 89 cases in which the abdomen was laid open for the removal of diseased ovaria; but then, of this grand total, there were 14 cases in which the operation was abandoned, after the woman was opened! However, let it be granted for the sake of argument, that the whole 89 were real cases of ovariectomy. It will be found that of these there were 55 recoveries, and 34 deaths, from the immediate or recent consequences of the operation. This statistical result, viewed by itself, and unaccompanied by any explanation, is not necessarily adverse to ovariectomy; but certainly it is not favourable. At this point, an inquiry suggests itself. Did the ovarian diseases, for which these operations were performed, endanger life? Perhaps in a few of the cases they did; but it cannot be denied, that ovarian tumours, in the vast majority of cases, so far from being of a mortal tendency, are only unsightly encumbrances. Then, again, how long did the 55 women who recovered, survive the operation? Have we their histories down to 20 or 30 months after the operation? We have not; and, therefore, for a special reason, which does not apply to other capital operations, the present statistics of ovariectomy are comparatively valueless.

In such an operation as ovariectomy, the very reparative process becomes an imminent and inevitable source of peril; and had, Dr C. believed, in cases, the latter history of which is only known by rumour, been the ultimate cause of death. To repair the extensive cutting of the ovariectomists, nature must pour forth in abundance coagu-

lable lymph; and every one knows, that in all situations in which lymph is thrown out, it exerts its inherent tendency to the most powerful contraction. Illustrations suggest themselves in abundance. If we have a large burn in the anterior surface of the neck, or in the bend of arm, does not the healing process, in the one case, drag down the head to the sternum, and, in the other, baffle the skill of the surgeon, by obstinately flexing the forearm upon the arm? The changes which the contraction of lymph gives rise to within the body, are as striking as upon its surface. A fatal ileus may, from the operation of this cause, follow peritonitis at a long interval; and, in the same way, atrophy of a portion of lung from compression is a common sequel of pleurisy: again, in intra-uterine inflammation, we have, originating in the same cause, amputation of the limbs of the foetus, and many other lesions. The statistics of ovariectomy, then, are evidently imperfect, until we obtain detailed histories of the patients, not for weeks, but for many months, perhaps for years, after the operation.

Admitting the full value of the uterine sound, and all the other recent improvements in the diagnosis of uterine and ovarian disease, Dr C. would still ask the question at practical men, Is not the diagnosis beset with almost insuperable difficulty? Can the attachments of the ovarian tumour, when such tumour has been ascertained to exist—can the attachments in any one case be certainly made out? In 14 of the 39 cases referred to, the operation was suspended from the scalpel disclosing the non-existence of any ovarian tumour, or that the attachments of the tumour could not be touched!

Dr C. concluded by stating that the substance of his objections might be thus stated:—

No. 1. The difficulty of diagnosis.

No. 2. The non-fatal character of ovarian tumours.

No. 3. The immense and inevitable dangers of the reparative process.

Dr Handyside said, that, in the divided state of opinion existing, (as the President had remarked), among surgeons, relative to the propriety of undertaking the operation of ovariectomy, the profession naturally looked to him as responsible for the step taken in the case narrated at the last meeting of the Society; and would, of course, expect from him a full statement of the reasons that had led him to perform that operation.

Dr Handyside remarked, that the only justification and full warrant for such surgical operations as involve imminent peril and hazard, (such as lithotomy, the ligature of a large artery, the operation for hernia, amputation through the thigh, ovariectomy, &c.), is acknowledged to rest on this ground, that their performance is essential to the preservation of the patient's life. Thus, he showed that his patient had been much reduced by repeated tappings, the last three of which were found to be necessary during the very limited space of about four weeks; and that his was not a case similar to those described by Martineau, Portal, and others, which amply attest the protracted duration of life in association even with this stage of the affection. But, he added, there are other important conditions which must coexist with the above requirement, in order to warrant the step of a capital operation, as that of ovariectomy. These he stated to be, secondly,—the establishing a clear diagnosis, in a proposed case of ovariectomy, so as to determine accurately that the tumour is not malignant or of solid consistence, that it presents no serious adhesions, and that the uterus is not involved. Thirdly, that there is no hope of a palliative cure, or of a spontaneous declension in the severity of the urgent symptoms. Fourthly, that there is no coexistent disease or condition of the system such as contra-indicates capital operations in general. Fifthly, that the patient and her relatives, on being made acquainted with the danger attending the operation, express their urgent request for its performance. Sixthly, as to the statistics of the operation,

(here Dr Handyside quoted the tables given by adverse reviewers in the *Edinburgh Medical and Surgical Journal* for 1843, and in this *Journal* for 1845.) Although these are by no means unfavourable as an argument for its performance, still he would not make use of them as such, for these reasons:—First, that many cases in which the operation had been most recklessly and unjustifiably performed are included in these tables, which have thus perverted the statistical results, and made the operation appear in a less favourable light; and, Secondly, because surgical statistics in general stand broadly forth against the performance of many universally recognised capital operations, (and here Dr Handyside adverted to the statistics of some of the larger amputations, &c.)

Dr Handyside observed, that he is no advocate for the operation in cases such as those in which it has been generally had recourse to, for that he, like many other surgeons, had been previously prejudiced against and averse from the operation, (which aversion was in no degree lessened by the circumstance, that some Edinburgh surgeons had previously refrained from undertaking the operation in the present case); but that, after a careful examination of the subject, he was forced to the conclusion, that it is the duty of the surgeon, *in certain rare cases*, to recommend and to practise the operation, and the case submitted to his care appeared to him to be one of those. This view he adopted only after having availed himself of the assistance of those of his professional brethren versant in obstetric diagnosis, who concluded, along with himself, that the tumour was non-adherent throughout; that it was attached only by an elongated pedicle, the broad ligament; that the uterus and peritoneum generally were healthy; and that the fluid in the abdomen was either the result of the irritation of the peritoneum from the presence of the tumour, or the produce of the tumour itself.

He stated, that such cases differed from those which generally came within the province of the surgeon, as, in arriving at a decision as to the propriety of the operation, he thus manifestly required the co-operation of a skilful obstetrician, and hence a probable reason for the unfavourable reception that the operation had met with from the majority of operating surgeons—the tendency to which has been in no way lessened by the undeniable circumstance, that really little or no surgical skill is required for its accomplishment, and, consequently, that no credit for anatomical knowledge, or surgical dexterity, can accrue to the operator,—for he stated it as his opinion, that the operation required less of these qualifications than even the common operation of amputation through the leg.

He added that, while a diagnosis in most other cases requiring surgical operation could generally be at once and easily made by the surgeon himself, much care, and repeated examination of the patient, would be required in cases submitted to him for ovariectomy, as in the present case, in which he had not decided on the operation until he had made repeated examinations of the patient, both before and after, as well as during the last tapping. In this way, with the valuable aid of Dr Simpson, a diagnosis was formed, which has been amply verified.

Lastly, Dr Handyside again protested against the indiscriminate performance of the operation, and stated, that in such rare cases as the present, *but in such only*, he was quite ready to repeat it.

Professor Simpson stated, that he believed ovariectomy quite unjustifiable in many of the cases in which it had been had recourse to, but in a few rare instances, like that of Dr Bennett's patient, quite as justifiable as most of the capital operations performed in surgery for chronic affections. And it appeared to him that two circumstances prevented ovariectomy from obtaining a fair consideration and fair trial, especially with professed surgeons. First, the diagnosis and the operation were, under the existing di-

visions and arrangements of practice, undertaken by two different sets of practitioners—the former by the obstetric physician, and the latter by the operating surgeon. It was, perhaps, the only capital operation in which the surgeon was now required to proceed upon the diagnostic knowledge of another party; and no one was to be blamed if he felt a natural repugnance to incur so serious a responsibility on such grounds. Secondly, surgeons, as a class, still confessedly allowed themselves to be greatly bound and swayed by the trammels of authority, and the mere fact that some of the highest names in surgery had once declared (with or without due investigation) against ovariectomy, is with most others an ample and satisfactory reason for totally rejecting the operation. In the same way, but in an opposite direction, the leading authorities in the surgical world having agreed to consider ligation of the *arteria innominata* as a legitimate operation, it has now been repeatedly performed. But what has been the result? Why, the vessel has been tied some twelve times, according to Mr Phillips,—it might be oftener, or it might not be so often,—but, at all events, as often as the operation had been performed, it had proved fatal; and yet, because it had been decreed proper and justifiable by authority, we find it in the very last text-books on surgery still commented on as such; whilst ovariectomy, as proving fatal in one out of every two or three cases, was loudly denounced as improper and unjustifiable. In the important department of surgery, such inconsistency would doubtlessly betimes become rectified—when (as had been long the case in medicine and midwifery) the dogmatism of mere facts and experience came to be more respected than the dogmatism of mere opinion and authority.

The diseased condition of the ovary, to which the operation of ovariectomy was particularly applicable, if applicable at all, was, in Dr S.'s opinion, that form of ovarian dropsy which was by far the most frequent of all, and consisted in multilocular cystic degeneration of the organ—the gelatiniform, or areolar cancer of some authors. All other forms of ovarian dropsy (as they were called) were rare in comparison to this; and to it all remarks, in such a discussion as this, principally or entirely applied. In most instances,—in nine cases out of ten,—this species of ovarian dropsy pursued, he believed, a regular progress onward, towards greater or less enlargement, insufferable distension, more or less repeated palliative tapplings, frequently disintegration of the morbid structure, local irritation, constitutional exhaustion, and death. Generally, it took a series of years to run its course, but sometimes it passed through its phases and progress more rapidly. We want a sufficient body of well observed facts to know the average duration and simple natural history of this, as of most other diseases. Some authorities averred that the disease occasionally went on for 20, 30, 40, or 50 years. Dr S. doubted entirely the truth of such alleged cases, and believed that abdominal tumours, with this history, were not affections of the ovary at all, (certainly not its cystic multilocular disease), but fibrous tumour of the uterus, which were often exceedingly chronic in their progress, and, as Dr S. had repeatedly seen, were very frequently mistaken for the ovarian affection under dispute. Again it had been as strongly averred that cases of multilocular dropsy of the ovary had been absorbed and cured. He equally and entirely doubted the validity of this observation. Errors in diagnosis would, he believed, account readily for all such therapeutical incredibilities. He had seen hysterical tympanitic distention of a portion of bowel, and collection of fæces mistaken for ovarian tumours; and these were certainly quite curable. He had, in several instances, seen also ovarian dropsy very perfectly simulated in form, figure, situation, &c. by large chronic inflammatory effusions in the cellular tissue of the pelvis and broad ligament, always commencing with and accompanied by inflammatory phenomena, and these, like similar inflammatory effusions elsewhere, were always more or less completely amenable to medical treatment. But he had no belief whatever that iodine, or mercury, or muriate of

lime, or aqua potassæ, or diuretics, or deobstruents, or aught else, were capable of absorbing and removing the complicated structure and contents of a multilocular cystic tumour of the ovary. He would almost as soon believe that the head could be absorbed and removed by medicine. When the disease was accompanied with much local vascular action and congestion, the occasional loss of blood was sometimes certainly beneficial. But in the general run of cases of this malady, he had long come to the conclusion that we did all that was possible with medicine, when we kept the individual functions of the economy as near as possible to their individual standards of health. Break down the activity and vigour of the system by mercury or other debilitating medicines, and then the ovarian disease only too often progressed with double strides.

Seeing medicine was of so little direct use—what measures had surgery to propose? cystic structure of the tumour had been tapped and injected in imitation of the treatment of hydrocele—setons had been passed into it, and through it—incisions had been made into its walls, &c. &c. ; but all such operations were now, he believed, abandoned by general consent, as useless in their effects, and far too often fatal in their practice to admit at all of repetition. In fact, two measures only were at the present day applied to the surgical treatment of the disease, namely, 1. Tapping; and 2. Total extirpation. The first of these operations—tapping, was professedly adopted merely as a palliative measure—for the present relief of the patient—not for the cure of the disease. In a very few instances the tumour appears to become bound down by adhesions after tapping, and no re-accumulation takes place; but these cases are so very rare that in practising the operation we scarcely even venture to reckon upon the possibility of this occurrence. In some cases where the tumour is very large, but the cells small, and containing gelatiniform matter, tapping is of no use, and cannot in any degree evacuate or diminish its contents. Fortunately for the success of this operative procedure, the anterior and superior cell or series of cells were generally large, and dilated more than the others, in consequence of least resistance being opposed to their growth and distension in this direction. And tapping, when adopted, though a palliative measure only, was by no means so free from danger, as some practitioners think, and some writers would seem to allege. We had as yet no sufficient collection of data to show its actual results. But Mr Southam had commenced the inquiry, by tabulating the results of twenty cases of the operation. Fifteen of these cases had been recorded by Drs Bright and Barlow, without apparently any view to such an investigation, and hence afforded the more valuable and unprejudiced evidence. Four of the twenty patients, or one in five, died of the effects of the first tapping. Four patients died of inflammation within a few days after the operation; three more died in one month; fourteen in all died within nine months after the first tapping. Of the remaining six, two died in eighteen months, and four lived from periods varying from four to nine years.

Paracentesis, whilst thus merely a means of *palliation*, was still a proceeding in which no inconsiderable amount of danger appeared to be incurred. Ovariectomy, on the other hand, was an operation which, if successful, was professedly a means for the perfect and radical *cure* of the disease. But it was undoubtedly a most serious and dangerous operation, and therefore was it warrantable or unwarrantable, when judged of by the *principles* applied by surgeons to the determination of the propriety of other capital operations in chronic diseases? Let us consider ovariectomy and the objections to it in this point of view; for by such a comparative test will the propriety or the impropriety of the operation be best ascertained and determined. The principal objections which Dr Simpson had heard urged against ovariectomy were as follows:—

1. It is an operation accompanied with great danger and mortality.—All parties are ready to admit fully of this point. But it is by no means a matter decisive, as some think, of the impropriety of the operation. At all events, if ovariectomy is to be con-

demned and suppressed on this count, several of the legitimized capital operations in surgery must be equally, or still more strongly, condemned on exactly the same charge; for it is in reality not more fatal than many of these operations, and even not so fatal as some of them. On this subject (the mortality accompanying capital operations in general), very erroneous views seem to be entertained by many members of the profession. The statement of a few simple statistical facts will serve to prove the position assumed, and may, perhaps, surprise those who have not directed particular attention to the subject. Dr Churchill, Mr Phillips, Mr Atlee, and Dr Cormack (see his Journal for May last), had each calculated the mortality in ovariectomy, from the cases on record, and came to nearly the same conclusion. Dr Simpson took Dr Cormack's results as being those of a writer against the operation, and hence his tables could not be suspected of any unfair leaning towards ovariectomy.

Out of 89 cases in which ovariectomy had been either performed or attempted, 34 sunk, or nearly 4 in every 10 patients died.

Out of 65 cases, collected by Dr Cormack, in which the operation had been perfected, 25 died, or between 3 and 4 out of every 10 patients were lost.

Now Malgaigne has shown, that out of 852 amputations of the extremities of all kinds (including those of the fingers and toes), which were performed in the Parisian hospitals from 1836 to 1841, 332 died, or about 4 out of every 10 proved fatal.

Among these, out of 201 amputations of the thigh, 126 died, or 6 in every 10.

---	---	192	---	leg,	106 died, or $5\frac{1}{2}$	---	10.
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Of the amputations of the thigh, in 46 cases the operation was performed for severe injury of the limb: of these 34 died, or more than 7 out of every 10.

When we looked to the results of amputation nearer home, the results were not much more encouraging. In the Glasgow Infirmary, from 1795 to 1840, Dr Lawrie has shown that out of 276 amputations performed, 101 proved fatal, or nearly 4 in 10 died.

Among these, out of 128 amputations of thigh, 46 died, or $3\frac{1}{2}$ in every 10.

---	---	62	---	leg,	30 died, or 5	---	10.
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---	---	53	---	arm,	21 died, or $4\frac{1}{2}$	---	10.
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In the Edinburgh Infirmary, during the four years commencing July 1839, there occurred 72 amputations of the thigh, leg, shoulder-joint, arm, and fore-arm. Of the 72 patients, 37 recovered and 35 died—or nearly 5 in every 10. Of these amputations, 18 were primary. Out of 4 primary amputations of the leg, 1 patient recovered and 3 died. Out of 4 similar amputations at the shoulder-joint, 1 recovered and 3 died. There was one primary amputation of the arm; the patient died. There were eight primary amputations of the thigh; all the eight patients died. (See Dr Peacock's Reports of the Hospital, containing the only official returns hitherto published.)

Mr Phillips has collected the histories of 171 cases in which the larger arteries of the body were tied: of these 57 died; or about $3\frac{1}{3}$ in every 10. Dr Inman has collected 199 cases of these operations; 66 died, or about $3\frac{1}{3}$ in every 10. Out of 40 cases of ligature of the subclavian artery which he has tabulated, 18 proved fatal, or nearly 5 in every 10 died.

In his work on hernia, Sir A. Cooper records 36 deaths among 77 operations for that disease, or nearly 5 in every 10 died. Dr Inman has collated 545 cases of operation for hernia; 260 proved fatal, or nearly 5 in every 10 of the patients died.

In the earlier years of life, lithotomy is comparatively a safe and legitimate operation, and few die. But it is quite different when the operation is submitted to at 40

years of age, and upwards. At and above this term of life, Dr Willis has shown, from numerous statistical returns, that from 2 to 5 out of every 10 operated upon die.

Even what we deem slighter operations, are sometimes attended in the absolute by no inconsiderable danger of life. Out of 95 cases of excision of the mamma, referred to in Dr Cormack's Journal for February 1843, 20 died, or 2 in every 10. In how many cases of the remaining 75 would the disease inevitably return and ultimately destroy the patient?

Ovariectomy then is fatal in the proportion of about 35 or 40 in every 100 operated upon; but in most capital operations we singly have as high, or even a higher mortality than 35 or 40 per cent. Amputation of the thigh is higher. So is amputation of the arm. Ligature of the subclavian, for aneurism, is higher. Tying the innominate is fatal in every case. The operation for hernia has a higher mortality. Lithotomy is as fatal in most hands after the middle term of life. Even amputation of the leg below the knee is scarcely more safe, or at all events as many, or more, die after amputation of the leg, in the hospital practice of Paris and Glasgow, as die after ovariectomy.

It had been foolishly objected to the statistics of ovariectomy, that we did not know all the unsuccessful cases. Dr S. believed that the ascertained statistics regarding it were as full and complete as the statistics regarding any other capital operation. It was too serious and too startling an operation for any cases of it to remain easily hid. On the other hand, it could be readily shown that the statistics of our major surgical operations were not always reported in the most faithful manner, and so as to give the most accurate results. Malgaigne candidly confesses as much in regard to the elaborate statistics which he has collected of various surgical operations from different hospitals.

The existing results regarding ovariectomy would, probably, be on all hands allowed to demonstrate one point, namely, that exposure of the cavity of the peritoneum was not so dangerous a proceeding as was formerly dreamed of by pathologists. Surgeons have exposed it often in hernial operations, and even left ligatures upon its omental vessels when necessary, and not unfrequently with impunity. In 1842-43, a portion of the omentum was removed in six operations for hernia at St George's Hospital, London. "In some of the cases, two ligatures, each embracing one-half of the omental mass were applied; in the other cases, ligatures were applied to all the bleeding vessels." Five of the six patients recovered. One died comatose, a few hours after the operation, from disease of the brain. (Hewett in *Medico-Chirurgical Transactions*, vol. 27.) But still, it must be confessed, extreme dread of all such abdominal surgery was, and probably is, the prevailing idea. The comparative success of the Cæsarean section in the hands of Continental accoucheurs, might almost have taught us a different lesson, the peritoneal cavity in that operation being of necessity freely opened up; and we may daily see the same done upon the females of some of our domestic animals, with remarkable impunity, in the coarse operation of spaying.

2. The ultimate results of cases of ovariectomy were alleged to be unknown and unfavourable.—It was urged that the reports of cases had been published with too great haste, and before the final effects could be known, months and years afterwards. Great weight had been attached to this argument in the question of ovariectomy. But it probably would be found to tell against other capital operations with much more truth and effect than against ovariectomy. In how few instances were the published reports of capital surgical operations carried beyond a few weeks? And what a large proportion did die within a short period after escaping from the more immediate consequences of the operation, for aneurism, and stone, and cancer, and amputation,—and that with very broken and imperfect health too, during the interval. The primary history of cases of these operations was given, not yet their ultimate history. Dr Simpson at the

same time adduced various facts, to show that, as far as regarded ovariectomy, the allegation did not in reality hold good. The process of reparation after ovariectomy is, say some, too great to be accomplished with health and safety. Theory may argue so—but facts here give a direct and practical denial to theory, by demonstrating the reverse to be true. In one of the first cases operated on (Emiliani's, in 1816), the patient has since become the mother of five living children,—an ample proof of the completeness of the cure. Dr Simpson read a note from Dr Clay of Manchester, stating the present condition in (14th December 1845) of the patient that he had operated upon two or three years back. His first patient, operated on 12th September 1842, 'continues quite well, and follows her household duties with ease and comfort.' A patient subjected to ovariectomy on the 25th September 1842, 'is at this time perfectly well, and capable of greater exertion than most women of her age, viz. 60.' Regarding a third patient operated upon in November 1842, Dr Clay states, 'I saw this case a few days ago on account of a polypus of the nose—in every other respect she is quite well.' A patient operated upon in August 1843, 'is at this time perfectly well, saw her a few days ago.' Dr Clay operated on two cases in October 1843, 'the first remains at this time quite well,'—the second reports herself 'in better health now than in any part of her former life.' A case was operated upon in November 1843, 'I have,' says (Dr Clay), 'seen this woman frequently of late, whilst attending other branches of the family; she is quite well;' and so on with regard to some others.

3. It was argued that the extirpation of the affected ovary would not necessarily effect a perfect cure of the disease, or secure the patient against its return.—This certainly holds true of the diseases for which several of the major operations in surgery were performed, but as certainly it did not hold true of multilocular dropsy of the ovary. The surgeon amputates a limb, or excises a tumour for some form of carcinomatous disease, hazarding more or less the life of his patient for the temporary removal of a diseased action which is almost perfectly certain to re-appear either in the seat of the operation, or in some other part of the body. He ties the subclavian for aneurism—but is it not a disease which is very liable to co-exist in different vessels at the same time, or to form consecutively in different parts—and if the patient escapes the great and immediate dangers of the operation, has he any surety against its re-appearance elsewhere? You may amputate the thigh to get rid of a scrofulous or tubercular knee-joint. But in how many cases is *local* tubercular disease the mere result of a *general diathesis*, that ere long will betray itself in some other part or organ; and how often, indeed, in patients dying from operations for "white-swelling," are the lungs at the time actually found to be the seat of tubercle. Dr Simpson thought it a point of the highest practical moment to consider that, on the contrary, the pathological nature of multilocular disease of the ovary was such that it had no tendency to recur after its complete removal. From the character of its morbid structure, and its clinical history, it was certain that it presented no liability to spring up again, like malignant or tubercular disease, in the same locality—or in distant and in different organs of the body. The other ovary might be partially affected, and if so, might require removal along with the first—a step which at the time would probably not add much to the absolute danger of the operation—seeing the abdomen was once opened. Do not surgeons operate for popliteal aneurism, when it is present in both limbs, even with the additional chances of an analogous diseased condition of the vessels existing internally. Probably it will be found that a surgeon would more rarely require to repeat ovariectomy, in consequence of the remaining ovary subsequently becoming diseased, than he now requires to repeat lithotomy, in consequence of a second or a third stone forming after a time in the bladder.

4. Ovarian disease (it is averred) does not produce such dangerous and urgent symp-

toms as to demand an operation.—Dr Simpson said that he had already adverted sufficiently to the dangerous and ultimately fatal tendency of the common multilocular dropsy of the ovary. He had at present charge of one case, where an enormous ovarian tumour produced occasional most intense suffering, in the form of severe abdominal pains and spasms resembling the agonies of labour. In many cases where it had reached a large size, it more or less incapacitated the patient, by its simple weight and volume, from following the ordinary duties belonging to her station; and, if poor, threw her upon the bounty and charity of others. In most it was, after a time, liable to be attended with local attacks of irritation and inflammation, fever, &c., or produced dyspnœa, difficult progression, &c.

Dr S. doubted if, in many cases operated upon, of aneurism or necrosis, or ulcers, &c., supposed to demand amputation, &c., the suffering or the incapacity from the duties of life, were greater than in a large proportion of ovarian cases. But, argue the surgeons, *we* operate early in aneurisms, &c., because they continue to increase; the same is true of ovarian tumours; because the aneurismal swelling is, after a time, liable to affect the structure of neighbouring parts, and render late operative interference less successful,—the same is true of ovarian tumours; because with the aneurismal disease the constitution will sympathise and become debilitated,—the same is true of the ovarian tumour; because the aneurism may burst and endanger life,—the same is true of ovarian tumours. Dr Simpson had, two years ago, seen one burst in the peritoneum, and prove fatal; its parietes were eroded by small internal ulcerations at several points, and at last had given way. Any argument urging haste in the one case, would, he feared, equally in principle at least, apply to the other. On the contrary, would proper palliative treatment applied to local aneurisms not stay their progress, and make them as chronic, if not more so, in their course, than multilocular tumours? Mr Fergusson has lately stated that he has watched one case of axillary aneurism “for several years” without it increasing. And aneurisms sometimes are, at last, spontaneously cured, much oftener, Dr S. believed, than ovarian dropsies. Take another case that happened in the hospital practice this morning. A man applies with stricture, and symptoms of stricture only. On passing a small bougie, a stone is struck in the bladder, and the patient is forthwith advised to submit his life to all the perils and consequence of lithotomy, though he has no suffering traceable to the calculus. Would it be justifiable to advise a patient with an ovarian dropsy, giving her no trouble, to submit in the same way to ovariectomy? Dr S. most assuredly thought it would be utterly unwarrantable. And the palliative treatment for urinary deposits and calculus was (it must further be recollected), now far more advanced than the palliative treatment of ovarian dropsy. A calculus of this kind would not likely increase so rapidly as to destroy the patient in five or ten years. An ovarian tumour very likely would do so. And sometimes, as in this case, an urinary calculus does not really give rise to such uneasiness as to demand any very active palliative treatment. Do we not sometimes see calculi in the bladder after death, which have never given rise to any marked symptoms during life? Again, does not the operation for the obliteration of the varicose veins of a limb sometimes prove speedily fatal, and yet the disease itself is one easily palliated by rest and bandages. Besides, this recognized legitimate surgical operation for varicose enlargement was not only dangerous to life, but, he feared, useless in its effects. In most cases, at least, the disease was as bad again in a few months as it was before surgical interference was adopted.

(*To be continued.*)

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PART I.—ORIGINAL ARTICLES.

Ligature of the Subclavian Artery, in a Case of Hemorrhage from the Axillary Artery. By R. J. MACKENZIE, M.D., F.R.C.S.E.

THE following case appears to me worthy of being placed on record, not from the fact of its being one of simple deligation of one of the larger arteries having been followed by a favourable result, but from the interest which attaches itself to it, as an injury of an unusual nature: and, more especially, I think it may prove of interest, from the fact, that a very small number of cases (amounting only to six or seven) have been recorded, in which a ligature has been placed on the subclavian artery for the purpose of arresting hemorrhage from a direct wound of the axillary artery, and as I believe that the practice to be pursued in similar circumstances, would still be a matter of considerable doubt in the minds of most surgeons.

John Forrester, a married man, of thirty-five years of age, a warehouse clerk, of temperate habits.

On the 5th of November 1845, this man, on returning in the evening from his employment, found his children amusing themselves with a red-hot poker, which they had put into the fire, from which it had just been removed as he entered the room. He immediately snatched the poker with his left hand from the boy who held it, and, in making after the young delinquent to chastise him for his misdemeanour, he stumbled and fell forwards. In trying to save himself from the fall, he stretched out his left hand, which bringing the butt end of the poker to the angle of the room, where the wainscot and floor met, he fell with his whole weight on the red-hot point, which entered the right axilla, immediately behind the tendon of the great pectoral muscle.

The poker was instantly withdrawn from the deep and scorched wound, from which a few drops of blood escaped. The pain was described as extreme for about five or ten minutes, when he was greatly relieved by the application of a bread and water poultice. Great redness of the surrounding integuments supervened, with a considerable degree of fever, which confined him to bed.

The application of poultices was continued till November 13th (eight days after the occurrence of the accident.)

On the forenoon of that day, a large eschar was separated, and, on its coming away, a sudden and copious gush of blood took place from the axilla, which was partially arrested by stuffing the wound with rags, till a surgeon in the neighbourhood arrived, who applied a compress of lint, soaked in an astringent solution. As the hemorrhage, however, was not altogether arrested, further assistance was sent for from the New Town Dispensary, and Dr William Robertson soon afterwards saw the patient. The lint was then removed, and the bleeding effectually kept in control by the careful application of a compress and bandage. It was difficult to estimate the quantity of blood which had been lost, but it had probably not exceeded twenty ounces.

On the evening of the same day, as he complained greatly of the pain caused by the compress in the wound, it was removed, and, there being then no return of the bleeding, and the whole surface of the cavity having a sloughing appearance, water-dressing with oiled silk was applied. A considerable degree of fever existed, for which an antimonial solution with sulphate of magnesia was ordered.

At Dr Robertson's request, I visited the patient the following day, when I found him free from fever, and suffering little pain. The surface of the wound, which was situated in the axilla, immediately to the inner side of the biceps, and behind the tendon of the great pectoral muscle, was about two inches in length and an inch in breadth, was covered with a gray slough, and secreting a thin watery discharge. The skin in its neighbourhood was of a dark-red colour, and there was considerable hardness and infiltration around the shoulder and upper half of the arm.

As the impropriety of making any further examination of the wound was evident, I re-applied the water-dressing, and explained to Forrester's wife, that, should the bleeding return, it was to be repressed by removing the dressing, and firmly pressing her finger to the bottom of the wound. I likewise pointed out the spot where the subclavian artery might be compressed in the neck.

At seven o'clock the following morning, (Nov. 15), I was sent for on account of a return of the hemorrhage, which had occurred in a full stream on his turning himself in bed. On entering the room, I found him lying in bed in a large pool of blood, his wife on her knees over him applying most effectual pressure on the subclavian artery over the clavicle, by which means she had suc-

ceeded in having the bleeding entirely under her control. The moment the pressure was relaxed, a profuse flow of arterial blood took place, which I checked by the application of a firm graduated compress in the wound, supported by a bandage applied from the fingers to the shoulder. The quantity of blood lost appeared to be from twenty-five to thirty ounces.

On the following day (16th) there was no return of the bleeding, but he complained severely of pain in the wound, and in the whole ulnar side of the arm. He was feverish, but had slept for several hours during the night.

On visiting him the following afternoon (17th), I found the bandages again saturated with blood, and he complained of increased pain and tightness in the neighbourhood of the wound, with a feeling of cold and numbness in the hand and forearm. I removed the dressings, and the instant I took the compress out of the axilla, a copious gush of arterial blood took place, which was immediately arrested by a fresh compress, secured as before. No bleeding took place that evening, but on the following forenoon (18th), the dressings were again becoming gradually more stained with blood.

Having previously narrated the details of the case to Mr Syme, and having had the benefit of his advice as to the measures which I had already pursued, I now obtained his opinion as to the proper course to be adopted, as it was evident that compression could not be much longer continued without great risk to the patient.

It was thought, that if, on careful examination of the wound, the bleeding point could be discovered to be not far distant from the external orifice, the opening should be freely dilated, and the vessel, if possible, be tied at a sound point above the opening in its coats. In the event of this being found impracticable, one of two courses remained to be pursued, the application of a ligature to the subclavian artery, or amputation at the shoulder point. The performance of the latter operation was certainly that attended with the greatest chance of success, and with least danger to the patient. The vessel would probably have been divided, in the incisions, above the injured point; and the patient was in a state by no means unfavourable for the performance of such an operation. Again, the free anastomosis, existing between the branches of the axillary and subclavian arteries, rendered the propriety of trusting to ligature of the latter vessel, as a means of arresting the hemorrhage, very questionable. As the patient, however, from his employment, depended for the means of subsistence on the use of his right arm, Mr Syme was of opinion with myself, that the ligature of the subclavian should be first adopted, when, in the event of a recurrence of the hemorrhage, amputation might be performed as a last resource with as much safety as before the application of the ligature.

Shortly afterwards, I visited the patient with Dr Duncan,

when we proceeded to examine the wound, with the view of ascertaining the state of the parts in the axilla. On removing the compress, no blood flowed from the wound, the edges and surface of which were sloughing, and the dressings were saturated with a thin and fetid discharge. On introducing the finger into the opening, it was found to pass upwards and inwards into the axilla, to the depth of about three inches, and at the bottom of the wound the axillary artery and surrounding nerves were found lying bare, the vessel being exposed to the extent of about half an inch. The parts in the neighbourhood were much infiltrated with blood, and the shoulder and upper part of the arm were considerably swollen and ecchymosed.

The depth of the wound and infiltrated state of the tissues rendering any operation here (at any time perplexing,) now one of extreme difficulty; and, moreover, the chance of our being able to reach the vessel at a sound point being very small, the idea of resorting to this proceeding was at once abandoned, and Dr Duncan readily concurred in the proposal to place a ligature on the subclavian artery above the clavicle.

As the room, where the patient resided, was small, ill ventilated, and badly lighted, it was thought advisable to remove him, previously to the operation, to a comfortable lodging in my own vicinity, which was accordingly done on the same afternoon. Previous to his removal, however, the compress was replaced in the axilla, and the limb supported by a bandage carefully applied from the fingers to the shoulder.

When I visited him the following morning, he was pale and exhausted, restless, and anxious that something should be done for his relief. He complained of the tightness of the bandages, which had again become saturated with blood during the night. He willingly assented to my proposal of tying the vessel, and expressed himself as anxious for the performance of the operation as soon as possible.

The operation was performed at 10 o'clock, A.M. (Nov. 19th), in the presence of Dr Davidson, Dr Duncan, Dr William Robertson, Dr Graham Weir, Dr H. Douglas, and Mr Howden, to whom I was much indebted for their kind and able assistance.

The integuments being drawn down by the hand of an assistant, an incision was made over the clavicle, the skin divided, extending from over the outer border of the clavicular portion of the sterno-mastoid for about three and a half inches outwards, parallel with the clavicle, and about half an inch above that bone. A few fibres of the platysma-myoides were divided, and the external jugular vein, which lay in the outer third of the wound, was slightly separated by the knife from its cellular connections, and held by a copper spatula to the outer side of the incision. The rest of the platysma engaged in the wound, and a few fibres of the clavicular portion of the sterno-mastoid were next divided. After a little

dissection, and the opening of the deep cervical fascia, the lower border of the posterior belly of the omo-hyoid was brought into view, below which a mass of adipose tissue protruded ; this being rather in the way of the knife in clearing the deeper parts, was dissected out and removed, when a branch of the brachial plexus was seen running across the bottom of the wound. On now introducing the finger, the insertion of the scalenus anticus into the tubercle of the rib was easily recognized, and the artery was felt pulsating to its outer side. A blunt hook being now introduced at the inner part of the wound, and the parts slightly retracted towards the sternum, a very slight dissection exposed the coat of the artery. This was laid bare to the extent of about a sixth of an inch, and a common aneurism needle easily passed around it from within outwards. The ligature was then tightened, and tied with a double knot. The edges of the wound were brought together by three points of suture, and a piece of lint, moistened in cold water, applied. One small vessel was divided at the first incision, which was twisted. The patient bore the operation remarkably well, and showed his want of consciousness of the tightening of the ligature, by inquiring, after the knot was secured, if "the tying of the thread would give him much pain."

An opiate, consisting of a drachm of solution of muriate of morphia was given. Some oozing of blood took place about two hours after the operation, by which slight tension of the sides of the wound was produced. Had the stitches been then divided, and the coagula removed, the wound might have been left in a more favourable state for union ; but, as the patient, though willing to submit to any thing which might be thought proper, was rather alarmed at any further interference, I thought it better to be satisfied with the continuance of the cold applications.

At 8 P.M., he felt quite comfortable, and had slept for three hours in the afternoon. Pulse 80 ; skin cool. He complained a little of heat in the arm and hand of the side on which the vessel had been tied, and the temperature of the surface of these parts was higher than the rest of the skin. The bandages, which were saturated in blood, had become dry and hard, the oozing from the axilla having evidently ceased. The compress was left *in situ*, but the bandages retaining it were cut, so as to remove, as far as possible, all pressure from the axilla. There was faint pulsation perceptible in the brachial and radial arteries. The opiate, as above, was repeated at 11 o'clock, P.M.

20th.—Slept nearly all night, and expresses himself as being free from pain and much better. Pulse 72 ; tongue clean and moist. The bandage was taken off from the arm and hand, and the compress gently removed from the wound in the axilla. The surface of the arm felt hot and dry, and on raising himself to sit up in bed, the limb assumed a livid colour from venous congestion. On laying him down, however, and slightly raising the

arm, the limb very soon assumed its natural colour and appearance. The edges of the axillary wound were covered by pale granulations, but the deeper part of the cavity seemed to have an unhealthy or sloughing surface. The discharge was copious and healthy. A small quantity of dry charpie was laid in the wound. Water-dressing, with oiled silk, was applied to the wound over the clavicle, which looked well. The same dressings were repeated in the evening.

21st.—Passed a restless night, but slept for two hours towards morning, and in the forenoon he appeared very well. Pulse 76; tongue clean and moist; skin cool; suppuration commencing in the wound over the clavicle. One of the stitches was removed, and a bread and water poultice applied. The arm and hand are of natural temperature and colour. The wound in the axilla, as deep as can be seen, is covered by pale granulations. Discharge healthy and diminished in quantity. The cavity was gently cleansed by means of a syringe and warm water, and charpie applied as before. Bowels freely acted on to-day by medicine.

23d.—Was rather feverish yesterday, with heat of skin and dry tongue. Both wounds, however, progressed favourably. He was ordered an antimonial solution, with sulphate of magnesia. To-day he feels much better, having slept for several hours during last night. Pulse 72; tongue clean and moist. There is a considerable degree of hardness, with slight redness around the wound over the clavicle, and strong pulsation is felt over the inner side of the incision. The remaining stitches were removed, and bread and water poultices continued. The wound in the axilla is now covered with healthy granulations, from which there is a copious discharge of healthy pus.

25th.—Going on well in all respects. Pulse 72; tongue clean and moist; bowels opened twice yesterday by medicine; sleeps tolerably well at night. A considerable quantity of coagulated blood has been discharged from the wound over the clavicle, the surface of which is now granulating and contracting, being dressed with a sulphate of zinc lotion. Axillary wound contracting, the discharge being considerably diminished. He complains of a prickling pain in the wrist and fingers, which is relieved when the discharge has free vent from the axilla. The pulsation of the radial artery is now very distinct.

29th.—A sinus was to-day discovered running from the wound in the axilla behind the humerus, which, when the patient lay on his back, allowed the matter to collect behind the posterior border of the deltoid muscle. A counter-opening was made at this point to give free issue to the matter. The discharge from the axilla has continued to be copious, but the surface of the wound is contracting, and is covered by healthy granulations. The wound over the clavicle is entirely cicatrized, except at the small

opening, where the ligature hangs out, from which point there is a slight healthy discharge.

December 7th.—The discharge from the counter-opening, which was at first pretty copious, gradually diminished, and in three or four days ceased, when the small wound closed. Since then the discharge from the axilla has been greatly reduced, and the wound in that part is now merely a superficial granulating surface, of the size of a shilling. Although the patient has a blanched appearance from loss of blood, his health has been very slightly impaired, and he now feels strong, and submits unwillingly to the necessary restrictions of diet. His only complaint is of a distressing prickling pain in the little finger and the ulnar side of the ring finger and hand. This he suffers from generally when he awakens from sleep, or after lying for a long time in one position, speedy relief being obtained by a change of posture, and slight muscular exertion of the hand and arm.

Dec. 8th.—This evening (20th day from the operation) the ligature was found lying loose in the wound, and was removed.

Dec. 22d.—The day after the separation of the ligature, the wound over the clavicle was found to be entirely healed. The axillary wound contracted rapidly, and has now been for some days firmly cicatrized. The patient has nearly quite regained his former robust health, and has resumed his occupation, being now able to write as well as before the occurrence of the accident. He still occasionally complains of slight prickling pain in the ulnar side of the wrist and hand; but this, he says, is gradually diminishing, and is already very trifling. Pulsation is entirely absent in the brachial, radial, and ulnar arteries; nor can the existence of the inosculating arteries be perceived by the finger, on careful examination of the limb.

In considering the facts of this case, it is evident that the untoward symptoms, which were to be apprehended after the application of the ligature, were gangrene of the limb, or a renewal of the bleeding from the wounded vessel, under either of which circumstances amputation must have been performed. The swollen and infiltrated state of the arm, with the feeling of cold and numbness of the hand, were conditions by no means promising for the vitality of a limb, in which the supply of blood was to be cut off from its main arterial trunk. The pressure of the compress upon the vessels and nerves of the axilla could not, I believe, have been much longer continued without producing mortification of the limb; and the possibility of diminishing, with safety, or altogether removing this pressure after the application of the ligature appeared to me to render the risk of gangrene much smaller by removing this obstruction to the venous circulation of the limb. The diminution of the swelling, which rapidly followed the cutting of the bandages and removal of the compress, showed this to be the case.

A return of the hemorrhage from the axilla was certainly the danger to be most apprehended, and was, perhaps, the only real cause of anxiety for the issue of the case. The free anastomosis, existing between the branches of the axillary and subclavian arteries, is sufficient, in general, to admit of a return of pulsation in aneurismal tumours in this situation, at a shorter or longer period after ligature of the subclavian artery. Had the re-establishment of the circulation, in the present case, proved sufficient to renew the hemorrhage, amputation must have been immediately performed, as further pressure in the axilla would then have been inadmissible.

The destruction of the coats of the vessel, however, I believe to have been of very limited extent, as rapidly fatal, and much more copious hemorrhage than appears to have taken place in the present instance, often occurs from a very trifling lesion of the arterial coats.

The surface of the wound, after the separation of the eschar, was healthy, and, as far as could be seen at the time of the operation, showed no further disposition to unhealthy action, than was probably induced by the pressure of the compress.

These circumstances led me to believe that the shrinking of the artery after the application of the ligature, and the contraction of the wound, which would probably take place after the removal of the compress, would prove sufficient to close the opening in the vessel, before the collateral circulation was established.

Had the opening in the vessel, on the contrary, been of larger size, and produced by unhealthy or phagedænic ulceration, the prognosis must undoubtedly have been much less favourable than under the conditions above mentioned.

The risk of secondary hemorrhage, at the separation of the ligature, was comparatively small, seeing that the artery at the point where the ligature was applied was sound; and all suspicions of that chronic disease of the arterial system, which is such a frequent cause of dread in similar operations for aneurism, were here absent.

On the Rules applicable to the employment of Venesection and of Opium in Obstetric Practice. By JOHN BREMNER, Surgeon, Marnoch. Communicated by DR THATCHER.

(Continued from p. 76.)

3d, Undeveloped state of cervix uteri.

In consequence of its proximity of situation, and also, as is believed, its similarity of nature to the preceding affection, treated of in last number, it was originally intended to have included, under the same head, the consideration of the one above specified.

Finding, however, that its importance has been deemed such as to be made the subject of very particular remark, by certain whose names deservedly stand conspicuous, both for acuteness and accuracy of discrimination, a separate place for investigation has here been assigned it.

The writers who more particularly take notice of this affection are Drs Gooch, Campbell, and Hamilton.

“The cervical portion of the uterus,” says Dr G., p. 185, “is sometimes thick, hard, gristly, hot, and painful, as if in a state of sub-acute inflammation; here the dilatation proceeds very slowly, and the os uteri, to the touch, instead of conveying the sensation of an orifice in a piece of broadcloth, feels like an orifice in an inch deal board.”

Dr Campbell, at p. 190, as formerly stated, merely mentions its occasional existence, and describes it as possessing an appearance similar to what it does about the eighth month of pregnancy, and concludes, by intimating that, for its removal, “V.S., approaching to syncope, is useful, which, conjoined with patience, are,” says he, “all that are required.”

The description given by Dr Hamilton is as follows:—

“The edges of the os uteri swell during the pain, as if distended with air, becoming relaxed when the pain ceases, and, notwithstanding strong labour throes, neither the membranes nor the infant are brought in contact with them. If, during the intervals of the pains, the finger be carried up within the os uteri, the stricture of the cervix will be distinctly perceived.”

Although somewhat general, and without reference to the previous condition of the patient's health, or state of the circulation, &c., there is to be met with, at p. 386, of the work of Dr Burns, a lengthened detail of the various morbid affections of the os and cervix uteri, along with the important influences they severally exercise over the natural phenomena of child-birth, the study of which, it is conceived, will become subservient to the improvement of all who feel desirous to advance in the path of correct obstetric knowledge.

Upon a consideration of the preceding statements, the affection in question bears, it will be seen, integral evidence of greater power of resistance than what the majority of accoucheurs have perhaps been led to expect.

An entry upon its investigation cannot be better effected than by endeavouring to obtain satisfactory answers to the following queries, *1st*, As to whether its existence is derived from the same source as the preceding, described in last number? and *2d*, If such be the case, provided a concurrence of similar circumstances should be met with, would they retard the progress of dilatation in an equal degree?

The only author whose opinion seems anywise decisive as to the first of these questions, is Dr Gooch, (see extract already quoted).

Whilst Drs Hamilton and Campbell maintain a perfect silence as to its nature, and the causes by which it is brought to pass, a good deal, it is supposed, can be collected from the statements they have severally recorded, more especially Dr H., respecting the difficulties to be encountered, and consequently the degree of distress to be undergone before its removal shall be finally effected. "Resistance," says Dr H., "to the dilatation, in consequence of an undeveloped band of the cervix uteri, is happily of rare occurrence; for if not understood, it is productive of a degree of distress which can hardly be described. The author has been called into cases where patients have been suffering from this cause for above thirty hours, and where the symptoms were truly alarming."

The inferences deducible from the language of Dr C., are altogether of the indirect kind. At p. 171, he intimates, "that in the cerv. uteri the muscular fibres are indistinct, and consequently less powerful than in the upper parts of the organ." Confirmed, as this statement will be found to be, by correct anatomical demonstration, are we not entitled to argue in a similar manner betwixt the comparative degrees of resisting power possessed by the cervix uteri, and its more susceptible vascular and nervous orifice? It must, however, be borne in mind that so long as all the parts act in harmony together, this diversity does not exhibit itself, neither, it is evident, will it be discovered in those cases where the orifice only is the seat of the malady. The real estimate of resisting power to the free operation of uterine action can only, it is presumed, be satisfactorily ascertained when the stricture is in the cervix, compared with where the parts included under the foregoing head, more particularly the aperture itself, are affected.

Having been led to reflect closely on the nature, &c., of this complaint, only within a very recent period, it is with diffidence I venture to advance any decided opinion on a subject demanding great nicety of distinction, both in a physiological and pathological point of view; whilst it is, at the same time, replete with considerations of the utmost importance to the safety of the parturient female.

From a comparison, however, of certain cases hereafter to be described, my present belief is, that, as the consequence of an equal degree of irritative action, or perchance of that description to which the epithet rigidity is more correctly applicable, affecting the os and cervix uteri, the latter will prove more distressing and tardy in its development under a similarity of circumstances and treatment than the former.

A number of particulars connected not only with the history of the cases above adverted to, but likewise of several others, of which a statement cannot, in the meantime be correctly furnished; and reasoning *a priori* upon the proximity of the seat of the affection to that of the extreme point of the organ, have served to im-

press me with the conviction that its occurrence is not so rare as Dr Hamilton's account would lead us to suppose.

Waving, as unprofitable, all controversy respecting these topics, the attention of those whose spheres of practice afford favourable opportunities, is urgently requested towards the investigation of this formidable affection, of which our knowledge is as yet very imperfect.

Diagnosis.—The diagnostic, as well as the characteristic symptoms of this morbid state, are so fully and distinctly embodied in the combined extracts of Drs Gooch and Hamilton, quoted at the commencement of this article, as in a great measure to supersede the necessity for any additional remarks.

The only two affections with which it seems liable to be confounded, are a state of organic disease of the part and that of the orifice already so frequently referred to.

The former, should it have been of considerable standing, will, it is believed, be capable of being distinguished with little difficulty; whereas, by minutely contrasting it with the latter affection, in which the orifice, though irritable, and enlarged in volume, as well as indisposed speedily to yield, is uniformly in contact with the membranes or foetal head, we shall the more readily comprehend the projecting, everted, and corrugated or purse-like appearances, exhibited in that under consideration. In the event, however, of a combination of the affections, it is easy to understand, that we shall witness all the symptoms descriptive of the present, in connection with a similar state of the os uteri, and perhaps also the parts more externally situated.

In all the cases met with where the symptoms of this complaint were anywise prominently marked upon the accession of labour, it was found, upon inquiry, that the patient had, in nearly a corresponding ratio with its duration and intensity, been the subject of the usual constitutional symptoms enumerated under the two former heads, thus evidencing the fact that it originates from the same source, and differs in nothing from the former, save with respect to locality.

4th, State of irregular action of the uterus.

The fourth resisting cause enumerated, (*viz.*) a state of spasm or partial action of the body or fundus of the uterus, appears to be principally taken notice of by Drs Burns and Rigby. At p. 454, its character and symptoms are thus described by the former. After stating it to be one of more frequent occurrence than many suppose, that it usually affects the circular fibre of the cervix, and also a detail of the causes from which it may generally be expected to arise, he proceeds:—"It is marked by pain coming or increasing at intervals, like proper pains, but it has little effect on the os uteri, or forcing down the child; nay, the os uteri sometimes seems even to contract during a pain; if there be any bearing down, the pressure is only momentary. The

pain does not entirely go off as in natural labour, but the patient complains of constant uneasiness in the back or some part of the belly, but usually the former. The paroxysm of pain is generally described by the patient as affecting some part of the belly, particularly the lower part, corresponding to the cervix uteri," &c.

Dr Rigby designates it stricture of the uterus; and his account is as follows:—"We have," says he, "already had occasion, more than once, to allude to that species of violent and continued contraction, which we have denominated stricture of the uterus, but have chiefly considered it where it affects the os uteri; a somewhat similar condition of spastic rigidity is occasionally, though rarely, seen in the other parts of this organ, and is capable of producing a most serious obstacle to delivery. The uniform and regular action of the uterus disappears; its contractions become partial both in extent and effect—one part alone contracts, whilst the rest of the uterus is relaxed; its shape thus becomes altered; for, by these partial contractions of its fibres, it may become elongated, shortened, flattened, &c.; the spasmodic action frequently varies its seat, and successively attacks different portions; thus, where it affects the body of the uterus, it becomes contracted almost like an hour glass, having a transverse circular indentation, as if it had been tied with a cord." After a still more lengthened detail of symptoms and circumstances relating to this complaint, he goes on to state,—“In cases of this kind we find, that although the uterus contracts, the child does not advance, but rather retracts during a pain—the contractions are never general, but partial, and even where they are general, the fundus does not attain its due preponderance over the os uteri; so that the one contracts as much as the other does; in severe cases also, the uterus continues in a state of spasmodic action during the intervals of the pains,” &c., p. 212.

In the absence of evidence which would enable me to substantiate wholly the more prominent symptoms here transcribed from the work of Dr R., such as that of hour-glass contraction, &c., the result of cases met with from time to time, have afforded me convincing proofs of its being a complaint of no trifling importance.

From observing, that in the majority of these cases, the os uteri, as also the parts forming the outlet, laboured (at least as I then supposed) under a considerable degree of excitement; and that it was seldom witnessed in others, of suspected difficulty from similar causes, in which a regular organized plan of treatment was adopted with the commencement of parturition, I have been led, as it were, step by step, to embrace the opinion, that it is not only a secondary, but in many instances, an affection of a tertiary nature, springing out of one or other of those included under the foregoing divisions. In hazarding this statement, I feel happy in being supported by such an able authority as Dr Burns, who, it

will be observed, seems to consider it as having a connection with a morbid state of the cervix.

In none of the cases which I have witnessed, could I suppose it depended upon a spasmodic state of the neck or orifice of the womb, but as being itself wholly of that nature, it may by some be considered, if not a primary affection, capable only of being produced in consequence of an intimate alliance with parts similarly circumstanced. This, it would seem clear, is a position utterly untenable, seeing that resistance to the healthy operation of any of the natural functions whatever seldom, if ever fails, to throw their respective organs, or those muscles in most immediate contact with them, into a state of spasm—instance the bladder and kidneys, &c., the effect of calculi in the urethra and ureters, and also colic affecting the bowels by reason of the application of cold to the lower extremities or surface of the body, &c.

A possibility, however, exists, that it may occasionally arise in consequence of a degree of excitement, or perhaps the contrary, a state of torpor, affecting the uterus itself, of which notice shall be taken by and by at greater length.

Diagnosis.—A careful consideration of the symptoms, as noted by Drs B. and R., can scarcely fail to render its detection easy, whenever it appears. Could I consider myself at liberty to draw conclusive inferences from a few examples, I should state its occurrence as being most common in those cases where resistance to free uterine action, in a greater or less degree, prevailed, but in which the pains are of a trivial, variable character. In this way, when opposed by a resisting power, upon which they are unable to make any impression, their course is determined in the opposite, or that direction which yields with greatest readiness on their approach, without being scarcely exerted on the uterine aperture at all. Much, however, it must be evident, will depend on the degree and nature of the resistance—the original state of the patient's constitution and health previous to confinement, &c.

Its existence, like all the others, can only be actually ascertained by careful and cautious examination during a few successive pains; and the young practitioner's inquiries will be greatly facilitated whilst he is subjecting his patient to this examination, by placing his other hand gently upon the abdomen, when any of the phenomena spoken of in the preceding extracts will be readily discovered. In the event of his suspicions being fully confirmed, provided he has not done so already, he should carefully scrutinize into the varied states of the uterus previously treated of.

5th, Premature rupture of the membranes of the ovum.

The circumstance of the membranous sac becoming prematurely ruptured, has been described by the majority of practical writers as an incident, by means of which the progress of labour is usually attended with considerably greater difficulty and delay than otherwise; and for the most part classed with those resisting causes

lately passed under review, as requiring for their speedier and more effectual removal the evacuation of blood.

It is found to be more prominently taken notice of in the works of Drs Hamilton and Burns.

Dr Campbell, likewise, at pp. 189, 190, makes mention of it in connection with a protruded state of the uterus into the pelvis, (which, having never been met with, will be passed over in silence,) and appears to regard venesection as the *panacea* against those untoward effects to which the presence of two such formidable occurrences have been supposed capable of giving rise.

Having been led, at the period of my entrance upon the practice of midwifery, chiefly from the reported magnitude of the difficulties attendant upon such an occurrence, as described in books, to offer it in the cases met with, no cordial welcome, and, at the same time, to watch over it with a jealous eye; I may, perhaps, be considered as guilty of exaggeration, when I state that the number of these in which the very unfavourable opinions imbibed have, at the moment of writing this, been fully verified, if any, are extremely few. I request it, however, to be particularly understood, that none of a difficult description, in which imprudent delay or mal-application in the use of remedies bore any part, are included in this statement. Making all due allowance in every instance where it unfortunately does take place, for the loss of an auxiliary so important in preparing the way for the more free dilatation of the parts concerned in the expulsion of the foetus, as the smooth, elastic, and conically-shaped membranes of the ovum in their distended state, the result of minute and close attention in the whole of the cases witnessed, warrants me to believe that, when in every respect complete, the power possessed by them of counteracting the effect of other resisting causes, is extremely small; and that venesection, in every instance, is to be had recourse to, in so far as may be deemed requisite towards liberating the system and sexual organs, from the state of phlogosis described, as if no such additional cause existed.

The preceding assertion, it is supposed, receives confirmation in no inconsiderable degree, from a circumstance which, as far as my reading extends, has not as yet been made the subject of observation. Allusion is here given to the fact that cases are almost of daily occurrence in which the liquor amnii is extremely limited in quantity, if not altogether wanting, and where, consequently, the effect in accelerating and facilitating the progress of dilatation must be much on a par with those in which early rupture has taken place. Lest, however, it should be supposed that the remarks which have been stated, respecting the effects of this incident, are such as would impress the mind of the young practitioner with the idea of its being one of trivial importance, I beg to say that in every instance where it happens, the utmost vigilance should be exercised in order to discover the correct state of the

system, and os uteri, &c., with regard to circumstances, which are here unnecessary to be repeated.

Without venturing to give a decisive testimony as to the real causes of its production in the greater number of examples, the fact of its frequent occurrence in cases of interruption dependant on a more or less unyielding condition of the os or cervix uteri, seems to have given rise to the impression that the sum total of the delay and difficulties was vested in itself, whereas, by careful observation, the reverse will, if I mistake not, with at least equal consistency, appear entitled to a preference in the scale of comparisons. The consequences being uniformly of an untoward than opposite tendency, it becomes the imperative duty of each of us to guard against such an event, by all the judicious means in our power, upon the accession and during the first stage of labour, and when it does so, to investigate minutely the condition of our patient, before having recourse to venesection or any other measures. The necessity for this caution seems the more urgent, seeing there exists the strongest reason to believe that its occurrence amongst individuals labouring under very considerable prostration of strength is not so rare as has perhaps been imagined. Two well authenticated cases at least will hereafter be adduced, in one of which venesection had evidently an injurious effect.

One circumstance connected with the early discharge of the amniotic fluid, which seems well nigh to have escaped the notice of writers, deserves to be especially remembered, viz., the inconvenience and irritation its constant dribbling away is apt to occasion, by which, should the case prove lingering, the passages are in danger of becoming excoriated, sometimes to such a degree as, in the absence of timely recourse to the ordinary prophylactic means, to render the patient's situation very irksome and unpleasant, when appearances seemed to indicate that otherwise she would have been exempted.

Of the advantages to be derived from the institution of an early examination in every case of premature rupture, lest the presentation should prove such as to demand the operation of turning, it is unnecessary here to stop to inquire.

Diagnosis.—Though, of itself, a comparatively simple and readily detected affection, yet, associated, as it is liable sometimes to be, with another, and also certain states of the os uteri, &c., in which a discrimination is of the utmost consequence, it is conjectured that a few observations respecting the most prominent of these, and the manner in which the diagnosis may most easily be accomplished, will prove, in some degree, interesting and serviceable to the junior class of practitioners.

The first is that of a false collection of serum :—“ Sometimes,” says Dr Campbell, p. 81, “ an effusion of fluid, resembling the liquor amnii, takes place per vaginam, before there is any evidence of uterine action, and has not inaptly been called *false*

waters. It may consist of a copious gush or two and then cease, or in a stillicidium of some days' duration. It has been ascribed to rupture of a lymphatic vessel; but more probably it results from irritation and increased secretion from the passages, or laceration of the chorion." When a discharge of any sort is reported to have taken place previous to his arrival, he should make it his invariable rule to inquire diligently into the circumstances of the case. To accomplish this in a dexterous and skilful manner, he has only to carry his finger, properly lubricated, along the canal of the vagina, and provided the dilatation be effected only to a very circumscribed extent, he will not in general experience much difficulty in reaching the os uteri, when, by gently insinuating its apex into the aperture, a little prudent attention and scrutiny during a pain or two, will serve to complete, in most cases, the distinction betwixt the soft elastic impression the membranous sac, should it be only very partially distended, never fails to convey to the touch, compared with the flattened, denser, and more unequal one afforded by the naked scalp. In those cases where the secretion of the liquor amnii has been very sparingly formed, or again absorbed, the diagnosis may not, at first examination, be accomplished with equal ease, as in the former case, when it becomes necessary to wait with patience, and endeavour to promote the farther development of the orifice.

The young accoucheur has, however, to be warned against another source of error, from which it is believed few can altogether claim exemption, viz., in very severe cases of excitement or rigidity, in which the os uteri is more than usually retracted, and where it consequently happens that its dilatation and access are more tardy and difficult than otherwise, he is inclined to suppose his finger in contact with the membranes or child's head, when only exerting pressure against the parietes of the uterus. Should such a mistake not be timely discovered, its results in many instances, it will be readily understood, must be serious.

Cases, also, are now and then met with where the os uteri has become so extended in volume at the commencement of the labour, as with some difficulty to be distinguished from the distended membranes, with which it is in the closest contact, and, like the former, demanding a certain degree of circumspection on the part of the attendant, in order to a proper discrimination.

In all the several states above described, more especially where discharges are reported to have taken place coeval with parturition, it becomes us always to be cautious in forming and delivering our prognosis, until we shall be able fully to determine the real state of matters by examination. A proper degree of attention, however, on the part of the practitioner, provided he can lay claim to a moderate share of the *tactus eruditus* will uniformly guard him against committing any particular blunder, respecting either this or the diagnosis.

(*To be continued.*)

Case of Extraction of a Foreign Body from the Uterus. BY
HENRY IMLACH, M.D., Extraordinary Member of the Royal
Medical Society, &c. &c.

Read before the Medico-Chirurgical Society, 4th February 1846.
[Communicated by PROFESSOR SIMPSON.]

THE following case appears to me so remarkable, that I consider it well worthy of notice; and yet I would have had some hesitation in bringing it before your Society, had not two other medical men, as well as myself, been able, from personal examination of the patient, to attest that the foreign body was actually within the uterus itself, and not merely in the upper portion of the vagina, or in some accidental sac communicating with that canal.

The history of the case presents several points of interest, and I shall therefore endeavour to detail it, just as it came before my own notice. In May 1843, while I was attending Mrs H., she mentioned to me that her youngest daughter, then about thirteen years of age, had been in the frequent habit of wetting her bed, ever since she was about 9 or 10 years old, and that this incontinence had come on after a fright. At this time a little mattery discharge had begun to flow from the vagina, and the mother attributed this last to the girl having strained herself while drawing water from a very deep well. The girl looked remarkably healthy, and as the development of her figure and other symptoms indicated the approach of the catamenia, I expressed to the mother a hope that when the menses were established, the girl would get well.

I heard no more of this patient till a few months ago, when she called upon me, on her way to a provincial hospital to which her friends had determined to send her; and as some sort of medical report is required previously to admission into that hospital, and having no opportunity of ascertaining the real nature of the complaint, I merely certified that she had "some uterine affection," after the mother had shown me some very soiled linen of her daughter's. I shall now quote from a letter I received from the surgeon under whose care she was for some little time in the hospital. "The history given of the girl when admitted, was, that after great exertion she became affected with vaginal discharge. After inspecting the discharges, and reflecting on the absence of general ill health, and somewhat bold demeanour of the girl, I communicated to the nurse my suspicions that we had unwittingly admitted a case of gonorrhœa. The progress of the case, however, led me to doubt my own conclusions, and I at length proposed examination by the speculum, which revealed nothing but a profuse discharge of pus from the *os uteri*. The symptoms certainly differed from those of an ordinary case of gonorrhœa,

but the relaxed and dilated condition of the vagina, and the readiness with which the girl submitted to examination by the speculum, tended to confirm my opinion of her character." I am sure my friend might have added that the absence of the hymen gave confirmation to his suspicions, at any rate, when I afterwards introduced the speculum, there was no vestige of this membrane sufficient to offer the least obstruction to the instrument.

I should here mention that the patient is now nearly sixteen, very robust looking, and has menstruated regularly and copiously ever since May or June 1843, the time when the purulent discharge first made its appearance.

The girl was now put under my care, and I accordingly visited her at home, thinking it would be a good case to try a modification of Dr Prothero Smith's speculum, which had been made under the direction of my friend Dr Sibbald of Maidstone. The metallic speculum however proved rather too large, so I introduced the glass tube, and then saw the os uteri most distinctly. It seemed enlarged, irregular, and fungous-looking. The finger, however, proved the best explorer, and I discovered the os tinæ pretty high up, ulcerated, open, and of a very peculiar hardness. The point of the finger easily entered the uterus, and there to my astonishment, I discovered a hard substance, which from its flat surface, circular shape, and the hole in the centre, I at once recognised to be a reel or pin. I then felt the stem of it, but could not dislodge it, as I had no instruments with me. A few days afterwards, I took my friend Mr Ray of Milton with me, for I wished to have his additional testimony as to the actual position of the reel. This happened to be the last day of her menstruation, which fortunately caused the os uteri to be well dilated, the fluid could be felt flowing through the hole in the reel, and although we could not distinguish *the neck* of the uterus, both Mr Ray and I were satisfied that the reel was actually within that organ. The patient was now laid on her back in the lithotomy position, I placed my left forefinger on the reel, seized it with a long pair of ball-forceps, and with some slight difficulty extracted it entire.

I next made a very careful examination of the parts, and could discover nothing like a pouch, and am quite satisfied that the reel had been actually within the uterus, not partially but entirely. The os tinæ was very irregular, and would easily have admitted two fingers. The cavity of the uterus was large, its walls thick, soft, and well lubricated with the menses. The girl did not complain of any pain during the extraction. The reel was a common wooden one, one inch and a third in length, and five-sixths of an inch in the diameter of its ends.

Plenty of warm water was used with a female syringe during the next two days, after which I again visited the patient, and found that she had had little or no pain since the operation. I ex-

amined both with the speculum and with the finger, and found the vagina smaller than before and healthy; the os tinæ much contracted, firm, rather irregular in shape, and would scarcely admit the point of the finger. The purulent discharge has entirely ceased ever since that time, but she still occasionally wets the bed, though not so frequently as she has done during the past six years.

Now the cavity of the unimpregnated uterus could hold an almond, according to anatomists, but the mouth of it is too small, in the normal condition, to admit so large a substance without great difficulty, and considerable gradual dilatation. In the present case the uterus contained a good sized reel, and as I have mentioned how it was *got out*, I have next to inquire how it *got in*. The girl declares she never introduced it, and was not aware of its presence. And as the most credulous will not allege that a fortuitous concourse of atoms produced this reel, or that it could be the result of spontaneous generation, or of peculiar impregnation, or consisted of an extraordinary degeneration of the ovum, we must infer that it came from *without*. Urinary vesical calculi have been extracted, having for their nuclei various matters, such as nuts, tobacco pipes, barley, &c. and even hair pins, as in the case lately published in the Medical Gazette, for 14th November 1845, in which instance it was believed that the hair pin had been swallowed, and afterwards found its way from the colon into the bladder; but as my patient did not recollect having swallowed a reel at any time, I inquired still further, and was told by her mother that when the girl was between nine and ten years of age, a man met her on the road, and committed, or attempted to commit rape on her; she told her mother of this at the time, but no steps were taken to prosecute the offender. Ever since that time she has watered her bed, but she does not know whether or not the man had introduced the reel at that time. There never was any inflammation of the parts to excite attention, and at any rate, no purulent discharge till the period of puberty.

The natural inference appears to me to be, that perhaps the story of the rape may be true; that she thus learnt bad habits, and from irritation at puberty, she introduced the reel into the vagina, whence she could not extract it again: but still it is wonderful how such a large substance worked its way into the cavity of the uterus of a person who never had a child. This is indeed the puzzle of "the reel in the bottle." But query, to what extent is the mouth of the uterus open during coitus? for if it be then more patent than in the unirritated condition, repeated masturbation might force any such substance as the reel from the canal of the vagina into the cavity of the uterus.

Notice of Glycerine, recently proposed by Mr Startin, of the London Cutaneous Institution, as an application in the Treatment of some Cutaneous Diseases. BY WILLIAM SELLER, M.D.

SCHEELE, the Swedish chemist, sixty or seventy years ago, observed that when litharge and oil are boiled together in a little water, a substance of a sweet taste separates and remains dissolved in the water, while the chief part of the oil unites with the oxide of lead to produce the well-known diachylon, or lead-plaster. This sweet substance was termed at first the sweet principle of oil, and is the glycerine of more recent times, so called owing to its sweetness, by Chevreul, the earliest successful cultivator of the chemistry of fatty bodies. This substance, though so long known, has not been made trial of in medicine till now. Even in our last-published works on materia medica, there is no mention made of its possessing any medicinal properties. It has been tried of late, however, at the London Cutaneous Institution, and with such promise of success, that the travellers of the London wholesale drug-houses, are already exhibiting samples, and soliciting orders for it over the country. The probability of this substance proving a useful application in some forms of cutaneous disease, appears to have first occurred to Mr Startin, of the above-mentioned Institution. He has described its effects in a lecture¹ on the squamous eruptions reported since the publication of the last number of this journal.

Its usefulness depends most probably on its property of resisting evaporation, even at a considerable temperature. Mr Startin says that a common plate wetted with it may be kept in an oven, side by side with a joint of meat, till the meat is cooked, without any sensible diminution in the quantity of the liquid. Hence, when applied to the skin, it remains moist, forming a coating or varnish, not distinguishable from the ordinary secretion of the part. A lotion composed of half an ounce with ten ounces of water, effectually prevents the skin from becoming dry. When used pure, it makes the part stiff and uncomfortable, so it answers best diluted. It is also added with advantage to poultices, and even to baths. Mr Startin speaks of its use chiefly in Psoriasis, Pityriasis, Lepra, and Ichthyosis, in all which he describes it as producing excellent palliative effects. He promises to give to the Profession ere long the results of experiments he is carrying on to determine its virtues in various forms of cutaneous disease, and in the meantime he invites his medical brethren to make trial of it in their practice, and to communicate to him the results. As, from the ascertained properties of this substance, there is good

¹ Medical Times, Feb. 7.

ground to think that Mr Startin's account of its advantages, as well as his expectation of a more extended utility, will turn out to be well founded, it is desirable to publish his invitation to his medical brethren as widely as possible—which is the object intended by the present notice.

The accounts of this substance in our common manuals are for the most part very meagre; a few words, therefore, in addition, on its chemical history may not be unacceptable to those practitioners who are disposed to put its reported properties to the test.

Glycerine is an uncrystallizable transparent fluid, of the consistence of syrup, free from colour when perfectly pure, but usually of a yellowish tint, which may be removed by animal charcoal. It has no smell, the taste is sweet, not unpleasant; and it is heavier than water, 1.250 to 1.280. It dissolves in water in almost every proportion; it is also soluble in alcohol, while it is wholly insoluble in ether. It attracts moisture from the atmosphere, and this, it is probable, is partly the cause of its never drying up when spread out thin. At an elevated temperature it boils, a part passing over unchanged, while the rest is converted into empyreumatic oils, acetic acid, and combustible gases, with a carbonaceous residue. When set on fire, it burns with a clear blue flame. It undergoes no alteration in the air, and cannot be made to ferment even by the addition of yeast. Nitric acid changes it with some difficulty into oxalic and formic acids. Nitrate of mercury affords a strong white precipitate; with chlorine, glycerine forms a white flocculent solid; and with bromine, a dense oily liquid. Boiled with solutions of salts of copper, it throws down metallic copper. The diacetate of lead gives no precipitate; and with the aid of heat, glycerine dissolves the oxide of lead. With potass it forms a compound soluble in alcohol. By sulphuric acid, it has been said, to be converted, as in the instance of starch, into sugar; but the real effect is the production of an acid-compound, the sulpho-glyceric acid. This acid with bases affords salts, exhibiting some analogies with the sulpho-vinates—these salts are soluble; the sulpho-glycerate of lime crystallizes in long delicate needles.

Various methods of procuring glycerine have been suggested by the several authorities. That which Mr Startin employs is got from Apothecaries' Hall, the residue of the process for litharge-plaster. As glycerine does not enter in soaps, it must be contained in the refuse of soap manufactories, so that if a demand arise for it, here are two abundant sources of supply.

When the original process by Scheele is followed, namely, by boiling litharge and oil with a little water, the water takes up the glycerine along with a portion of oxide of lead. The oxide of lead may be got rid of by sulphureted hydrogen, and the water in part by evaporation; or, if it be desired of high specific gravity, by evaporation in vacuo, side by side with a vessel of sulphuric acid.

When an animal fat is chosen, this is the best process.¹ In the details of the first part of the process, the directions given in the pharmacopœias, under litharge-plaster, should be adopted. Dr Ure, however, recommends, in the case of olive oil, no more than half the proportion ordered by the colleges.

When an alkali is preferred to saponify the oil or fat, it should be in the caustic state—the glycerine will be found in the mother liquor along with a portion of the alkali. To saturate the alkali, sulphuric acid should be added, as soon as the soap separates, and any excess of the sulphuric acid is then to be neutralised by a little carbonate of baryta. Next the liquid is to be filtered and evaporated to the consistence of syrup, and, after the addition of alcohol, it is to be filtered again. The alcohol dissolves the glycerine, leaving the sulphate of the alkali, and the sulphate of baryta as a deposit. This is the process as directed by Berzelius, but it is manifestly unfit to afford an article for the market. Tartaric acid may be taken here instead of the sulphuric acid, but alcohol is still requisite to separate the glycerine. For external application, the presence of a small quantity of the oxide of lead, or of caustic alkali, will not often be an objection in cutaneous diseases, and if it were, the oxide of lead might be separated sufficiently by sulphuric acid; nor would the caustic alkali, after being changed to a sulphate by the same acid, act injuriously.

Glycerine consists of carbon, hydrogen, and oxygen with water, ($C^6 H^7 O^5 + HO$)—and it has been regarded as a hydrated oxide, of a radical glyceryl ($C^6 H^7$) not yet separated. This oxide is further described, as a base analogous to the oxide of cetyl in spermaceti, and cerain in bee's wax. This base, united with the fatty acids, constitutes oils and fats—thus margarine is pronounced to be the bimargarate of glycerine, stearine the bistearate of glycerine, oleine the binoleate of glycerine, butyrine the butyrate of glycerine, &c.

¹ Simon's Chemistry, vol. i. p. 70.

PART II.

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

No. II.—*Summary of the Remedies applicable to the cure of Chronic Eruptions.* By WILLIAM SELLER, M.D., one of the Physicians to the Royal Public Dispensary, Edinburgh, &c.

CUTANEOUS eruptions are very embarrassing to the medical practitioner. Supposing the no small difficulty of their diagnosis to be got over, the choice of remedies for the present relief of the patient's sufferings, or the ultimate cure of the disease, raises a new source of perplexity, particularly when the disease is one of those of less familiar occurrence in ordinary practice.

It is Heberden who says that the first thing a medical practitioner has to consider, when called to a patient, is, whence he is to choose his remedies—from among emetics, purgatives, diuretics, diaphoretics, astringents, tonics, or narcotics, &c., that is, on what therapeutic order of medicines is he to draw for treatment? But this rule is hardly of any avail in cutaneous eruptions, or at least in chronic eruptions. The eruptive fevers fall under very much the same rules of management as the febrile diseases in general, but the language of therapeutics, applicable to most diseases besides, will not bend to the description of the treatment of chronic eruptions. No doubt, some chronic eruptions are dependent on internal derangement of function, and others arising from local disorder, are kept up and aggravated by the presence of such internal derangement; so that in both cases there is room, more or less, for treatment by general rules applicable to the actual state of the patient's constitution. But after deducting those cases in which the constitutional derangement is of a character known under other circumstances, and therefore falling within common rules of treatment, there remain connected with cutaneous diseases, many kinds of functional disturbance of a special character, and which require, therefore, a special mode of treatment. Again, on other occasions, there is this complexity in the subject, that the remedies which would cure the constitutional disturbance, were there nothing present but constitutional disturbance, prove hurtful to the local affection. Thus the remedies selected to combat the constitutional disturbance, should be not only available against it, but must be favourable, or at least not unfavourable, to the direct cure of the local affection. For example, mercurials may be not unsuitable to the removal of the constitutional disturbance, but may

fail in their final effect, by aggravating the local disease in a degree, more than commensurate with their beneficial influence over the constitution. Mercurials are almost uniformly hurtful in lichen, and yet the constitutional disturbance in lichen is often such as might be expected to yield to mercurial remedies. Here, doubtless, the constitutional effect of the mercury is the same as in analogous cases of simple disordered function, but its stimulus on the local disease is injurious. It would be easy to multiply examples of the same description. But the conclusion intended is already obvious, the constitutional treatment in a cutaneous eruption has to be determined, less by general considerations, than by a special experience in previous cases of eruption of the same character.

And the same kind of reasoning is not less applicable to the treatment to be undertaken expressly against the local affection itself, whether the remedies be designed to act against it, through the stomach, or directly on the affected part. In short, whether a constitutional affection be present or absent, it is beyond dispute, that general considerations turning on the supposed character of the disease, and on the nature of remedies, are an insufficient ground for the choice of the means of cure, or of alleviation in such diseases, without a special experience of what cures or alleviates the particular eruption which is present.

Thus cutaneous diseases are, as it were, a separate field of practice, in which the experience gained in other departments affords but an uncertain light. It is true, the state of the affected part in general points out plainly enough whether emollient and soothing, or stimulating applications should be used. In so far the treatment even here is rational; but in the choice of soothing applications, and still more in the choice out of the numerous peculiar remedies, coming under the head of stimulants, we are forced to acknowledge how much of our skill is empirical. On what principle could it be pronounced, that the direct application of sulphur should be specific in scabies, and yet injurious in lichen?

Since then the principles on which remedies are grouped together for the ordinary uses of practice, hardly ever coincide with the ends to be attained by treatment in cutaneous diseases, if there be any sound principles on which the remedies for eruptions can be grouped, these will be best found by the previous consideration of the said remedies, in the aggregate, under the restricted view of their application to such diseases.

By reflections such as these, was suggested the following alphabetic summary of the remedies in chronic cutaneous diseases:—

Ablution.—Ablution, with various mild fluids, is of the utmost benefit in many obstinate eruptions. For example, with warm or tepid water, or milk and water, in strophulus and prurigo, espe-

cially prurigo formicans, in psoriasis, in impetigo scabida, impetigo sparsa, and generally in the irritable states of impetigo, and in eczema solare; and with warm gruel or strained bran and water; in eczema impetiginoides, and eczema rubrum, and porrigo larvalis. In porrigo furfurans, ablution twice a day, with a mild soap and water, serves to remove the branny scabs.

Acidum Aceticum, Acetum Britannicum, Acetum Gallicum, Acetum Destillatum.—The strong acetic acid is hardly used unless as an application to warts. Vinegar and water affords temporary relief to the itching in several of the species of prurigo, and in those forms of strophulus and lichen, in which a similar uneasiness occurs. Vinegar is also among the stimulants advantageously employed in acne simplex, when, by the previous use of milder applications, such a stimulus can be borne. The internal use of acetic acid is rarely serviceable in cutaneous eruptions, and has often proved hurtful, as in psoriasis and acne, in which it has been administered on the false hypothesis, that these diseases are of a scorbutic nature. The use of acetic acid in the febrile exanthemata does not fall within our purpose at present.

Acidum Hydrocyanicum Medicum.—The hydrocyanic acid in lotion relieves the uneasiness in impetigo. For this purpose, one part of the medicinal acid is diluted with two hundred parts of water, or nearly in the proportion of one drachm of the acid to 24 ounces of water, and the lotion is by degrees increased to twice or thrice this strength. It is used, however, of greater strength. The formula given by Schneider of Dusseldorf, who has employed it successfully, corresponds with the greatest strength above-mentioned, being one drachm of the acid in four ounces of spirit, and as much rose water. Dr A. T. Thomson's formula directs a much larger proportion of the acid; being one part of acid to two of spirit, and twenty of water. Rayer's formula is of nearly the same strength, being two drachms of the acid to half a pound of water. Rayer admits good effects from such a lotion in impetigo, but doubts if it be superior for this purpose to diluted nitric, or diluted sulphuric acid, and properly remarks that much caution is requisite in using a lotion of this strength, if the cuticle be not entire.

Acidum Hydrochloricum or Muriaticum.—Muriatic acid is less used in cutaneous diseases than the other acids termed like it, the mineral acids, namely, the nitric acid and the sulphuric acid. The muriatic acid, like the two just mentioned acids, enters into the tonic treatment, consisting of bark and other vegetable tonics with mineral acids, which is frequently beneficial in eruptions kept up by weakness of habit, as in lepra nigricans and eczema solare. Bielt uses a decoction of barley acidulated with the hydrochloric acid in eruptions, accompanied with pruritus, as lichen, prurigo, and eczema. In rupia and impetigo, dilute muriatic acid is employed as a caustic, the part being touched with a

feather dipped in the acid, and immediately after sprinkled copiously with water. Its local application has some special uses, as in the form of lotion, to soften the crusts in lepra, to touch aphthæ and dab ephelides.—For the last purpose, the lotion should be made of a drachm of muriatic acid and eight ounces of water. It is also useful in the dilute state to remove the thicker crusts in porrigo lupinosa. This acid is also advised to make an acid bath, the proportions for which are from two to four ounces of muriatic acid, to 70 imperial gallons of water. This bath is recommended in prurigo and lichen.

Acidum Nitricum.—Besides the internal use of dilute nitric acid on those occasions on which mineral acids are indicated, as in lepra nigricans, eczema solare, impetigo erysipelatoides, and the like, it is employed to acidulate drink in eruptions, attended with pruritus, as lichen, prurigo, eczema, and externally, as a caustic in impetigo and rupia. Combined with lard, it is beneficial in the dry and unirritable state of porrigo furfurans—for this ointment there was once a formula in the Edinburgh Pharmacopœia. This ointment was made of six drachms of fuming nitric acid (sp. gr. 1520), and one pound of lard.

Acidum Sulphuricum.—Dilute sulphuric acid is on the whole the most extensively useful of the mineral acids in chronic eruptions. In a few cases the internal use of the nitric acid is superior in effect as in chronic eczema. Half a drachm to a drachm of the sulphuric acid, in a quart of barley-water, should be taken daily. This mode of administration is beneficial in lichen during exfoliation, in impetigo erysipelatoides, in lepra nigricans, in eczema solare and eczema rubrum. In furunculus, dilute sulphuric acid is described by Fosbrooke as very efficacious—twenty minims twice a day are given at first in a large proportion of water, and this dose is gradually increased to two drachms with the like frequency.

In lotion, it is employed as an addition to the applications made use of in aphthæ, and as a wash in ephelides. Such a lotion should contain $\zeta i.$ in $\zeta xvi.$ of water. In ointment, it is beneficial in scabies, though this ointment yields in efficacy to the sulphur ointment, and has the inconvenience of destroying the patient's linen. The proportion is half a drachm of the diluted acid to an ounce of lard. A similar ointment is recommended by Chapman in porrigo scutulata.

Alkalina—See potassæ liquor, potassæ carbonas; sodæ carbonas, ammoniæ liquor, ammoniæ carbonas.

Althæa Officinalis, Marsh-Mallow Leaves and Root.—Marsh-mallow is a demulcent much employed in France. The root contains abundance of mucilage, with a little starch. Cold water extracts the mucilage; and when the root is boiled, it yields starch also. An infusion of the root is a common preparation in France, both for external and internal use in eruptive diseases.

The infusion is made of an ounce of the root, with a quart of boiling water. When the cold infusion is prepared, the same proportions answer. The decoction is made with nearly the same proportion of water boiled down to two-thirds. The decoction is now called mixture in the Edinburgh Pharmacopœia, and being designed for internal use, contains raisins. These preparations of the mallow root are employed as emollients by themselves, more frequently are joined with other vegetable substances, or are made the vehicle for saline applications. A decoction of althæa root, leaves of fox-glove, and poppy heads, is serviceable in those very painful states of impetigo figurata, and impetigo sparsa, in which most of the common remedies, even of the mildest kind, aggravate the patient's sufferings. A decoction of marsh-mallow roots made with the addition of dulcamara and hyocyamus, a handful of each, is used to moisten the compresses employed in lichen and acne. The infusion of marsh-mallow roots (one pint or 20 ounces), with one or two drachms of the solution of diacetate of lead (goulard) is useful as a lotion in lichen and chronic eczema.

Ammonia, ammoniæ liquor, ammoniæ spiritus, ammoniæ spiritus aromaticus.—Ammonia has been less used than the fixed alkalis, in eruptive diseases. Lotions containing the liquor ammoniæ, have been sometimes made use of in porrigo, and impetigo, but as Rayer remarks, the conditions under which it should be employed have yet to be determined with exactness. The same remark applies to the pomatum of Gondret, which consists of equal parts of aqua ammoniæ, oil of almonds, and suet. Bateman recommends a few drops of the aromatic spirit of hartshorn in internal disorder consequent on the repulsion of strophulus by cold.

Ammonia acetatis liquor, spirit of Mindererus.—The spirit of Mindererus is often serviceable as an external application in painful eruptions, with or without the addition of spirit, it affords relief in several species of prurigo, as in prurigo formicans, prurigo senilis, and even in prurigo podicis, and prurigo pudendi. The same lotion is useful in acne simplex, or pimples. The following formula is recommended when there is excessive pruritus.

℞. Liquoris acetatis ammoniæ ℥iii., Aquæ rosæ ℥iv., Spirit rectificat. ℥ss M.

Ammonia arsenis.—The solution of this salt is proposed by Bielt for internal use in most chronic diseases of the skin; eczema, impetigo, lichen, and more particularly in the squamous diseases, as lepra, psoriasis &c. This formula is,

℞. Arsenit. ammoniæ gr. iv., Aquæ puræ ℥iv. Solve. Dose from 12 drops to a drachm or more.

Ammonia carbonas—See ammonia.

Ammonia hydriodas; hydriodatis ammoniæ unguentum.

℞. Hydriodatis ammoniæ gr. xviii. adipis ovini ℥ss, Amygdalarum olei ℥ii. Tere simul. This ointment is employed by Bielt as a depilatory in Porrigo.

Ammonia murias, or ammoniæ, hydrochloras; Muriate of ammoniæ is added to some of the applications used instead of

sulphur in scabies. The formula for Pringle's ointment is,

℞. Pulveris radice veratri albi ℥ii. muriatis ammoniæ ℥i. axungię ℥vi. Tere semul.

This ointment is recommended against prurigo, as well as against scabies. Bateman says these are the ingredients of the empirical application against scabies, sold under the name of the Edinburgh Ointment. It is also combined with sulphur for the same purpose.

℞. Sulphuris sublimati ℥ss, muriatis ammoniæ ℥ii. axungię ℥ii. M.

It is used also in lotion with alum, and Bareges water, towards the termination of eczema and impetigo. Instead of Bareges water, the sulphas potassa cum sulphure may be introduced.

℞. Sulphatis aluminę et potassę ℥iii. muriatis ammoniæ ℥i. sulphatis potassę cum sulphure ℥ss, aquę purę ℥x. Solve.

The simple lotion of muriate of ammonia gives temporary relief in prurigo.

Amygdalus communis; amygdalae dulces; amygdalae amarae.

The emulsion of bitter almonds was a favourite remedy of the old physicians in inflammatory cutaneous eruptions, for example, in acne; and the emulsion of sweet almonds is still advantageously employed to smear the affected parts in irritable states of impetigo.

Anthemis nobilis; chamomile flowers.—Useful as a fomentation.

Anthrakokali.—This substance was introduced several years ago, by Dr Polya of Pesth. It is prepared by adding hydrate of lime, to a solution of carbonate of potass with 14 waters, in a sufficient quantity, to set the potassa free; and then filtering and evaporating in an iron vessel, till the fluid assume the appearance of oil, when the residue is to be mixed with coal in fine powder, in the proportion of 5 parts for every 6 parts of carbonate of potass employed. The iron vessel is then to be removed from the fire, and stirring kept up till the contents are changed into a black homogeneous powder. It is then to be put into well-stoppered bottles. Dr Polya prescribes two grains of this powder, three or four times a day in liquorice-powder, or carbonate of magnesia. An ointment is made by adding 16 grains to an ounce of lard. According to Polya, this compound has the same specific effect over the tettery principle which mercury has over syphilis, sulphur over scabies, and iodine over scrofula. Polya's views have not been confirmed, but Gibert thinks it, as an external application, a useful moderate stimulus, for example in psoriasis when it has reached its second stage.

Antimonials.—The preparations of antimony, as the antimonial wine and the antimonial powder, are of service as diaphoretics in various chronic cutaneous eruptions, as in acne indurata, pityriasis rubra, in sycosis, in frambęsia—antimonials however are seldom useful when there is much local irritation, as in prurigo formicans, and the like.

Argenti nitras.—Nitrate of silver, chiefly in the form of lotion, is a highly serviceable application in many forms of cutaneous diseases. A few examples in the case of a substance so familiar in modern practice will suffice. Thus in the dry and inert state of porrigo scutulata, in porrigo favosa, in the aphthæ of adults, in lupus, in psoriasis it is beneficial, and in the solid form in prurigo senilis and prurigo formicans.

The lotion generally contains from 3 to 6 grains in the ounce of distilled water, varied according to circumstances, to a greater or diminished strength.

Nitrate of silver is improper in chronic eczema.

Arsenicum.—*Solutio arsenitis potassae* or *solutio arsenicalis*, or Fowler's solution. *Solutio arsenitis sodae*, or *Pearson's solution*; eczema chronicum; lepra, psoriasis, ichthyosis, chronic lichen, impetigo, lupus, elephantiasis and syphilitic eruptions. It is apt to irritate when the skin is irritable. In pityriasis it is much less available than in the other squamous eruptions.

The ordinary cautions required in the administration of arsenic are too well known to be detailed here.

Arsenical Preparations.—*Solutio arsenicalis*, or Fowler's solution; officinal; half a grain of arsenious acid in each drachm; dose—from five drops upwards. *Pearson's solution*; one grain of arsenite of soda in each ounce; dose—from twelve drops to a drachm. *Biett's solution*, arsenite of ammonia one grain in each ounce of water; dose—12 grains to a drachm.

Asiatic Pills.—Arsenious acid one grain, black pepper powdered twelve grains, gum arabic two grains, water q. s.; make 12 pills; dose—one or two a day.

Pills of Arsenite of Iron—Arsenite of iron three grains; extract of hop one drachm; Mallows' powder (liquorice powder instead) half a drachm, orange flower syrup q. s.; make forty-eight pills; each contains one-sixteenth of a grain; dose—one daily.

Pills of Arsenite of Soda—Extract of aconite one scruple; arsenite of soda two grains; make twenty-four pills; dose—one or two daily.

Come's Powder.—White oxide of arsenic ten grains, sulphuret of mercury two scruples; animal charcoal powdered, ten grains; use as a caustic in ulcerated lupus.

For other preparations, see Mercury, Iodine, &c.

Avena—See Ablution. Porridge of oatmeal is a good poultice; and a popular cataplasm in Scotland is made of what is called sowins. Sowins are made of the husk of the oat, which is removed preparatory to making oatmeal. These husks are long and slender, and are to be got in the shops under the name of sowin-seeds. If these seeds be infused in hot water, and the infusion be allowed to stand in a warm place, it becomes sour and mucilaginous, and the liquor being separated from the husks,

may be reduced by heat to a tolerably stiff jelly. For a poultice, this jelly is usually mixed with an equal part of oatmeal made into porridge. Such a poultice is an excellent application in cases where a poultice is indicated, and there is, at the same time, much tingling, heat or uneasiness.

Dr Morrison describes a singular use of oatmeal in psoriasis. He dips a sponge squeezed out of tepid water in oatmeal, and directs the affected parts to be rubbed with it, repeatedly renewing the oatmeal as it drops off, and this process is to be practised two or three times a day. Mr Plumbe approves of the practice.

Axungia or Lard, of various well-known uses in skin diseases.

Barytæ Murias, or Bariï Chloridum.—The solution of muriate of barytæ is recommended by Bateman in lupus. The dose of the solution is from half a drachm to a drachm, also in porrigo favosa.

Bath, warm.—A few examples of the skin diseases in which the warm bath is useful must suffice. In prurigo senilis; in prurigo mitis, with friction; in lepra; in eczema rubrum; in pompholyx; in ecthyma luridum; in the ecthyma succeeding to scarlatina, and small-pox. The warm bath is sometimes hurtful in lichen, and also in young persons affected with pompholyx. In this case the tepid bath answers better.

The warm sea-water bath answers in the drier forms of impetigo; in prurigo senilis; in lepra; in pityriasis rubra.

Cold bath is useful in prurigo at last, and sea-bathing in prurigo formicans and lepra nigricans; in prurigo podicis the cold hip-bath answers. Sea-bathing serves both to remove pityriasis and to prevent its return. Rayer recommends sea-bathing as a means of cure in chronic eczema affecting the verge of the anus, and also in some forms of chronic impetigo.

Baths, alkaline.—An alkaline bath is made by adding from four to six ounces of carbonate of soda to an ordinary warm bath. Such a bath is of use in chronic lichen, in prurigo, in lepra, &c.

Baths, emollient.—These baths, prepared with bran, starch, marsh-mallow, oil or gelatine, are useful in impetigo, prurigo, strophulus, lepra, psoriasis, pityriasis, and the like.

Baths of the Vapour of Water.—Such baths are of service in chronic lichen when the skin is dry, in prurigo, in lepra, in psoriasis, in pityriasis.

Baths of Sulphurous Waters, Natural and Artificial—See Mineral waters.

Baths or Fumigations of the Vapour of Sulphur—See Sulphur.

Baths Iodureted—See Iodine.

Beta Vulgaris.—Poultices of beet-root mashed often afford much relief in local irritation; but the leaves of beet, like cab-

bage leaves, popularly employed in many eruptions, as in porrigo favosa, are uniformly hurtful.

Blood-Letting—General and local.—The subject of general blood-letting in chronic eruptions would require a thorough revision. At present all that can be attempted is to enumerate the eruptions in which it has been recommended on good authority. Bateman approves of blood-letting in prurigo; of small blood-lettings in lepra; while he regards it as hurtful in psoriasis. Rayer speaks strongly in its favour, in eczema, especially when more acute, and in extensive acne in young plethoric persons; also in ecthyma, when acute and extensive, and in anthrax; also in lichen, as the lichen agrius, when the papulæ are numerous and confluent; in lepra, when recent and spread over the body; in psoriasis as in psoriasis guttata, when recent in adults; and in some forms of syphilitic eruption. Cazenave and Schedel are equally favourable to venesection in these diseases, under the same kind of circumstances.

It is remarkable that the French authorities, so contrary to their general practice, should recommend blood-letting in certain eruptions so much more freely than the English. Thus, though Mr Plumbe's work seems expressly designed to point out the frequent presence of overlooked inflammatory action, it would not be easy to extract from it any sentiment favourable to the use of venesection in a case of non-febrile eruptive disease. Mr E. Wilson is one of the few English authorities who approves at least of small blood-letting, in such cases as those in which the above-named French authors enjoin it.

Local detraction of blood by leeches is often of much service, especially in the partial eruptions, which create much uneasiness, as prurigo podicis, prurigo scroti, prurigo pudendi, sometimes in lichen and impetigo, in anthrax, in psoriasis, as in psoriasis ophthalmica. In some of these affections the leeches must be applied beyond the circle of the eruption to prevent new irritation.

Borax; Sodae Boras.—Borax is of well-known use in aphthæ. It is also used joined with alum and sugar of lead in lotion when the irritability of the skin in pityriasis rubra is not great. The same combination is beneficial in the form of ointment.

Bougies.—Bougies are found to remove the prurigo urethralis in females.

Bran—See Triticum.

Butter.—Butter is useful in some inflamed states of eruptions, as in inflamed states of lepra.

Butter-Milk.—Butter milk gives relief in prurigo formicans.

Cabbage Leaves.—These are, for the most part, a hurtful application, though popular.

Camphor.—In a few cases, camphor is a useful application.

A camphorated liniment is used with advantage in porrigo decalvans. An ointment containing camphor and opium, affords temporary relief in prurigo.

Cantharis Vesicatoria.—*Cantharides, tincture of Cantharides*.—The internal use of cantharides in eruptions is of ancient date. It is useful in lepra and psoriasis, and overcomes obstinate cases of eczema, particularly in females. The ordinary precautions necessary under its internal use must be observed.

Capsicum Annuum—*Cayenne Pepper*.—Cayenne pepper is sometimes a useful application as in the inert state of porrigo scutulata. The tincture more or less diluted may be employed for this purpose.

Carbo Ligni—*Charcoal*.—Charcoal has been both given internally and applied externally in cutaneous eruptions. It is said to cure scabies, and to be beneficial in lepra and impetigo. But if it be possessed of useful properties, these seem to have been overrated. There is a formula for a charcoal poultice in the Dublin Pharmacopœia.

Chlorineum—*Chlorinei aqua*; *Oxymuriatic acid*.

Chloride of Soda—*Chloride of lime, or calx chlorinata*.

Chlorine water has been administered internally, and applied externally in some eruptions. The external use of it is now superseded by the oxy-chlorides of sodium and calcium, which appear to part with chlorine readily when carbonic acid gas is present.

Chlorine-water has been deemed of some benefit in pityriasis versicolor and in acne punctata. Its external use has been celebrated against tetter, and itch, and for this purpose it has been combined with oil or lard. The chloride of lime has been much more successful, having been found to cure scabies as quickly as sulphur, and to relieve uneasiness in most eruptions attended with itching. Dr Christison recommends a solution containing from a fortieth to a sixtieth of the chloride to be applied continuously, or at least five or six times a day, which he says allays the intense itching in 24 hours, and generally cures scabies in 8 days. The same remedy is of much service in aphtha, porrigo, lepra, psoriasis and eczema.

Cinchona.—See Tonics, vegetable.

Cocculus indicus, or anamirta cocculus; the fruit. An ointment of this drug, a formula for which is now given in the Edinburgh Pharmacopœia, has been used with much benefit chiefly in the early stage of several forms of porrigo, as in porrigo furfurans, after the removal of the scabs in porrigo lupinosa, and in porrigo scutulata before it has become dry. The ointment should be applied night and morning, and should be washed away with soap and water, at least once a day. In some of these affections an ointment of picrotoxia has been substituted, and Dr

Christison thinks that such an ointment might answer better for all of them. The picrotoxia ointment consists of ten grains of the picrotoxia to an ounce of lard.

Colchicum Autumnale—*Meadow Saffron*—*the Seeds and Cormi*.—Colchicum has been employed hitherto to but a small extent in cutaneous diseases. It promises, however, to be a most useful addition to the remedies known against obstinate skin diseases. The wine or tincture of the seeds of colchicum, employed as in rheumatic affections, is likely to be of excellent effect in many of the most tedious eruptions, as prurigo, eczema, impetigo, and the like.

Conium Maculatum—*Hemlock*.—Hemlock has been employed both internally and externally in eruptions. Under both modes of administration, hemlock has great power of allaying local irritation, and deserves to be more extensively tried in such affections than it has been of late. There is a formula for a hemlock poultice in the Dublin Pharmacopœia.

Cream.—It is useful to smear irritable parts, also in irritable states of impetigo.

Cold Cream.—See Plumbi Præparata.

Creasotum, creasote; Mistura Creasoti; Unguentum Creasoti.—There is not sufficient evidence of the utility of creasote taken internally in cutaneous diseases; but experience has already proved its efficacy as an external application, as in lepra, psoriasis, porrigo prurigo, and the like.

Creta Præparata.—Chalk with soda, and with calomel, or with both, is used in various cases on a common principle, as in porrigo larvalis.

Crotonis Tiglii Oleum.—The liniment of croton-oil to bring out pimples is of use to prevent retrocession in obstinate cases of eruption. To make this liniment, a drachm of croton-oil is added to an ounce of oil of almonds.

Cupri Præparata.—The sulphate is the chief preparation of copper in eruptions. A lotion of this salt is of much use in herpes labialis, when attended by acrid heat and painful tension of the skin, also in the inert states of porrigo scutulata. The diluted ointment of the diacetate deserves a trial in some of the obstinate forms of ulceration connected with cutaneous eruptions.

Delphinium Staphisagria, Stavesacre.—Preparations of Stavesacre have been deemed useful in the inert state of porrigo scutulata.

Depilatories.—These are used in porrigo.—See Alkalia.

Diaphoretics—Saline and antimonial; alterative as guaiacum, sassafras, sarsaparilla, dulcamara, mezereon.

Diet.—The directions for diet are chiefly prohibitory. The state of the constitution commonly indicates whether it should be more or less nutritive. Raw vegetables and fruits are seldom

admissible, though apt to be resorted to under the notion of an eruption being a form of scurvy. Spirits are almost uniformly hurtful, and a moderate allowance of wine is commonly, yet not always, preferable to malt liquors. This short notice of diet is far from commensurate with the inestimable importance of the subject in eruptive diseases.

Digitalis Purpurea.—A decoction of fox-glove, mallow and poppy heads is useful in painful states of impetigo.

Diuretics.—Useful in some eruptions, as in pompholyx.

Dulcamara.—See *Solanum*.

Elemi.—The elemi ointment, for which there is a formula in the London and Dublin Pharmacopœias is one of the applications of repute in the inert state of *porrigo scutulata*. The London ointment contains nearly as much common turpentine as elemi; in the Dublin formula there is no turpentine.

Emulsions.—The emulsions of white of egg and of almonds are substituted in modern times for the use of saliva anciently recommended in some eruptions, as in pityriasis, lichen, strophulus.

Epispastics.—It has long been in use to apply a blister to remedy internal disorder, consequent on the sudden repulsion of eruptions. It appears also to be an ancient principle to endeavour by blistering to convert chronic inflammation into acute, so that the morbid action may be brought to an early termination. Rayer remarks on this practice, that when such an end is in view, it is better to apply a succession of small blisters than one large blister, since the latter may be sometimes succeeded by severe effects. Acne is one of the diseases in which a blister is recommended, and here it may be debated if the remedy be not a greater evil than the disease. Blisters applied to the nape of the neck are thought to have prevented the *porrigo larvalis* in the children of families strongly disposed to that disease. In one kind of case a blister is beyond doubt a useful application, namely, in the very dry and inert state of *porrigo scutulata*.

Forceps.—A pair of blunt curved forceps, answers well to press out the sebaceous deposit in *acne punctata*.

Ferri Præparata.—The constitutional symptoms usually indicate plainly enough when preparations of iron are requisite. The state of the constitution which requires iron, does not perhaps necessarily combine with any cutaneous disease. Hence, though it is more common along with some eruptions than with others, it is not to be assumed as present, unless indications of it appear independently of the local disease. Whenever signs of feebleness in the exercise of the great functions of circulation, respiration, or nervous action appear, there is reason to suspect that the iron of the living system is in deficient proportion, or at least that the use of the preparations of iron will be serviceable. Such a state is often seen in strophulus, in lichen, as in lichen urtica-

tus, in lepra, in porrigo scutulata, in porrigo favosa, in ecthyma infantile, and in aphthæ. The ferrum tartarizatum and the wine of iron are often preferred in children. Among the numerous preparations of iron lately introduced into practice, several will be found well adapted for use in cutaneous diseases, both in children and adults.¹

Sometimes preparations of iron are used externally—of which there is an instance in the application of muriated tincture, in the very dry and inert state of porrigo scutulata.

Fuligokali.—Fuligokali is a preparation of soot and potass, in imitation of anthrakokali, (which see.) Gibert finds fuligokali superior to anthrakokali. He has employed it both internally and externally. As an external application it is “resolutive, de-ter-sive, and stimulant.” Its use is in the various forms of tetter, and Wilson says he has found it particularly successful in the treatment of psoriasis palmaris.

The following is the mode of preparing the substance. Boil one part of caustic potass with five parts of soot in a sufficient quantity of water for an hour. When the solution cools, filter, evaporate, and dry. The powder or scales obtained must be kept in a dry place, secured in well stoppered bottles.

The ointment employed by Gibert consists of from a scruple to half a drachm united with an ounce of lard.

A sulphureted fuligokali is obtained by heating in a little water 4 parts of sulphur, with 14 parts of caustic potass, and after their solution, adding 60 parts of soot. Evaporate, and dry, and keep the resulting compound with the same precautions against moisture as the fuligokali. It is to be suspected that all these preparations, the anthrakokali, the fuligokali, and the sulphureted fuligokali owe their efficacy chiefly, if not exclusively, to the alkali which they contain.

Gossypium Herbaceum—*Raw Cotton*.—The singular success which attends the use of raw cotton in several descriptions of burns has naturally suggested the employment of the same remedy in inflammations of the skin. At present, however, it is a remedy under trial, rather than an established remedy in eruptive diseases. In erysipelas and erythema it is unquestionably of service, when the part admits of some degree of pressure, and on the same condition most probably it may be applied with advantage in painful eruptions when the pain is dependent on inflammatory excitement of the part. Several successive layers of cotton, as in the case of burns, should be applied, and if wadding be used, it should be torn open and the unstarched surface applied next to the affected part.

¹ See Northern Journal of Medicine, No. I. May 1844.

Gowland's Lotion.—See Corrosive sublimate.

Guaiacum officinale.—*Resin and Wood of guaiacum, or lignum vitæ.* Guaiacum in the form both of the wood and of the resin, has been much employed in eruptive diseases. The decoction of the woods, still represented by the “decoctum guaiace” of the Dublin and Edinburgh Pharmacopœias and Plummer’s pill, have long been of habitual use in this order of maladies. There can be no doubt of the frequent utility of guaiacum, both wood and resin, in eruptions, though its “modus operandi” is still an unsolved problem. Guaiacum is the most stimulating of the section of diaphoretics to which it belongs, before referred to, under the name of alterative diaphoretics; and probably there is less difficulty in perceiving why a powerful stimulus to the cutaneous circulation, like guaiacum, especially in the form of the resin, should be beneficial in these diseases, than sarsaparilla, sassafras, mezereon, and dulcamara, the medicines properly grouped with it, in a subdivision of diaphoretics. The stimulant influence of guaiacum is exerted, not so much upon the general vascular system, as upon the capillary vessels, and hence it is not difficult to understand why this effect determined on the capillaries of the skin should be followed by an exchange of morbid action there, for a healthy action is incompatible with the continuance of the eruption. It is customary to term guaiacum, and the other diaphoretics just enumerated, alteratives; and in the actual state of our knowledge this term is not to be looked upon as a mere piece of verbiage. No doubt the term “alterative” stands side by side with the term “specific.” Both terms refer to final effects in the treatment of diseases, the several steps in the operation preceding which cannot as yet be pointed out. A specific cures a disease by intermediate effects which escape observation; an alterative improves the general health in a manner inexplicable as yet on any known physiological principle, and by such improvement of health renders the sanative powers of the constitution adequate finally to overcome the disease. Both then are provisional terms—provisional till the increased acquaintance with the physiological operation of medicines, by unfolding the successive steps by which they operate, shall enable us to reduce the effects of both these orders of remedies to general rules analogous to those on which the established therapeutic orders of medicines are founded. But in the mean time both terms express, or at least are designed to express, a fact, and the important point as regards the practice of medicine is not a debate as to the explanation of the effect, but an inquiry into the well-foundedness of the fact. It is however beyond doubt that of late years less pains have been taken to determine the soundness of the matter of fact implied in the two terms in question, than to show that the use of these terms involves an attempt to conceal our ignorance of the explanation. The fact, it is manifest, is all in all; the explanation is of very subordinate consi-

deration. In regard to guaiacum, then, and the other alteratives and specifics, this prevalent mode of viewing the subject has led to the neglect of the proper means of ascertaining how far the properties formerly ascribed to them are well founded.

Glycerine.—*The sweet principle of fixed oils and fats.* This substance, which is a liquid soluble in water, is proposed as an application to the affected parts in squamous diseases, as lepra, psoriasis, pityriasis, and ichthyosis. When spread out thin, even on a warm surface like the skin, it has the valuable property of remaining moist. It answers best dissolved in water, in the proportion of glycerine one part to twenty parts of water.¹

Hair-Powder.—See *Triticum*.

Harrowgate-Water.—See *Mineral waters*.

Hydrargyri Praeparata.—The preparations of mercury have been freely used in past times, both internally and externally, in the treatment of cutaneous eruptions. That they have not been used too freely cannot be affirmed. Still it is easy to run into the opposite error, and neglect them to the detriment of the sufferer. In the following account much discrimination on this subject cannot be pretended to. The plan adopted requires that the remedies proposed on good authority for the several eruptions should be stated, even where a suspicion may exist, that a remedy has sometimes been carried too far.

Corrosive Sublimate; Hydrargyri Bichloridum.—In eruptive diseases, corrosive sublimate is sometimes used internally, more frequently it is applied externally in the form of lotion.

In lepra, occurring in an inert state of the habit, the internal use of corrosive sublimate has been found beneficial; but except in syphilitic eruptions the internal use of it has not been much persevered in. There are several formulæ for the internal use of it to be met with in works on cutaneous diseases. Van Swieten's liquor is composed of corrosive sublimate, eighteen grains; water twenty-nine ounces; alcohol, three ounces. Dose—a teaspoonful in a glass of decoction of sarsaparilla. This is far from a good formula; the spirit rather favours than prevents the change of the bichloride to calomel. The solution of the London Pharmacopœia no longer contains spirit, a small proportion of salammoniac being substituted. The following is the syrup of Larrey:—bichloride of mercury, hydrochlorate of ammonia, of each twenty grains; extract of opium, liquor of Hoffmann (spirit. æther. sulph. comp. Lond. Pharm.), of each two drachms; syrup of sarsaparilla, 32 ounces. This preparation contains nearly two-thirds of a grain in each ounce.

A lotion of corrosive sublimate is beneficial in chronic lichen, a weak solution affords temporary relief in prurigo, and especially in prurigos enilis; the lotion is useful in inert states of porrigo scutulata. A solution of corrosive sublimate in spirit is pre-

¹ See Northern Journal of Medicine, vol. iv. p. 148.

scribed with advantage in acne simplex, after the previous use of dilute spirituous lotions, and also in acne indurata. Corrosive sublimate has frequently been employed against scabies; but mercurials are probably better avoided in that disease. Gowland's lotion is a solution of corrosive sublimate in an emulsion of bitter almonds. This is frequently used in acne, and for the same affection the corrosive sublimate is dissolved in the proportion of half a grain to the ounce, in the "Eau de Cologne."

The yellow wash once termed "aqua phagedænica" consists of corrosive sublimate and lime water. It is made by adding two grains of the salt to an ounce of lime water. This wash is one of the most beneficial remedies in prurigo pudendi.

Calomel.—The Plummer's pill so long employed in cutaneous eruptions, owes its utility chiefly to the calomel which it contains. The state of the constitution must in part direct the use of this and other forms of calomel. In chronic eczema, when it resists the milder remedies, calomel to the extent of four grains daily for a week, to be afterwards changed for Plummer's pill, is recommended by Bateman. In porrigo larvalis, the same author advises mercurial purgatives in alterative doses, to be continued for three or four weeks, by which treatment, he says, the removal of the disease is accelerated, and a similar use of calomel, either with or without chalk, and carbonate of soda, is advised in some of the other intractable forms of porrigo.

The external use of calomel is not often resorted to, but an ointment of calomel and lard hastens the cure of chronic eczema, when it has become reduced to a small compass.

A calomel ointment is also recommended in chronic lichen, for which the following formula is given: Calomel one drachm, camphor one scruple, lard an ounce. Another calomel ointment, recommended in tubercular eruptions, consists of calomel and acetate of lead, of each two scruples, camphor six grains, lard half an ounce.

Nitratis Hydrargyri Unguentum, or citrine ointment.—Of all the mercurial applications the citrine ointment has been most generally used, and in some cases it cannot be replaced by any other preparation or application.

This ointment diluted is the most successful application in the prurigo podicis, and prurigo scroti. The same ointment diluted with saturnine cerate, or simple ointment, succeeds in restoring the skin to its healthy action after the removal of the crusts in lepra. In local psoriasis the diluted ointment is very serviceable. In impetigo sparsa and figurata the citrine ointment is very serviceable when used with the requisite precautions; but the over free use of this ointment, as well as of the red precipitate ointment in these eruptions, has often been productive of much suffering. It should not be resorted to in these eruptions unless when the irritability is less urgent, and it should be diluted with 5 or 6

times its weight of lard. In impetigo scabida, the same ointment diluted with 3 or 4 parts of lard, is applied with advantage. In porrigo larvalis, after the decline of the irritation, a diluted citrine ointment is proper. In the dry and unirritable state of porrigo furfurans, the citrine ointment succeeds. In porrigo favosa also, it is useful, provided it be diluted in proportion to the degree of inflammation which is present.

(*To be continued.*)

PART III.—REVIEWS.

A Practical Treatise on Healthy Skin, with rules for the Medical and Domestic Treatment of Cutaneous Diseases. BY ERASMUS WILSON, F.R.S. &c. London, 1845. 8vo, pp. 356.

IN reviewing formerly (see No. II. of this Journal,) the treatise of Mr Wilson, on Diseases of the Skin, we ventured to predict that it would not be his only, or most important contribution to the subject of cutaneous diseases. We were scarcely prepared, however, for its being so soon followed by another volume, on a nearly similar subject, certainly calculated to extend still further the fame of its talented and justly celebrated author.

In this (in many respects) admirable book, however, Mr Wilson treads on somewhat dangerous ground, and we are not sure that his feet have not at times slipped in the descent which he is making. We call it a "descent," because in it Mr Wilson has attempted to popularize the interesting subject of his investigation, and indite a work on one of the most curious and intricate branches of medicine, not intended for the guidance of the profession, but of the public. If we venture to speak at all disparagingly of the attempt, it is assuredly by no means because we can regard it as any thing at all approaching to a failure, but simply because we doubt the propriety of intrusting the non-professional public even with the limited discretionary power of treating their own diseases, which Mr Wilson has assigned them. Of all that relates to the structure and functions of the healthy skin, and the laws of "hygiene" applicable to its management, we express our most unqualified approbation, but we must enter our protest against the dealing out of medicines for the cure of its diseases, and even the translation of medical formulas for employment by the patient himself.

The use of "corrosive sublimate," "sulphate of copper," and "hydrocyanic acid lotions," ought scarcely to be left to the discretion of a patient, even of one who has studied the admirable book in which they are, in our opinion, somewhat rashly recommended.

There is perhaps nothing which more clearly indicates the possession of talent, and of clear and accurate notions on any subject, than the power of communicating information to those who were previously in entire ignorance about every thing regarding it.

This qualification our author possesses in no ordinary degree—always perspicuous, simple, and intelligible, there is occasionally a playfulness of fancy, which we could scarcely think the subject admitted of, but which gives a lightness, and relief to the drier details of the book, calculated greatly to increase its popularity.

Of this the following quotation may serve as an example, where the author delicately introduces the "*acarus scabiei*," to the kindly attention of his fair friends, under the somewhat startling title of "animalcular eruption."

"From these observations, I am inclined to think that man forms no exception to the general rule, and that in a state of nature, the little creature may be found abundantly in his peculiar habitat, the human scarf-skin; but that artificial habits and manners have almost driven him out of the pale of polite society. Occasionally, however, he makes incursions upon his ancient haunts, but is driven back with wrath whenever he is discovered. It would seem that there are no protective game-laws for the unfortunate 'curmudgeon,' yet 'battues' are by no means infrequent under the sunny skies of Italy, and with ourselves he is much indebted to the perpetuation of the tax on soap. The little parasite has a peculiar objection to soap, and cheap soap would go far towards exterminating him. The baths for the lower orders which will give them clean skins and fresh linen are also angry threatenings against a persecuted race, and should be as much as possible discountenanced by a humane and discerning public. The ladies, again, pursue him with their anger; he is known to possess an acute sense of smell, and is sickened by the cruel compounds of the perfumer. To him the 'eau de millefleurs' is a thousand daggers, the 'eau de Cologne' a perfidious enemy, and the little bundles of lavender spikes which the country maiden hoards in her drawers, absolute poison. I trust that none of my readers will take advantage of my candour in pointing out the weak points of the little 'brigand'¹ to torment him any further."—P. 280—282.

Having premised so much in regard to the general character of the book, it is time for us to deal with it a little more in detail.

The first chapter is devoted to the consideration of the scarf-

¹ The name by which he is properly known in Gascony.

skin, and conveys a great deal of useful information in a very popular form. The following extract on the use, or rather abuse of the nails is admirable :—

“ 13. The mode of growth of the nail is peculiarly interesting. It must be apparent to every one that the nail is thicker at its free end than in the situation of the lunula, and, consequently, that it must grow in thickness as well as in length. The growth in thickness takes place by the addition to its under surface of an organizable fluid, which becomes converted into cells in the manner already described in the formation of the scarf-skin (§ 4). By this process the horny plates are gradually raised out of their sheaths, and their original depth is maintained by fresh additions to their free edge. And, moreover, their entire surface, being in a state of progressive formation, is soft and impressible. Let us now turn to growth in length. This takes place by means of a similar process, occurring at the free edge of the root. Additions are made to this edge, and as the cells enlarge, they press the nail forwards, and the latter, being connected with the longitudinal laminae by a soft medium, offers no resistance to the onward growth. Thus we have growth in thickness and growth in length proceeding harmoniously.

“ 14. But, what if we should wilfully oppose Nature in her harmonious course by wearing a shoe that is obviously too short for the foot, and which brings the edge of the nail against the leather? Why, in this case, Nature gives us warning, by means of her agent, *pain*, that such a proceeding is contrary to her laws. We stop our ears, and get accustomed to the pain, which, perhaps, is not severe, and soon goes off; the shoes get a scolding for their malice, and we forget all about it for a time. But does Nature check her course to suit the convenience of thoughtless man? No, no. In a short time we find that the nail, intercepted in its forward course, has become unusually thick and hard, and has spread out so much upon the sides, that it is now growing into the flesh, and so makes a case for the doctor. Or perhaps, the continuance of pressure may have inflamed the sensitive skin at the root, and caused a sore and painful place there. And instances are by no means infrequent in which the power of production of the nail at the root becomes entirely abrogated, and then it grows in thickness only. When this is the case, it is quite remarkable what a mass the nail will become. I know an instance in which the nail is regularly shed; whenever the old one falls off, a new one being found beneath it. Sometimes, growth in length is not entirely checked, although growth in thickness is induced, and then we get some marvellous specimens of toe-nails. I have several in my possession; one being fully two inches in length.”—
P. 15—17.

We cannot spare room for any extracts from chapter second, “on the sensitive skin,” but we must quote the following from

chapter third, as we feel sure even medical readers require to have their attention directed to the great importance of the perspiratory system :—

“ 34. Taken separately, the little perspiratory tube, with its appended gland, is calculated to awaken in the mind very little idea of the importance of the system to which it belongs; but when the vast numbers of similar organs composing this system are considered, we are led to form some notion, however imperfect, of their probable influence on the health and comfort of the individual. I use the words, ‘ imperfect notion,’ advisedly, for the reality surpasses imagination and almost belief. To arrive at something like an estimate of the value of the perspiratory system in relation to the rest of the organism, I counted the perspiratory pores on the palm of the hand, and found 3528 in a square inch. Now, each of these pores being the aperture of a little tube of about a quarter of an inch long, it follows, that in a square inch of skin on the palm of the hand there exists a length of tube equal to 882 inches, or $73\frac{1}{2}$ feet. Surely such an amount of *drainage* as seventy-three feet in every square inch of skin, assuming this to be the average for the whole body, is something wonderful, and the thought naturally intrudes itself: What if this *drainage* were obstructed?—Could we need a stronger argument for enforcing the necessity of attention to the skin? On the pulps of the fingers, where the ridges of the sensitive layer of the true skin are somewhat finer than in the palm of the hand, the number of pores on a square inch a little exceeded that of the palm; and on the heel, where the ridges are coarser, the number of pores on the square inch was 2268, and the length of tube 567 inches, or 47 feet. To obtain an estimate of the length of tube of the perspiratory system of the whole surface of the body, I think that 2800 might be taken as a fair average of the number of pores in the square inch, and 700, consequently, of the number of inches in length. Now, THE NUMBER OF SQUARE INCHES OF SURFACE IN A MAN OF ORDINARY HEIGHT AND BULK IS 2500; THE NUMBER OF PORES, THEREFORE, 7,000,000, AND THE NUMBER OF INCHES OF PERSPIRATORY TUBE 1,750,000, THAT IS, 145,833 FEET, OR 48,600 YARDS, OR NEARLY TWENTY-EIGHT MILES.”—P. 41—43.¹

We pass over two admirable chapters from which want of space alone forbids us to make copious extracts, and in which the oil glands of the skin, and the hairs are discussed at some length,

¹ To the medical reader, it may be necessary to explain, that the sebaceous system is included with the system of perspiratory glands and tubes in this calculation. I have ascertained, beyond question, that the sebaceous system is the perspiratory apparatus of the greater part of the body, the true perspiratory glands and tubes being found only in certain parts. Therefore, the calculation which I have made on these premises must be considered as falling within rather than beyond the truth.

and in a most interesting manner. In the former, Mr Wilson gives a full account of the singular *entozoon folliculorum*, discovered by Simon. As most of our readers have probably made themselves already acquainted with the discoveries of our author on this subject, through the medium of his paper in the Philosophical Transactions in 1844, it is unnecessary for us to notice them here. Mr Wilson is of opinion that these animals do not exist in the perfectly healthy skin, but are produced when it is in a torpid state, and he “ sees no other conclusion open than to assume that they perform some beneficent purpose in the economy of the skin ; that purpose being according to his belief, the disintegration of the over-extended cells, the impression of a new condition on the contents of the cells, and the stimulation of the tubes to perform their office more efficiently”—(p. 62.)

In the succeeding chapter we have some very interesting investigations with respect to the hair. In it two popular fallacies are combatted. The one,—the alleged fact of the hair becoming white suddenly from some violent mental excitement, which our author is disposed to regard as a poetical fiction, although he by no means denies the possibility of a gradual change in the colour of the hair, dating from a period of deep anxiety or grief. Mr Wilson also authoritatively denies the supposition that the hair can grow after death, adopting the explanation of Haller and Bostock, that the apparent growth often observed, is owing to the shrinking of the skin. It is indeed impossible to believe that a vital process, such as the growth of hair assuredly is, could be carried on in an organism from which vitality has departed; and yet such opinions have been maintained by such men as Bichat,¹ Pariset, and Villermé,² not to speak of the more ancient and still less credible narratives of Heister, and Camerarius.

With this chapter, the fifth in the book, Mr Wilson concludes his account of the structure of the skin and its appendages ; and in chapter sixth, we are introduced to the consideration “ of the influence of diet on the health of the skin.” The grand object of the remainder of the book, with the exception of what ought to be considered as the professional part of it, is to establish the following most important law of health, which we give in the terms in which our author enunciates it. “ By food, by raiment, by exercise, and by ablution, to maintain and preserve an agreeable warmth of the skin, every thing above this is suspicious ; every thing below noxious and dangerous”—(p. 103). Each of these means is discussed in a separate chapter, the first (chap. 6th) being decidedly the only meagre and lame performance in the whole book, being utterly unworthy alike of the character of the author, and the importance of the subject. Very different, in-

¹ Anatomie generale, vol. iv. p. 825.

² Dict. des Sciences Medic., art. Barbe and Poil.

deed, is chap. 7, where the influence of clothing on the health of the skin is discussed with the hand of a master. A few striking sentences first point out to the non-professional public, that clothing in itself has no power of bestowing heat, and can only act by confining around the body that warmth which has been generated by itself. From this is deduced an explanation admirably suited for the popular mind, of the reason why a loosely fitting dress, is warmer than a tight one, from its inclosing around the body a thin stratum of warmed air; for in fact, the warmth of all coverings depends on the power which they possess of detaining atmospheric air in their meshes.

The general principles on which the properties of clothing depend, having been fully and ably illustrated, Mr Wilson proceeds to consider in detail the qualities of the fine materials from which dress is usually formed. Linen is found to have a peculiar smooth and soft texture, from the roundness and pliability of its fibres, but it possesses the disadvantages of being a good conductor and bad radiator of heat; and moreover, from its porosity, is exceedingly apt to absorb perspiration, and in this damp state, to acquire a power of conducting heat, which goes far to rob the body of its natural warmth. Cotton, again, being a worse conductor of heat, and not of so porous a character, is preferred in cold climates for the former, and in hot climates for the latter quality. It has not, however, the freshness of linen, and the angularity of its fibres renders it apt to excite irritation in delicate skins. So far as roundness of fibre, softness of texture, absence of attraction for moisture, and power of retaining warmth, are concerned, silk is greatly superior to both linen and cotton, and it possesses, moreover, all the freshness of the former, but unfortunately the slightest friction causes it to disturb the electricity of the skin, and thus to produce a powerful irritation. Wool is objectionable for the same reason, besides possessing irritating qualities from the nature of its fibre, so that many persons find it impossible to wear woollen garments next the skin. The advantages of these substances, as articles of clothing can, however, be obtained, and the objections against their use removed, by interposing between them and the cutaneous surface a linen covering. Employed in this way, they also go far to remove the objections which we have found to apply against linen worn next the skin. The influence of colour is next discussed, and the experiments of Franklin and Stark supply our author with a ready means of illustrating it. The reader is next warned against the use of impermeable coverings, and the striking heading, "Suffocation from Dress," is not likely to increase the demand for water-proof clothing. The experiments of Dr Edwards are then referred to, to prove that the power of generating heat varies in man according to the season, and that he therefore does not require, in a state of health, entirely to proportion the amount of his clothing to the difference

of temperature between summer and winter. But sickness or sedentary-occupation, by reducing our power of generating heat, renders us more than ordinary susceptible of cold, even when the temperature is comparatively mild. Mr Wilson does not conclude this branch of his subject without an effort to expose the folly of those who attempt to harden their infant charges. "Are the little Highlanders whom we meet during three out of the four quarters of the year, under the guardianship of their nursery-maids, dawdling about the streets, in our public walks or squares, properly protected from the cold? Are the fantastically attired children whom we see 'taking an airing' in carriages in our parks, sufficiently and properly clad? If this question can be truly answered in the affirmative, then, and then only, my remarks are needless. There can enter into the parent mind no more baneful idea than that of rendering children 'hardy' by exposing them unnecessarily to cold, and by clothing them inefficiently. I have known instances wherein parents acting on this principle have failed entirely in rearing their offspring. Does Nature treat her progeny thus? Does she not, first of all, ensure the birth of her young only at a kindly season, and then provide them with downy coverings, warm nests, and assiduous protectors? And we must imitate Nature, if we would give to Britain a race capable and worthy of maintaining her independence and honour. The little denizens of a warm nursery must not be subjected, without a carefully assorted covering, to the piercing and relentless east or north-east wind; they must not be permitted to imbibe the seeds of that dreadful scourge of this climate, consumption, in their walks for exercise and health; they must be tended, as the future lords of the earth, with jealous care and judicious zeal. *One-sixth of the deaths of young children, it must be remembered, result from cold (§ 97).*"—P. 133, 134.

But we must hurry on, passing over much valuable matter in this and the succeeding chapter, which treats on the "influence of exercise on the health of the skin." We have read many powerful appeals to the public on the injurious effect produced by the use of stays, but we have never seen one where the matter was more simply and clearly explained than by Mr Wilson, in the chapter last alluded to. He shows that the first effect of stays is to limit the bending and other movements of the trunk of the body, and as a necessary consequence, to "degrade the muscles from their natural firm and healthy, to a soft and flabby state; but, farther, by squeezing the muscle between their firm and unyielding texture, and the horn bones of the chest, they impede the circulation through them; and this tending still more to increase the atrophy, the muscles are of course rendered incapable of duly supporting the spine, which at length sinks under the superincumbent weight which it has to support.

Chapter nine treats of the influence of ablution and bathing on the health of the skin, which appropriately introduces a discussion on the merits of hydropathy, or the treatment of disease

by water. In the former, the sources of impurity to which the skin is exposed, is pointed out, and the means of its removal amply detailed. Mr Wilson is a strong advocate for soap; indignantly denies that it acts as an irritant to the skin, and very decidedly settles a question upon which an appeal is occasionally made to medical men.

“ I may be asked, What is the best soap? I reply, Good white curd soap, without scent, or scented only by its contiguity to odorant substances. The use of soap is certainly calculated to preserve the skin in health, to maintain its complexion and tone, and prevent it from falling into wrinkles; and if any unpleasant sensations are felt after its use, they may be immediately removed by rinsing the surface with water slightly acidulated with lemon-juice.”—P. 163.

We only regret that we cannot extract more from this chapter, every sentence of which is worthy of a careful perusal. Once more, however, we must quote Mr Wilson's recommendation of the kheesah, or Indian flesh-glove, which we think only requires to be known, to supersede all other mechanical means of rubbing the skin, and admirable specimens of which we have seen at Mr Arnott's in Howe Street, the Edinburgh agent of Messrs Savory and Moore of London:—

“ Since the above was written, I have had the opportunity of examining a flesh-glove that comes recommended to us by the experience of ages, and certainly offers advantages superior to any other kind of rubber for the skin in existence. This is the Indian flesh-glove or kheesah, a glove, or rather mitten, which has been used, from time immemorial, in Hindostan, Persia, and throughout the East, and by a race of people, both from necessity and luxury, more attentive to the skin than any other upon the face of the globe. The glove was introduced into England by Mr J. Ranald Martin, of Grosvenor Street, and much labour and expense have been employed by Messrs Savory and Moore in having a similar glove manufactured in London. Their imitation, however, is perfect, both in appearance and properties; and it is a subject of much satisfaction to me to be enabled to recommend so admirable a contrivance for promoting the health of the body, through the agency of the skin. The glove is made of goat hair, the material used in the manufacture of the Burruck or Persian glove-cloth, of which the original kheesah is composed.”—P. 181.

On the chapter in which the merits of hydropathy are discussed, it is not our intention to enter, although we think both its advantages and disadvantages are very fairly estimated by our author. Neither shall we say any thing of the remainder of the book, consisting of eight chapters, in which the special diseases of the skin are fully discussed.

We have already expressed our disapprobation of the plan rather than^m of the execution of this part of the book, and should feel unwilling to deal harshly with an author, in most re-

spects, so excellent. The present competition for practice unfortunately affords too strong a temptation to introduce the public to a style of literature of which we feel convinced they had far better be ignorant. It was only the other day that we were inexpressibly disgusted by hearing of an eminent London accoucheur who had transmitted to a lady in this neighbourhood, formerly under his care, a copy of his work on diseases peculiar to females. We are far from thinking that this publication of Mr Wilson's is equally unfitted for popular perusal, still less would we wish to pass a rash censure upon the motives by which either of the parties were actuated in the conduct which we have condemned; but we regret exceedingly that, amidst the abandonment of much that was reprehensible, and more that was ridiculous, in the conduct of the practitioners of the old school, some of those feelings which it is the fashion to designate as their prejudices, are not still retained.

With this, which to some will doubtless appear a very trivial exception, we cordially welcome and recommend the highly interesting and elegant volume of Mr Wilson. That it will be read by the public we have little doubt, and it must, therefore, be read by the practitioner, unless he would leave his patient better informed than himself on subjects, a knowledge of which will often render the use of medicine unnecessary, and in ignorance of which the best directed medicinal treatment will often fail of producing the expected result.

PART IV.—PERISCOPE.

METEOROLOGY.

Origin and Progress of Storms in the United States.

[From the report of the Surgeon-General of the United States Army to the Secretary of War, dated Nov. 1, 1845, we copy the following letter from Mr Espy, the meteorologist, to Dr Lawson. Mr Espy, as well as the Surgeon-General, deserves great praise for his meteorological investigations, and it is gratifying to perceive that their researches are likely to be crowned with success.]

SIR,—With the aid of Lieut. Irons, I have since my last "report," completed ninety-two meteorological charts, for the months of January, February, and March 1844. These are the months corresponding to those of my first report for 1843.

In that report I ventured to draw from the documents then collated the following twenty generalizations:—

1st.—The rain and snow storms, and even the moderate rains and snows, travel from the west towards the east, in the United States, during the months of January, February and March, which are the only months yet investigated.

2d.—The storms are accompanied with a depression of the barometer near the central line of the storm.

3d.—The central line of minimum pressure is generally of great length from north to south, and moves sideforemost towards the east.

4th.—This line is sometimes nearly straight, but generally curved, and most frequently with its convex side towards the east.

5th.—The velocity of this line is such, that it travels from the Mississippi to the Connecticut river in about twenty-four hours; and from the Connecticut to St John's, Newfoundland, in nearly the same time, or about thirty-six miles an hour.

6th.—When the barometer falls suddenly in the western part of New England, it rises at the same time in the valley of the Mississippi, and also at St John's, Newfoundland.

7th.—In great storms, the wind for several hundred miles on both sides of the line of minimum pressure, blows towards that line, directly or obliquely.

8th.—The force of the wind is in proportion to the suddenness and greatness of the barometric depression.

9th.—In all the great and sudden depressions of the barometer, there is much rain or snow; and in all sudden great rains or snows, there is a great fluctuation of the barometer.

10th.—Many storms are of great and unknown length from the north to the south, and reaching beyond our observers on the Gulph of Mexico and on the northern lakes, while their east and west diameter is comparatively small. The storms, therefore, move sideforemost.

11th.—Most storms commence in the "far west," beyond our most western observers; but some commence in the United States.

12th.—When a storm commences in the United States, the line of minimum pressure does not come from the "far west," but commences with the storm and travels with it towards the east.

13th.—There is generally a lull of wind at the line of minimum pressure, and sometimes a calm.

14th.—When the wind changes to the west, the barometer generally begins to rise.

15th.—There is generally but little wind near the line of maximum pressure, and on each side of that line the winds are irregular, but tend outwards from that line.

16th.—The fluctuations of the barometer are generally greater in the northern than in the southern parts of the United States.

17th.—The fluctuations of the barometer are generally greater in the eastern than in the western parts of the United States.

18th.—In the northern parts of the United States, the wind, in great storms, generally sets in from the north of east, and terminates from the north of west.

19th.—In the southern parts of the United States, the wind generally sets in from the south of east, and terminates from the south of west.

20th.—During the passage of storms, the wind generally changes from the eastward to the westward by the south, especially in the southern parts of the United States.

The great uniformity of the phenomena accompanying the storms of the first three months of the year 1843, emboldened me to draw the above generalizations; observing, at the same time, "how far these generalizations will apply to other months of the same year, or to the same months of different years, remains to be seen by future investigations."

I have the pleasure now to state, that the phenomena exhibited in the charts herewith communicated, so entirely correspond with the above generalizations, that there

seems to be no necessity to make any change in them. It is therefore expected that future observations will establish them as *laws*, applying to *these*, and perhaps to the other winter months.

In the summer months, however, there is one great feature of the storms of the winter months wanting; that is, their great size. In the summer the rains are quite local; and though, like the winter storms, each rain appears to progress towards the east from the place of beginning, yet, from want of size and continuity over a great space, they are not so easily traced.

I shall, therefore, not attempt to deduce any generalizations for the summer storms, until all the journals which may be received for several years shall have been collated.

In conclusion, I will venture to deduce two other generalizations, as applicable to the storms of January, February, and March.

21st.—The northern end of the line of barometric minimum generally moves faster towards the east than the southern end.

22d.—The maxima and minima of the thermometer move faster towards the east with the storms.

All which is respectfully submitted,

JAMES P. ESPY.

—Boston Med. and Surg. Jour.



SURGERY.

On Substernal Goitre. By DR GIEHRL.

A species of goitre, as yet very little known, consists in the prolongation of one of the lobes of the thyroid gland, which extends under the clavicle into the cavity of the thorax, where, by its development, it causes death by compression of the viscera contained in this cavity. A case somewhat analogous is reported by Boerhaave, of an Admiral who died with symptoms of asthma, in whom the thymus gland was found much hypertrophied.

The first observation, described by Dr Zingl of Munich, was that of a female servant, who was affected with dyspnœa and palpitations of the heart, which were increased when she moved about: at the same time the thyroid became swollen, and varices formed in the neck; she suffered frequently from catarrh and sharp pains in the side; presently the dyspnœa became extreme, the cough more severe, and the palpitations more obscure, but extending over the whole chest; frequent lancinating pains through the thorax; at length extreme orthopnœa, delirium, and death. At the autopsy, the thyroid gland in the neck was found a little increased in size, but it extended under the sternum as far as the pericardium. This prolongation, which was hard, almost scirrhous, and traversed by varicose veins, weighed more than two pounds.

The second instance, which was also observed in the hospital at Munich, is that of a man of forty years of age. He suffered from severe dyspnœa; the face was swollen and red; the pulse was full and hard; he had cough, obscure palpitations of the heart, lancinating pains in the chest; the respiratory murmur was indistinct on both sides, but chiefly obscure in front; the neck was hard, without distinct goitre; there was no œdema of the lower extremities; small blue spots similar to petechiæ appeared on the arms subsequently to two venesections; extreme orthopnœa, with anxiety and cold sweats; he died three days after his admission into the hospital. On opening the chest, a large hard tumour was found occupying nearly the whole chest, covering the pericar-

dium, as far as the diaphragm, to which it was adherent. Above, it extended under the clavicle to the left lobe of the thyroid gland, of which it was evidently a prolongation. It had the appearance and consistence of a hepatized lung; on cutting into it a turbid fluid escaped, whitish and viscous; the two carotids, the descending vena cava, the par vagum and sympathetic nerves on both sides were surrounded and compressed by the tumour. It is probable that the tumour had existed for a long time, and had not caused any alarming symptoms; but in consequence of inflammation set up in its substance, it had attained a considerable size, and had thus interfered with respiration and circulation, especially of the superior vena cava; hence the symptoms observed before death.—Gazette Med. de Paris, Nov. 1845.

Lithotrity. By M. CAZENAVE.

At the sitting of the Academy of Medicine, of Nov. 11, 1845, M. Cazenave (of Bordeaux), read a short statistical notice relative to the operations of lithotrity, which he had practised during fifteen years. The number of these operations amounted to 52. Of these 43 were cured, 8 died, 1 only continued to suffer after the operation, though he had been relieved of two large calculi. Of the eight unsuccessful cases, three died from circumstances unconnected with the operation.—Gazette Medicale.

New Mode of Treating Spina Bifida. By DR LATIL DE THIMECOUR.

The subject of the following operation was a child of between two and three months old. At birth, the tumour is said to have been of the size of a small apple. When examined by M. L., the tumour had attained the size of the head of a full-grown foetus. It was situated in the sacro-lumbar region, at the point of union between the last lumbar vertebra and the sacrum. It was attached to the vertebral column by a tolerably thick pedicle, flattened in its longitudinal diameter, projecting about 52 millimetres (more than 2 inches) from the level of the spine, and covered by skin and cellular tissue. On pressing the finger on the pedicle, it penetrated into a cavity bounded on both sides by an osseous shell; but during these examinations, the infant cried violently, and was threatened with convulsions and impending suffocation, so that it appeared advisable not to continue them further. The tumour was filled with a transparent yellowish fluid, and so much distended, that it appeared on the point of breaking. On its left side there was a trace of a cicatrix, of a rounded form, like the umbilicus.

Two small cylinders, of very hard wood, were procured, about three millimetres (about one-eighth of an inch) in diameter, and ten centimetres (about 4 inches) in length. Each of these was pierced at its two extremities by three holes placed at equal distances from each other, so as to admit of the passage of a ligature.

The tumour was included between these two cylinders, which were drawn first to simple contact; the fluid was then removed by means of a trocar, and during its flow, any nervous portions which might have been floating in it, were gently pressed inwards. Whilst this was being done, the pieces of wood were gradually more firmly approximated till the serous membranes at the base of the pedicle were in most accurate contact: the tumour was then laid open with a bistoury.

(The application of the pieces of wood is quite similar to the proceeding usually adopted in the castration of horses and some other animals.)

No unpleasant symptom followed the operation. On the second day after its performance, the ligatures were tightened; and on the fourth day the parts exterior to the cylinders of wood were sphacclated. Seven days after the operation, on proceeding to remove the apparatus, a jet of fluid took place from the centre of the pedicle, when the

cylinders were again tightly applied. On the 12th day, they were entirely separated by ulceration, except at the centre of the pedicle. This was now included in a ligature, and the apparatus removed by cutting through this point of connection beyond the ligature.

A fortnight afterwards, the ligature had separated, and the wound was entirely healed. The child was then in a state of perfect health; and, what is worthy of observation, the alvine and urinary evacuations were voided with regularity and without pain; whilst, before the operation, the child uttered the most piercing cries on evacuation of the bowels or urinary bladder.—*Gazette Medicale*.

MATERIA MEDICA AND DIETETICS.

A Resumé of the Action of different Drugs upon the Mental Faculties. By OTTO.

Each drug, besides its general and special action upon the organs of the body, exerts at the same time an action upon the mental faculties. The stimulants increase to a greater or less degree the quantity of blood which flows into the brain in a given time; as a consequence of this, the whole brain is excited, provided the stimulation does not exceed a certain limit; but the local excitement differs according to the different stimulant employed. Thus, ammonia, musk, castor, wine, and ether increase the powers of imagination and perception; the empyreumatic oils cause peevishness, melancholy, and visions. Phosphorous acts upon the generative functions, so also does iodine, and at the same time induces sadness. Cantharides excite, and camphor diminishes, the sexual propensity. Arsenic causes melancholy; gold, hope; mercury, increased sensitiveness, (mental); and carbonic acid gas, placidity. Among the narcotics, opium stimulates the sexual desires, the intellectual powers, and the imagination. Belladonna dulls the mental faculties; hyoscyamus causes moroseness, jealousy, and violence; cicuta weakens the understanding; digitalis diminishes, and saffron increases the sexual desires; cannabis causes calmness; and amanita muscaria, courage; tobacco operates in the same way as opium.

A New Caustic. By M. VELPEAU.

M. Velpeau has for some time been engaged in experimenting on different kinds of caustics; and as the result of his investigations recommends a mixture of sulphuric acid and saffron. He has mixed the acid with various substances, such as asbestos, charcoal, flour, &c., but he prefers the saffron; this he terms the *caustique éthiopique*. In describing this substance, he concludes by stating, that no symptoms of its absorption have ever shown themselves, and that, besides its caustic powers, it possesses the valuable property of destroying the horrible stench of malignant suppurating sores. In short, this caustic pomade has three advantages,—1st, Its action can be so easily confined to a particular surface. 2dly, The slough which it produces is quickly thrown off. 3dly, The absence of absorption. It has the disadvantage that it cannot be kept any length of time, as it becomes weaker on account of the absorption of moisture or watery vapours by the acid.—*Annales de Therapeutique*, 1845.

Syrupus Calcariae or Hydrate of Lime in Diarrhoea.

Simple syrup, saturated with hydrate of lime, has been much employed by Dr Capitaine, as an antacid, in doses of from one scruple to half a drachm; and at the hospital Neckar, it has been given with much benefit, instead of cow-milk, in the diarrhoea of children during or after weaning.

Iron in the Chlorosis of Phthisical Patients.

Prousseau warns against the employment of iron in phthisical patients, as he considers that it hurries on the phthisis to a fatal termination: he regards chlorosis as a preventative to the formation of ulcers and tubercles in the lungs.—Gaz. Med. de Paris.

New method of employing Muriate of Morphia for Neuralgia and Toothache.

By Dr EBRARD, of Bourg.

M. Ebrard states that he has found the following to be a very successful plan of treating toothache by frictions with the muriate of morphia.

During the paroxysm, or in the evening, some hours after a meal, the patient should take upon the moistened extremity of his finger, 13 milligrammes (one-fifth of a grain) of the muriate, and apply it for two or three minutes to that portion of the gum which is painful. Then, while inclining the head on that side, taking care not to swallow or eject the saliva which holds the salt of morphia dissolved, he must allow free contact to take place between the saliva and the gum for five or ten minutes: this leads to the local absorption of the morphia. He may afterwards swallow the whole of the saliva. If there should be no relief, and symptoms of narcotism be absent, after a period of two hours, the application may be repeated. This repetition, however, is rarely required.

If the toothache should reappear the day following, without any abatement of the suffering, and no symptom of narcotism be present, the patient may employ 37 milligrammes of the muriate (about $\frac{57}{100}$, or one half of a grain English) in two doses, with the same precautions, allowing an interval of about two hours to elapse between each dose. M. Ebrard has reported cases in which one or two applications of the muriate, in this way, sufficed to remove the toothache entirely, whether it depended on caries or simple neuralgia, without any alteration in the tooth.

In neuralgia affecting the forehead, he has found a most successful method of treatment to be that of causing the patient to take, like a pinch of snuff, from 25 to 50 milligrammes ($\frac{4}{10}$ to $\frac{3}{4}$ of a grain) of muriate of morphia. Simple as this mode of treatment is, Dr Ebrard properly advises that great caution should be used in employing this powerful agent.—Gazette des Hopitaux, Janvier 1846.

Remarks.—While the above treatment appears likely to be beneficial, and the dose of the muriate of morphia prescribed is small, we must add a word of caution respecting it. This salt produces sometimes unexpected effects in small doses. At p. 376 of our last volume, will be found reported a case, where about the $\frac{1}{5}$ part of a grain, in two doses, applied endermically, caused most alarming symptoms in an adult female; and half a grain has produced dangerous effects, although we believe that a smaller dose than three grains has not yet been known to destroy life. There will be some difficulty in preventing the patient from swallowing his saliva. On no account should the dose be repeated if there be the least sign of narcotism.—Ed. Lond. Med. Gaz.

On the injurious effects of the simultaneous administration of Calomel and Common Salt.

A man affected with cerebral fever was treated by venesection and leeches. He was then ordered occasional doses of calomel, with an enema composed of a decoction of senna and a table-spoonful of common salt. The patient was in an alarming condition, but it was not anticipated that he would die speedily. Death took place, however, the same evening. The body rapidly putrefied, and presented large spots of ecchymosis. Bichloride of mercury had evidently been formed by the re-action of the two salts on each other! This fact is too important not to call for the serious attention of medical practitioners, and it imparts additional strength to the opinion, that calomel and com-

mon salt should not be given to a patient within short intervals of each other.—*Journal de Pharmacie*, Janvier 1846.

Remarks.—We believe this *fact*, reported by our respected contemporary, to be one of those *post hoc* conclusions which are so common in therapeutics. If the calomel (in large doses) and common salt had been mixed together and thrown into the stomach, if symptoms of poisoning by corrosive sublimate had then supervened, and appearances similar to those produced by that poison had been found in the body, if, in addition to these circumstances, corrosive sublimate had been clearly detected in the stomach, there might have been good reason for attributing death to this cause, “and not to the cerebral fever.” But what are the facts? Small doses of calomel enter the body by the stomach, while the common salt enters by the rectum; there was no evidence of poisoning, so far as the report goes, either during life or after death, nor was corrosive sublimate found in the body! The chemical change referred to, does take place, but only to a very minute extent, even when the substances are mixed together. The mixture requires exposure to a much higher temperature than is ever found in the stomach, to produce corrosive sublimate in perceptible quantity.—*Ed. Lond. Med. Gaz.*

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*Ammoniacal Ointment a Substitute for Blistering Plaster.*

The ammoniacal ointment, when properly prepared, causes vesication in about ten minutes. This rapidity of action renders it preferable to the other preparations used for producing vesication, which seldom act until after the lapse of several hours. Care should be taken that the ointment is properly prepared, or its operation will be slow and imperfect. The formula for its preparation recommended by M. Gondret, the inventor, is as follows:—Hogs lard, 32 parts; oil of sweet almonds, 2 parts; melt at a very gentle heat, and pour the compound into a bottle with a wide mouth: then add strong solution of ammonia (at 25 per cent? ) 17 parts. Keep the contents of the bottle well mixed by shaking them until cold. The common cause of the ointment failing, is, that the mixture of lard and oil is over-heated.<sup>1</sup> If the lard is too liquid or too warm when the ammonia is added, a portion of this is rapidly lost by evaporation; and the strength of the compound is impaired. When well prepared and kept in a cool place, in a well closed bottle, the ointment will preserve its vesicating properties for more than a month.—*Journal de Pharmacie*, Janvier 1846.

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FORENSIC MEDICINE AND MEDICAL POLICE.

Report on different Medico-legal questions connected with Pregnancy.

According to Friedrich, it is quite possible for a woman to be pregnant without being aware of it; for the knowledge of having had sexual intercourse does not include a knowledge of the probable consequences of the act, as many persons, especially those who are young, inexperienced, or silly, are ignorant of the object of coition; and as they are unaware of the physical changes brought about by pregnancy, they may mistake them for the symptoms of disease. Idiots, and women impregnated during sleep, coma, or syncope, may readily be ignorant of their pregnancy; and, in conclusion, Friedrich lays it down as a rule in practice, that the possibility of ignorance of pregnancy, even until delivery, cannot be denied.

¹ It would be better to melt the lard with the oil, by immersing the vessel containing them in water, the temperature of which is gradually raised.—*Ed. Lond. Med. Gaz.*

Henke considers superfecundation and superfoetation as identical. Schwabe, on the contrary, points out two strong marks of distinction between them. The first, where two ova, by two acts of copulation, performed at a short interval, (at least before the formation of the membrana decidua,) by the same, or two different men, are produced, he considers, possible in a few rare cases. But the second, viz., the introduction of a second foetus into a uterus of normal formation, in consequence of a second act of coition, after the complete development of the membrana decidua of the first impregnation, he regards as impossible. He considers superfoetation as possible only where there is a double uterus. Raciborski, in his treatise *de la ponte périodique spontanée et des époques de la reproduction chez la femme*, affirms that superfoetation is impossible, even where there is a double uterus, in consequence of certain physiological conditions, viz., in order that an ovulum be fecundated, it must be matured in the ovary; and if two ovula be matured at the same period by one or by two acts of copulation following each other at a short interval, a case of twin pregnancy will be produced; but as soon as an ovulum is fecundated, and is progressing in its development, in or out of the uterus, a second ovulum cannot advance to maturity in the ovary, and therefore no new fecundation can take place. According to Raciborski, the birth of a mature child, a few months subsequent to the birth of a previous one, is only a case of twins, where the development of one of them has been arrested by some accidental cause.

Pregnancy, with closure of the Vagina.

In Henke's Zeitschr, No. 32, for 1844, Möller records another instance of integrity of the hymen during parturition; the opening in the membrane was so minute as just to be visible, and it was with difficulty that the point of a probe-pointed bistoury could be passed into it, for the purpose of laying it open.

On concealment of Pregnancy in Bavaria.

According to the criminal code of Bavaria, concealment of pregnancy and delivery is not punishable, unless such concealment cause the injury or death of the child, or be intended as a preparation for its murder. This enactment, however humane it appears at first sight, is most injurious to morals, for it greatly conduces to the procuring of abortion and infanticide. Dr Gaderman denies the assertion in the criminal code, that "infanticide would be occasioned by punishing concealment of pregnancy or delivery simply;" he points out that the criminal code pays too little regard to the circumstance that the investigation into concealment of pregnancy or delivery is among the most difficult, uncertain, and doubtful, in legal medicine, and that on account of these circumstances, the accused frequently escape; and the difficulty is much increased when it is necessary to prove, if the child is born dead, that its death was a consequence of the concealment of pregnancy, or where it is born alive, that its subsequent death was a consequence of the concealment of delivery.

On the uncertainty of the manner of death of children in some cases of Infanticide.

Among the circumstances which render proof of life derived from the condition of lungs uncertain, is the fact that the child may breathe before birth without evidence of this being afforded by its cries. Dr Hayser has published four such cases, three in his own practice, and one in that of M. Petit of Copenhagen. The first case was one of natural labour, a mature child; the last stage of the labour was quick rather than slow; after the expulsion of the head, there was not the slightest trace of life, the mouth was shut, there was not the least motion of the alæ of the nostrils, or of the breast. Immediately after birth, the stethoscope was applied to the chest, and the heart was heard to

beat feebly and slowly. This ceased in from 1 to 2 minutes. On dissection, the edges of the lungs on either side projected for a line or two in front of the heart; they floated freely on water as well *en masse* as detached, and crepitated on incision. The second case was a footling presentation. The child on being born showed no signs of life. On dissection the thoracic viscera *en masse* sank in water, but the left lung, and its lobes separately floated and crepitated. The two remaining cases were almost precisely similar. Dr Hayser assumes the possibility that in many cases the child may breathe before its birth, when any interruption takes place in the circulation between it and the placenta.

Olivier d'Angers, speaking from experience, affirms that a child may, in certain cases, live a longer or shorter time without breathing, and he therefore argues that murder may be done on a child that has not breathed. He points to coagulation of the blood as a proof that any thing done to such a child has been inflicted during its life. If wounds are observed on the body of a child, and coagulated blood at the places injured, and if the injuries are such as might be expected to cause death, then we are entitled to assume that the function of respiration has been prevented by the injuries, and that murder has been committed. *Olivier* records two such cases to show that the total absence of respiration does not disprove the possibility of murder.

Poisoning with Charcoal Vapours.

The accident was brought about in consequence of some logs of wood having been placed to dry in an oven, which communicated, by means of an iron pipe, with a sleeping apartment. The first symptoms showed themselves in two boys who were already asleep; these were loud snoring and difficult breathing, whimpering and moaning; the father and mother, who were at the same time in the room, retired to bed. The first symptoms of the effects of the vapour, were in the father febleness of gait, and, on his going to bed, he fell into a lethargic slumber, accompanied with difficult breathing and snoring. The woman suffered from violent convulsions, with tossing of the head, dilated pupils, cold extremities, rapid pulse, quick breathing, and frequent groaning; she was insensible to the action of ammonia. Soon afterwards, one of the boys was attacked with violent convulsions, accompanied by insensibility, chattering of the teeth, great increase of temperature, quick bounding pulse, livid countenance, half open eyes, and dilated pupils. In the course of the evening, the servant also began to suffer from vomiting and insupportable headach. In the mother, the convulsions ceased, but again returned with increased intensity. In three days, however, all the patients were restored to health.

Murder effected by means of Sulphuric Acid.

Dr Fritz records a case of a disabled bed-ridden woman, who was murdered by her servant, by means of sulphuric acid. The case is remarkable, as having been deemed at first a case of suicide, but it was ultimately established not to have been suicidal. Suspicion was first excited in consequence of the known lameness and infirmity of the deceased making it impossible for her to reach the poison.—*Casper's Wochenschr.* No. 50, 1844.

Large Dose of Iodide of Potassium without Injury.

As an instance of the quantity of iodide of potassium that may be taken without injury, Dr Duvillé mentions the case of a man who received an ointment composed of 240 grains of the iodide of potassium, mixed with 450 grains of lard, to rub into his groin; by some mistake, he thought the ointment was to be taken internally, and he ac-

cordingly eat it in the course of 48 hours, in divided doses.—*Journal de Chemie Med., Juillet.*

As a contrast to the preceding, Dr Santha relates a case where 15 drops of a solution of ℥j. to the ounce, to be taken three times daily by a girl, ætat. 13, caused on the second day violent fever, headache, and pain in the gullet. These symptoms, with paroxysms of suffocation and delirium, gradually increased until the third day, when they became alleviated, and the girl ultimately did well.—*Zeitschr. f. d. Medicin.* Nov. 1844.

PART V.—MEDICAL MEMORANDA.

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY.

Wednesday, 17th December 1845.—Dr GAIRDNER, President, in the Chair.

(Partly from Cormack's *Journal of Medical Science*, and partly obtained from Professor Simpson.)

(Continued from p. 128.)

Professor Simpson continued,—Did we not sometimes see surgeons amputate the limb when it was merely the seat of simple and benign, but untractable ulceration? And ulceration might be a very serious inconvenience to a labouring man; but here we have a dangerous and often fatal operation performed for a disease which was not fatal nor dangerous in its own character, and that easily admitted of palliative treatment. Altogether it appeared to Dr Simpson, that the question of *when* we should conscientiously deem ourselves entitled to practise ovariectomy, or any other dangerous operation for a chronic disease, was one that had hitherto received no sufficient attention. It was a question that probably must always be decided much upon the merits of each individual case, and in regard to which different minds may come to opposite and yet conscientious conclusions. It always embraced a difficult moral and professional problem, in cases where the required operation was, as in ovariectomy, ligature of the larger vessels, amputation, lithotomy, &c., directly and immediately dangerous to the life of our patient. It resolved itself in such a case, into a question of this kind: Am I conscientiously *entitled* to inflict deliberately upon my own fellow-creature, with my own hands, the imminent and immediate chance of *death*, for the problematical and prospective chance of his future improved *health* and prolonged *life*? In calculating what *amount* of danger of present death ought to be incurred for the hazard of future good, many secondary elements necessarily entered into the problem—such as the existing chance of otherwise palliating the disease and prolonging life with certainty for months or years—the extent of attendant suffering—the probability of the affection recurring—or already existing elsewhere—the otherwise healthy or unhealthy state of the patient's constitution—the prevalence at the time of phlebitis or erysipelas, &c. &c. In such a calculation, the ideal glory of a successful operative result has probably been too often allowed to dazzle the calm judgment of both the operator and his patient, and the darker but equally truthful shades of the picture have been, for the moment, so far obscured and unseen. With the patient the stern reality of danger and death too frequently vanishes, here as elsewhere, before the strong hope of life. And the sur-

geon, like the soldier, is, in the computation of his successes, perhaps too liable to forget the actual amount of human suffering and human fatality through which these successes are obtained.

5. It has often been argued against ovariectomy, that the operation, when begun, could not sometimes be completed from adhesions, &c., or no tumour could be found.—These circumstances were the results of imperfect diagnosis; and Dr S. adverted to the occasional difficulties connected with the discrimination of ovarian tumours, and admitted them to their full extent. He explained that he could scarcely conceive the repetition of some of these errors if due caution were adopted. If other means failed, an exploring needle would always certify the presence of a tumour, and its structure or nature; the uterine bougie would show if the tumour were situated in the uterus or ovary, &c. The chief and ruling difficulty at this moment was assuredly that of discovering the existence or not of adhesions of the tumour by false membranes, their extent, &c. If this point could by any measures be cleared up, it would remove one of the great, perhaps the greatest, existing objection to ovariectomy. Nor was it totally hopeless. One of the most sure and solid advances made by modern pathology was our gradual but great improvement in the physical diagnosis of the diseased states of different organs. Probably the next marked step in this path would be the detection of some measure or measures for improving our knowledge of the physical diagnosis of diseases of the abdominal viscera. It was not more extravagant to expect this, than thirty years ago it would have been extravagant to expect all the vast aid and certainty which we now derive from auscultation in the physical diagnosis of diseases of the chest; and he believed some important steps had been already made regarding the detection of ovarian adhesions by Dr Frederick Bird of London, and others. Dr Bennett's contribution was under this head of the highest pathological and practical value. As soon as the ovarian tumour in the case described by him was exposed, it was evident to all who had taken an interest in the question, that the accompanying ascitic effusion oozed by apertures from the interior of the ovarian tumour, and was a secondary result. But if, as Dr Bennett would, he doubted not, be able ultimately to show, it was possible to distinguish by microscopic characters between the fluid of common ascites and the fluid of ascites thrown into the peritoneum through small ulcerated apertures in the walls of an ovarian tumour, it would clear up various points in a set of cases formerly surrounded with perplexing difficulties. It would enable us to detect the pathological cause and source of the great ascitic collections sometimes attendant upon comparatively small ovarian tumours. Cases with this complication (that is, ovarian tumours with apertures allowing their secretions to pass into the general peritoneal cavity) evidently in general ran a very rapid and fatal course. If these secretions were acrid and irritating (as when mixed with inflammatory effusions from the walls of the cyst or cysts), they might at once excite fatal peritonitis. This, however, was rare, and the exception to the rule. Usually the secreted fluid appeared to be blander, distilled slowly through the morbid openings in the parietes of the tumour, and, accumulating in the peritoneum, required ever and anon to be removed from that cavity by tapplings, which soon became more and more frequent, and more and more exhausting. This variety was probably, Dr Simpson suggested, of all ovarian cases, that most surely justifying the adoption of extirpation. And besides, in these very cases, it was generally ascertainable whether there were adhesions or not, for the tumour was surrounded by a fluid medium, and hence admitted more easily of this point of diagnosis being made out by its mobility in that medium. Perhaps it was, on the other hand, unjustifiable in our present state of knowledge to operate where there were many adhesions, or any great want of certainty about the existence and extent of them; as it was, where the tapplings, though many and frequent, did not (as was seen in a few exceptional cases

on record), exhaust rapidly the powers of the patient, or threaten her life with any prospect of urgent or immediate danger.

But, admitting to their fullest extent the occasional difficulties which have been found to beset the diagnosis of ovarian tumours for operation, do we not meet with occasional difficulties of exactly the same kind in other surgical operations, and which do not yet deter surgeons from interfering? - Is the trephine never used without detecting any effused blood, or pus, or depressed and fractured fragments of the bone? In tying the carotid and subclavian and iliac arteries for aneurism, it has now repeatedly happened, that all the great dangers of these operations had been submitted to most uselessly, the disease, during the operation, or after death, being found not to be aneurismal at all;¹ and hence not at all curable by such a procedure; and, when aneurismal, the operation has been sometimes left incompleted—the vessel searched for either not being secured, or, as has happened with Dupuytren and others, it has been reached and fatally transfixed with the ligature, instead of being surrounded by it. Have not the antrum, and the mamma, and the testicle, &c., been sometimes found the seat of simple inflammatory and curable effusion, after all the usual operative measures for the removal of supposed malignant tumours from these localities had been commenced, or even completed. A surgeon had excised ten scirrhus mammae, and in every case with perfect success. In not one was there any return of the disease. Sir Benjamin Brodie was requested by this active operator to see a new case of scirrhus which he had determined to remove. “It was nothing more,” says Sir Benjamin, “than a chronic abscess of the breast, which he denominated scirrhus.”—(Medical Gazette, 1844.) Dr S. had seen amputation of the thigh performed by a celebrated surgeon for supposed scrofulous disease of the knee-joint, and where, on examining afterwards the amputated limb, no traces of such a disease could be found. Most of them had seen cases of diseased limbs threatened with, or actually condemned to the knife, and which yet afterwards got quite well, when surgical interference would not be submitted to by the patient. In some cases of hernia, is it not occasionally found impossible, as in some cases of ovariectomy, to finish the operation, and return the bowel in consequence of extensive morbid adhesions or other causes? Is not the stone sometimes found encysted in lithotomy, and for that or other causes its removal rendered impossible after the bladder is cut into? Is the operation for the removal of an incarcerated piece of necrosed bone not sometimes found impossible after it is begun? Grave errors have been committed in diagnosis in ovariectomy cases, in relation to the propriety and practicability of the operation, but he doubted if as grave errors were not as frequently committed in some other recognized capital operations. A much greater amount of caution was undoubtedly requisite on this head.

In summing up his statement, Dr Simpson allowed that ovariectomy was a most serious and dangerous operation; but at the same time he maintained, that surgeons in declaiming against it had used a series of arguments, all, or almost all, of which would equally, and some of them still more strongly, apply against these capital operations for chronic maladies, regarding the propriety of which they did not affect to entertain one single doubt, and which they every day performed without the slightest scruple. For his own part, however, he entirely doubted whether surgeons should resort to many of these operations, under the circumstances in which they often adopted them. He doubted

¹ During the discussion, Dr Spittal mentioned, that out of 59 cases, collected by Dr Norris, of ligature of the subclavian artery for aneurism, “in three no aneurism existed, and in two the tumour was mistaken for aneurism and punctured.” Hence, in one out of every twelve of these cases, the diagnosis was perfectly wrong.

whether, for example, they should at once subject a man to all the immediate and fearful perils of lithotomy and lithotrity, because he had a stone in the bladder which gave him little or no uneasiness, and which might allow him, under proper regimen and treatment, to live and perform the duties of life for a long series of years. He doubted whether, in a case of axillary, or carotid, or popliteal aneurism, slowly increasing, or not increasing at all, having some small chance of spontaneous cure, and having no inconsiderable chance of being followed or accompanied with the same disease in other parts of the arterial system, all the dangers of the ligature of the vessel nearer the heart, should be at once recklessly encountered. He doubted whether, in malignant or carcinomatous disease of the forearm or leg, amputation of the arm or thigh should be at once resorted to, with the hazard of death in a few hours or days in one out of every two operations, and the almost perfect certainty of the same morbid action reappearing sooner or later in the stump, or in some other part, if the patient did happen to survive. And, on the same principle, he doubted whether, ovariectomy had not been employed in some cases under perfectly unjustifiable conditions, when the health and life of the patient were not immediately threatened by the stage and progress of the malady, when the tumour was a source of inconvenience and deformity, rather than a source of danger, and when the evils of the disease were as yet prospective rather than real. But if the health of the patient were becoming rapidly undermined by the disease,—if the progress of the affection showed that ere long it would inevitably prove fatal,—if the question were thus reduced to one of certain and not distant death from the course of the malady, or possibly an entire escape from the affection, with prolonged life and health from the operation,—and if, in addition, the ascertained or apparent freedom of the tumour from adhesions and other circumstances were such as to present no counter indication,—then Dr Simpson believed that ovariectomy might be undertaken under conditions far more justifiable and legitimate than the surgeon could possibly urge in favour of some of his stone, and aneurism, and other capital operations for pathological lesions of a similarly chronic character and course.

Lastly, Dr Simpson stated, that if betimes ovariectomy came to be recognized as a surgical operation, fit and proper in such cases of ovarian disease as he adverted to, or in others, he had no doubt the steps of the operation itself would meet with improvements. Such improvements were almost always wrought out by experience. How different is amputation now, from what it was formerly with the hot iron, or boiling pitch, to seal up the cut vessels. How comparatively safe and simple is the tying of an artery now from what it was half a century ago, with the flat double ligatures, and ligatures of reserve, &c. One great source of danger in ovariectomy was the irritation and injury inflicted on the intestinal canal and peritoneum from the strong ligature which was required for the stalk of the tumour being passed through the abdominal cavity, and out at the external wound,—remaining there for days or weeks, and keeping a portion of the wound in the abdomen necessarily open by its presence, and consequently, so far still more hazarding the occurrence of peritonitis. Probably it might be possible to devise some other measures of securing the large vessels, principally veins, be it remarked, of the pedicle, and thus save the several dangers arising, (1st), From leaving the ligature to irritate there; (2d), From the ligature, by its constriction of the stalk producing strangulation; and, (3d), From its exciting phlebitis. And if the ligature still continues to be employed, it would, Dr Simpson believed, be found a great improvement, as had been suggested to him by his excellent friend and assistant, Dr Keith, to pass it down, perforate the very thin layer of serous and mucous membranes dividing the utero-rectal reflection of the peritoneum from the upper and back part of the vagina, and bring it out along the vaginal canal. Dr Simpson knew that on the dead subject this could be done with the greatest facility. It would have several advantages. 1. It would

enable the surgeon to close at once the whole length of the incision in the abdominal parietes ; 2. The sides of the vaginal canal, being in contact, would act as a valve sufficient to prevent that dangerous access and egress of air to and from the peritoneum under strong respiration, vomiting, &c., which had sometimes occurred through the aperture kept open by the ligature, in the old form of operating ; 3. The ligature would not pass through the same extent of the peritoneal cavity, and would scarcely, if at all, touch or irritate the folds of the intestinal canal ; and, 4. If the uterus happened to be placed backward upon the rectum, the ligature applied to the posterior surface of its broad ligament would be included and imbedded in a cavity almost divided and separated from the general cavity of the peritoneum, and where the process of reparation and adhesion might often go on without fatally extending upwards into the general peritoneal sac. Farther, the cases already published recounted some errors which the experience derived from them showed might be avoided in future. We were thus warned to take great care to close, as accurately as possible, the peritoneal side of the wound, to prevent strangulation of a fold of intestine in its edges ; to adopt precautions with the same view of not allowing a similar effect from the portion of ligature passing through the abdomen ; not to allow the bladder to become much distended, least it drag the uterus, or disturb the reparative process ; not to excite inflammation by unnecessarily dragging at the ligatures, &c. &c.

Dr Spittal agreed with the previous speakers as to the great importance of minute and correct diagnosis ; not only as to the character and connection of the tumour, but in regard to all the other organs of the body. It appeared to Dr Spittal that this point had by no means been carefully attended to. Several cases, with serious co-existing disease, having been operated upon, by the fatal issue of which the general mortality has been considerably augmented. In illustration of the occasional great carelessness of diagnosis, Dr Spittal alluded to a case which occurred several years ago, in which pregnancy, near to the full period, had been mistaken for ovarian disease ; and in which the operation of passing a seton through the supposed morbid growth, was only averted by the timely efforts of nature. Had the simple and infallible test of auscultation been used in this case, could such an error have occurred ?

Dr Spittal called the attention of the Society to Dr Norris' table of cases, in which the subclavian artery had been tied.¹ These amounted to 69, of which 56 were cases of aneurism ; 9 wounds of the axillary artery, or secondary hemorrhage ; 1 rupture of the axillary artery, on an attempt to reduce a dislocation ; and 3 for diseases supposed to be aneurism. Of the whole, 36 recovered, and 33 died, or 1 in $2\frac{1}{11}$. But, if the 10 cases of injury of the arteries, or of secondary hemorrhage be excluded, as admitting neither of choice nor delay, 59 cases remain, of which 32 recovered, and 27 died, or 1 in $2\frac{5}{7}$; an amount of mortality still considerably greater than that of ovariectomy.

As to error in diagnosis ; of 101 cases of abdominal section for ovarian, and some few uterine tumours, collected by Dr Atlees,² in 6 no tumour existed, or 1 in $16\frac{2}{3}$. While of the 59 cases operated on for aneurism, in 3 no aneurism existed ; and in 2 the tumour was mistaken for abscess, and punctured ; together 5, or 1 in $11\frac{2}{3}$. So that error in diagnosis has hitherto been less in ovarian and uterine tumours operated upon, than in aneurism for which the subclavian has been tied. Dr Spittal thought, that the reason why so much prejudice continued to exist against the removal of ovarian tumours was very much in consequence of the unjustly severe animadversions of certain

¹ Cases from all sources from 1800 to 1844, American Journal of Med. Science, July 1845.

² Ibid. 1844.

eminent surgical authorities, who have, at the same time, somewhat underrated the sufferings attendant upon the disease in question; and who, nevertheless, consider and practise, as perfectly legitimate, the ligature of some of the great arteries for the cure of a disease which is not known to abridge life in a more rapid degree, in general, than ovarian disease, and which is frequently under the control of less severe measures, and sometimes spontaneously curable.

Mr Spence said, that whilst he was happy to find from Professor Simpson's observations that so much unanimity existed among the members of the surgical department of the profession, he could not allow the deduction which Dr Simpson drew from that, viz. that those who had declined to perform the operation had been influenced principally by views of the senior members of the profession. As one of those who had declined operating in the case alluded to, he (Mr Spence) might state, that he had given it long and full consideration before refusing to operate, and he would briefly mention the circumstances which had led him to conclusions unfavourable to the operation. These were, *first*, The difficulty, and in many cases the impossibility of forming a correct diagnosis in these cases, and as a proof of this he would instance a case in which he had made a *post-mortem* examination in the presence of Dr Thatcher and others, when the ovarian tumour was found perfectly free from adhesion, and otherwise favourably situated for removal, but in which was found a soft fungoid mass of a thin flattened form on the parietal peritoneum, extending from the pubes to the umbilicus, the existence of which could never have been ascertained by manipulation, however carefully or skilfully conducted; *2dly*, The immediate dangers of the operation, which is stated to have proved fatal in several cases, either from fatal syncope during the operation, or hemorrhage, occurring within a few hours afterwards; fatal sinking from the shock of the operation, &c.; *3dly*, The secondary dangers—of peritonitis, the extensive suppuration which must ensue, and be kept up by the presence of the ligatures, through the pedicle, and the great constitutional irritation produced by the slough of the pedicle; and, *lastly*, The very reparative process (supposing other dangers overcome) had always appeared to him as eminently fraught with danger, owing to the consolidation and contraction of the parts within the pelvis consequent upon cicatrization involving the intestine, and so giving rise to fatal ileus. Such were the grounds on which he had decided against the propriety of operating, and as to the cures stated from the cases which he had read, the date after the operation at which cases were reported as successful was too short, taking the last-mentioned circumstance of danger into consideration, to be allowed as evidence of complete cure, or as counterbalancing the great risks of the operation. True, Professor Simpson had mentioned to-night the successful results of some of Dr Clay's cases, and given their history long after the operation, but even this proof of these few cases was not published till now, and of course, surgeons could decide only by the evidence before them.

If surgeons, without reasoning from great general principles, long recognized as the results of experience, were at once to adopt every new operation or method of treatment, in consequence of statements of some successful cases, where were we to draw the line of demarcation between the rational practice of our profession and empiricism? He could not agree with Dr Simpson that the operations—ligature of the innominate or trepanning for effused blood, were now recognized as regular and justifiable operations by surgeons generally.

Dr S. had said that surgeons objecting to operation in ovarian disease, on the plea of it not being a rapidly fatal disease, were yet ready enough to operate in cases of aneurism, which was a disease which might continue long without being fatal, and might even become spontaneously cured. Surely Dr S. must have forgotten how rare

spontaneous cure of aneurism was. He (Mr S.) thought that in such cases the surgeon was not only warranted, but bound to urge the operation (an operation not dangerous in itself,) as, if delayed, risk of extension of the diseased state of the vessel, of suppuration within the sac, and gangrene of the extremity, would be much increased; and, indeed, such delay on the part of either surgeons or patients, might account for the unfortunate results which had been referred to by Professor Simpson and Dr Spittal.

Professor Simpson added a few observations in reply to the remarks made by Mr Spence. According to Mr Spence, trephining for the discovery of effused blood, and tying the arteria innominata, were not now looked upon by surgeons as justifiable operations. Probably the Society would allow that the lately published text-books by Professors Fergusson and Syme, were fair standards of the existing state of British Surgery. Now, Mr Fergusson, not only in his work, advises trepanning for effused blood, but even speaks of cutting through the dura mater in search of it. Mr Syme, in treating of the ligature of the innominata, states that it is a dangerous operation, but he does not give the most remote hint as to its being regarded by him or others, as an unjustifiable one; and, on the contrary, he describes the steps of the operation, and suggests means for rendering it safer. Mr Spence had alluded to the spontaneous cure of aneurism, and thought Dr Simpson wrong in his ideas about its frequency. Dr S. did not know of any data calculated to show how often, or how seldom, the spontaneous cure of a local circumscribed aneurism—such as surgeons operated for—might be expected; but of 8 or 10 cases of popliteal aneurism, seen in the hospital within the last 8 or 10 years, nature set up inflammatory action in the sac or vessel, or both, and cured one case (a patient of Dr Cunningham,) before art had an opportunity of interfering. At all events, Dr S. felt assured, that if local external aneurisms were treated by common palliative measures, their spontaneous cure would be found not to be so rare as the spontaneous cure of ovarian dropsy; and he feared that all Mr Spence's arguments for early operation in the one case, most unwittingly applied with similar appropriateness to the other. And when in aneurisms, art substituted her surgery for the surgery of nature, the operation was certainly by no means so safe as Mr Spence seemed to believe. Tying the subclavian for axillary aneurism, was fatal in about 1 out of every 2 operated upon. Nor was ligature even of the crural artery for popliteal aneurism, an operation of such facility and safety, as some surgeons seemed to believe. In the first number of Dr Cormack's Journal, eleven cases of ligature of the crural artery for popliteal aneurism, are adverted to, as having, within a limited period, occurred in Edinburgh. It is well known, that in five of these eleven cases, the operation was followed, sooner or later, by a fatal result.

Dr Cormack remarked that he was not responsible for any surgical statistics, or for any statements published in his Journal, excepting those which appeared anonymously, or with the express sanction of his own name. A periodical could no more vouch for the authenticity of the cases contributed to it by authors who furnished their names, than could this Society be held responsible for the truth of what was said or read before it.

Dr Douglas Maclagan said, that he would refrain from giving any opinion regarding the value of Ovariectomy statistics, as at present before the profession. He rose simply to state a fact which was important—that the great mortality which had occurred after amputation in the Royal Infirmary, during the period embraced in Dr Peacock's statistics, was owing to the then prevalence of hospital gangrene.

Professor Simpson.—Hospital gangrene surely did not prevail during the whole period?

Dr D. Maclagan.—During the greater part of it.

Dr Watson begged to state, that of the first 15 amputations he had in the Royal Infirmary, he only lost one.

Professor Simpson said, that was very creditable to the skill of Dr Watson, but we all know that there is such a thing as a run of lucky cases, and it is quite possible that in Dr Watson's next 15 amputations, there may be fourteen deaths. It is only from a large number of facts that generalizations can be legitimately deduced.

A short desultory conversation now ensued regarding the accuracy of certain statistical statements which had been made, in which Professor Simpson, Dr Spittal, Mr Spence, and Dr Cormack took part.

[It is to be regretted that none of the teachers of surgery, or surgeons to the Infirmary, favoured the Society with their opinions upon ovariectomy, excepting Dr Handyside and Mr Spence, who were personally concerned in the case reported by Dr Bennett.]

II.—From the Minutes of the Society.

Dr Scott made some remarks on apoplexy, connected with obstruction in the veins and sinuses of the brain. The case brought before the society was that of a young lady who had been seized with paralysis of the left side of the body with coma. She died in thirty-six hours. In the right hemisphere of the brain, a clot of considerable size was discovered, surrounded by broken down cerebral substance; from this, a large vein filled with black and firmly coagulated blood was traced into the longitudinal sinus. The sinus itself, as well as the lateral sinuses, were filled with firm clots, partly of blood and partly of lymph. These Dr Scott considered as being not of recent formation, and to have been the cause of the rupture of the vessels of the brain. The preparation of the vein was exhibited.

Dr Scott stated, that he had seen several cases of the same kind in young subjects, and he wished to draw a contrast between such cases and those arising from diseased arteries at a more advanced age.

Wednesday, 7th January 1846.—Dr GAIRDNER, President in the Chair.

I.—Cases of diseased heart by Dr Scott. Dr Scott made some remarks on obstructive disease of the mitral valve, the destructive signs of which were sometimes very obscure. Observations were made on the general and particular symptoms; and a case was detailed of a young lady who had for two years been affected with chorea, and who, when first seen, exhibited symptoms of general fever, remittent in its progress, accompanied by severe pains in the left hypochondrium, alternating with acute pain in the head and delirium, a rapid and sharp pulse, great general agitation, and, when the febrile paroxysm was at its height, with a loud bruit obscuring the sounds of the heart. In the state of repose, there was no bruit, but a tumultuous vibrating feeling of the heart to the hand, with sharp clear sounds. The disease terminated in a kind of asphyxia. The disease was accompanied by peculiar diarrhoea, which lasted for three weeks. On dissection, a warty and fleshy excrescence was found arising from one half of the mitral valve. No marks of endocarditis were present. A preparation and drawing were shown.

Dr Scott also made some remarks on softening of the heart, and alluded to a case in which the principal signs were dyspnoea, or undue exertion, a soft irregular pulse, and the apex of the heart pulsating beneath the sternum at its lower part. The patient's

general health was good, with the exception of great liability to bronchitis, which was easily manageable by proper care. This state produced great aggravation of the symptoms. The patient died from having neglected one of these attacks. The heart was large and soft, and tore on being removed from the body. Dr Scott considered this as one of the cases which due care and attention to diet render amenable to treatment, while neglect of rules was certain of leading to a fatal result. He had several cases of the same kind under treatment, where good results had been obtained, and where this state of the heart in all probability existed.

II.—Notice of observations on the thyroid, thymus, and supra-renal bodies, by John Goodsir, Esq. The author stated that he had observed the thyroid, thymus, and supra-renal bodies to consist at an early period of embryonic life, of two long continuous masses of blastema, extending one on each side of the spine, from the anterior extremity of the Wolfian bodies to the base of the cranium. These two bodies are the last portions of the blastoderma which become included by the umbilical constriction. The posterior part of each mass becomes converted into the supra-renal body around the omphalo-mesenteric vessels, the middle portion becomes the thymus around the cardinal veins and sinus of Cuvier, whilst the anterior constitutes the thyroid body around the anastomosing branches of the first and second bronchial vascular arches.

III.—Observations on black deposits in the bronchial glands, by Dr Makellar.

In the course of the observations which Dr M. had been enabled to make on carbonaceous infiltration into the lungs of coal miners, he had been led to consider the probability of carbonaceous particles being inhaled into and retained in the pulmonary organs of those engaged in other occupations than coal mining. He was convinced, that in individuals, especially of advanced years, and living in ill ventilated localities, as well as in those following certain occupations, that the bronchial glands invariably contain black matter which has been inhaled with the air.

In all the cases of the carbonaceous disease in coal miners, the bronchial and lymphatic glands were found loaded with the black substance resembling that found in the lungs; and there are cases on record where the same appearances were exhibited in the lungs and bronchial glands of iron-moulders.

Two cases were detailed, where black deposit was found in the chest. The first was that of a chimney-sweep, where the upper part of both lungs was found infiltrated with carbon, and the bronchial glands enormously enlarged, impacted with black matter, and obliterating the bronchial tubes.

The second was a case of stratiform melanosis of the pleura costalis and diaphragm occurring in a young person.

The black deposit in both instances was similar in external appearance, and with a view to ascertaining if there were any analogy in their component parts, they were submitted to chemical analysis; the result of which was, that the glands from the chimney-sweep contained a very large proportion of free carbon, whilst the melanotic matter did not leave a vestige of coloured deposit, evidently proving the difference between the two black deposits. From the occupation of the chimney-sweeper, and the chemical characters of the black matter in the bronchial glands, Dr Makellar thought himself entitled to conclude, that it was carbon inhaled, and not existing as a constituent ingredient of the organized solids or fluids.

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PART I.—ORIGINAL ARTICLES.

Report of the Sickness amongst the Edinburgh Police, as compared with that of the Members of the Yearly Benefit Societies in Edinburgh for 1845.—By WILLIAM TAIT, M.D. Surgeon to the Edinburgh Police.

(Read before the Medico-Chirurgical Society, 4th March 1846.)

AMONGST the many alterations which have recently taken place in the Police Establishment of this city, perhaps none has been attended with more practical benefit than that of providing medicine and medical attendance for the sick men in connection with it. Besides the direct advantages which the men who are actually sick derive, the moral influence which it has had on the dissipated, and the malingering, has far surpassed the anticipations of the most ardent promoters of the system; and I give the more credit to those who have been instrumental in introducing the change, as I derive no personal benefit from it, but on the contrary a very considerable pecuniary loss; and therefore might naturally enough have all my inclinations and feelings prejudiced against it. Whatever loss, however, I may sustain by attendance on this part of police duty, I rejoice that I have been placed in a position to collect facts, regarding the amount and nature of the sickness amongst the force, which will enable me to present to this society, annually, a report containing the result of these observations.

It is necessary that I explain, whilst entering upon the present inquiry, that the number of men connected with the watching force, is 304, exclusive of the lieutenants. These are divided generally into two classes—the Night and Day men. For our

present purpose, this arrangement may be considered all that is necessary, were it not, that there is a distinct class who continue on duty for twenty-four hours, and thus partake of the character of both classes—I allude to the turnkeys, reserve serjeants, and station-house keepers. As these are seldom exposed to the causes of disease which operate upon the night watchmen, and are placed in circumstances more similar to the men on day duty, I propose in the present classification to include them with the latter. There is a third class, who, although generally acting on night duty, requires a separate consideration, viz. the supernumeraries. This class consists of the men who have most recently joined the Establishment, and who perform duty only when vacancies occur by sickness or otherwise. When a man on day duty is sick for any considerable length of time, his place is generally supplied by one drawn from the night duty, and a supernumerary is appointed in the place of the latter; so that every man who joins the force, instead of being gradually accustomed to fatigue and exposure, is at once placed in circumstances most trying to his constitution, the precise effects of which upon his health, will be shown in a subsequent part of the paper. The classification, then, which I intend to adopt and illustrate on the present occasion is as follows, viz :—

Men on night duty,	.	.	.	189
Do. on day duty,	.	.	.	91
Supernumerary force,	.	.	.	24
				<hr/>
Total,	.	.	.	304

As the amount of sickness differs considerably in each of these classes, it may not be improper to premise by explaining the routine of duty which each performs.

The night watchmen go out at 9 o'clock, and continue till 6 the following morning, being nine consecutive hours on duty. Of late a practice has been introduced of supplementing the day force, by drawing two men at 4 o'clock in the morning, from each of the twelve stations into which the city is divided, who go out at 2, and continue till 5 o'clock afternoon, thus performing 10 hours' duty in the day. The whole of the men take this additional duty in rotation, and perform it for a week at a time.

The half of the day men take duty at 6 in the morning, and continue till 9, when the other half turn out, and continue till 2 o'clock. Those relieved at 9, take their place and continue till $\frac{1}{2}$ past 9 P.M. At 5 o'clock, the men who went off at 2, again take duty, and continue till relieved by the night force—the one half thus performing $10\frac{1}{2}$ hours' duty, and the other $9\frac{1}{2}$.

On reviewing the duty which the Night and Day men have to perform, it will appear obvious that the chances of sickness must differ considerably in each of these classes. The one are not only

exposed to greater vicissitudes of temperature and weather than the other, but have to continue 9 hours on their fatiguing and monotonous round, without any of the relief which very properly breaks in upon the routine of day duty. And accordingly we find in the following table, which shows the monthly return of sick in the Night, Day, and Supernumerary force, respectively, that there is no less than a difference during the year of 90·69 per cent betwixt the two. The supernumeraries, again, have at the rate of 264·82 per cent more sickness than the established night force—facts illustrating the necessity of further changes being introduced, both amongst those newly enlisted into the service, and those who are on night duty, before all can be placed in the same favourable circumstances, in regard to health, and longevity, as the day watchmen.

Table showing a Monthly Return of the Sick in the Night, Day, and Supernumerary Force, in 1845.

MONTH.	No. of Sick in Night Force.	No. in Day Force.	No. amongst Supernumeraries.	Rate per cent in Night Force.	Rate per cent in Day Force.	Rate per cent in Supernumerary Force.	Total Number Monthly Sick.	Average per cent of the whole Force.
January....	62	16	2	32·80	17·58	8·33	80	26·31
February..	45	14	10	23·80	15·38	41·66	69	22·69
Mach.....	41	10	11	21·70	10·98	45·83	62	20·39
April.....	42	11	10	22·22	12·08	41·66	63	20·72
May.....	57	13	10	30·15	14·28	41·66	44	26·31
June.....	26	11	7	13·80	12·08	29·16	80	14·47
July.....	43	14	11	22·75	15·38	45·83	68	22·36
August....	26	6	5	13·80	6·59	20·82	37	12·17
September	25	6	7	13·22	6·59	29·16	38	12·50
October....	30	13	12	15·92	14·28	50·	55	18·25
November	42	21	12	22·22	23·07	50·	75	24·67
December	54	20	10	28·57	21·97	41·66	84	27·63
	493	155	107	260·95	170·26	525·77	55	248·49

NOTE.—The annual percentage of sickness exceeds cent per cent, for the simple reason that many have more than one attack in the year; and the sum of the monthly percentages gives the annual percentage, because each attack is recorded only in the month in which it begins. 304, the number of the whole force, is in the same ratio to 755, the number of attacks, as 100 to 248·49, the annual percentage of sickness on the whole force, obtained by summing up the monthly percentages.

From this table, also, the bad effects of periodical changes of the men from day to night duty becomes apparent. These shifts, as they are called, take place every two months, and the sick list

almost immediately thereafter rises. The first, for the year over which these observations extend, took place in the end of December 1844, and we have the total number of sick in the following month amongst the whole force as high as 80, but the ratio of increase was greatest amongst the men on night duty.

There can be no doubt, however, that the increase is considerably affected by the state of the weather at the time the change takes place. In March, for example, it was exceedingly mild, and the shift which took place at the beginning of that month was not succeeded by any increase of sickness. The only effect which it seemed to produce was a check to the gradual diminution of numbers which was taking place during the preceding month. At the period of the next change, in May, we find, on the other hand, a very remarkable contrast. The number on the list is increased from 63 to 80. In fact, during the month, nearly the one half of those who had shifted from day to night duty were on the sick list. This increase, at this advanced part of the season, was accounted for by the cold east wind which blew for the first ten days of that month. A similar increase took place in July, immediately after the shift. The ratio of sickness in the night force was raised from 13 to 22 per cent. The next month it again fell to 13, notwithstanding that the fall of rain was very considerable. In September, the weather became more genial, and the shift which took place that month did not materially affect the health of the force. The next, however, which took place at the beginning of December, was immediately followed by a very considerable increase; so that, upon the whole, two-thirds of the shifts which have taken place during the year have had a marked effect upon the health of the men, and the little effect which the remaining third produced can easily be accounted for from the mildness of the season at which the change took place. It may be necessary to explain, whilst treating of this part of the subject, that only about two-thirds of the 52 men who perform day duty change at one time, else the contrast might have been much more striking.

The number of sick during the year in the whole force amounts to 755; being at the average rate over the whole force of 248·49 per cent per annum.

Taking the classes individually, we find that the ratio of sickness amongst—

The night force is	.	.	.	260·95,
The day force	.	.	.	170·26,
The supernumerary force	.	.	.	525·77,

being unparalleled in amount by any trade, profession, or class of society in Europe, and this, too, in a season when sickness, both in town and country, is acknowledged to be rather under than above the average. On comparing it with the preceding year, I

find good grounds for congratulation, for it has not only diminished about 20 per cent in amount, but also in severity, there being no less than a diminution of three days' sickness to each man.

The influence of *locality* upon the health of the night force appears worthy of notice. The whole district within the bounds of police is divided into 12 sections, in none of which is the ratio of sickness precisely alike, and the difference betwixt some of them is very remarkable. In one, for example, it is as high as 393 per cent, and in another as low as 168, being no less than 225 per cent of a difference. But for a fuller illustration of this point, I beg to introduce the two following tables,—the first giving a monthly return of the sick in each section for the whole year, and the second showing the situation of the section—the number of men belonging to it—and the ratio of sickness in each. The size of the section, and the number of men on it, have no corresponding relation—the strength of the force being regulated more by the density of the population than the extent of the area.

1.—Table showing the number of sick in the Night Force for 12 months, and the section to which they belong:—

SECTION.	1	2	3	4	5	6	7	8	9	10	11	12	
January.....	7	6	3	6	9	2	7	2	12	2	4	2	62
February.....	2	2	4	3	3	2	2	3	7	11	4	2	45
March.....	4	2	2	4	1	5	4	3	7	3	3	3	41
April.....	3	5	4	4	1	5	1	4	8	3	1	3	42
May.....	7	2	3	7	3	4	3	1	3	13	8	3	57
June.....	3	1	1	5	1	5	1	3	4	0	0	2	26
July.....	2	7	1	9	2	3	4	1	3	6	3	2	43
August.....	4	5	1	3	0	0	1	1	4	5	2	0	26
September...	2	3	0	3	3	3	1	2	1	3	3	1	25
October.....	3	2	2	3	1	6	4	2	2	0	3	2	30
November...	9	1	3	6	3	3	3	2	4	2	4	2	42
December...	7	5	5	6	6	2	4	1	6	2	5	5	54
	53	41	29	59	33	40	35	25	61	50	40	27	493

2.—Table showing the number of men in each section—the number sick in each, and the rate per cent and situation of each section.

No. of Section.	No. of Men in Section.	No. Sick in each Section.	Rate per cent of Sickness.	SITUATION OF SECTION.
1	19	53	278·94	{ High Street, Castlehill, North and South Bridges, Physic Gardens, Mound, Blair Street, and Niddry Street, Cowgate from Blair Street to St Mary's Wynd.
2	14	41	292·85	{ Canongate, North and South Back, to foot of St John Street, Regent Road and Terrace, Calton Hill and London Road to Meadow Bank, &c.
3	11	29	263·63	{ Nicolson Street from Infirmary Street to East Crosscauseway, and all to the east from Carnegie Street to South Back of Canongate.
4	15	59	393·33	{ Cowgate from South Bridge to George IV. Bridge, Bristo Street, Meadows, Nicolson Street to St Patrick Square Buccleuch Place, George Square, &c.
5	17	33	1 4·11	{ Carnegie Street, Newington, Grange Loan to Canaan, Sylvan Place to Sciennes.
6	12	40	333·33	{ Grassmarket, Lauriston, Bread Street, Castle Road, Cowfeeder Row, &c.
7	12	35	291·75	{ Earl Grey Street to Morningside, Fountainbridge, &c.
8	13	25	192·30	{ Lothian Road, Queensferry Street, Water of Leith, Morrison Street, Dalry, &c.
9	20	61	305·	{ Royal Institution to Great King Street, west to Doune Terrace, Moray Place to Queensferry Street, east Princes Street, and all within.
10	20	50	250·	{ Hanover Street east to High School, Calton, Leith Street Broughton Street, London Street, Great King Street to Dundas Street, and up to Princes Street.
11	15	40	266·66	{ Greenside Lane, Row, &c. Leith Walk, London Road, Easter Road to Duke Street, Leith, Broughton to Claremont Crescent, Forth Street, Broughton Place, &c.
12	16	27	168·75	{ Canonmills, Inverleith Row, Henderson Row, Stockbridge, Comely Bank and Cumberland Street, and Fettes Row, Scotland Street, &c.

From the first table, it appears that the period of the year affects in some measure the health of the men on some of the sections. In the 9th, a section which of all others might be considered one of the healthiest of the city, the *ratio* of sickness is as high as 720 per cent per annum in January; or if the first four months of the year is taken, it is at the rate of 510 per cent, still a prodigious amount of sickness, when compared with that of the adjacent section to the west, where it only amounts to 92 per cent. Why there should be such a difference between two districts of the town so nearly situated to each other, and apparently differing little in their circumstances, is a question I throw out for discussion. The most natural, and I think upon the whole the most satisfactory explanation which can be given to account for the excess of sickness in this quarter of the town is, its exposure to the north and east winds. My reasons for pre-

ferring this explanation are, 1st, That it is during the winter and spring months only that a greater amount of sickness prevails in the district, and this is the period of the year at which it is most exposed to these winds. 2d, It is a fact that the adjoining section is in a great measure protected from them. And, 3d, All the sections which are sheltered from these winds, have less sickness than those which are more or less exposed to them. Even the sickness of the Cowgate district, which is the most unhealthy of the whole taking it for the whole year, is only at the rate of 188 per cent during the three spring months, being 252 per cent less than what occurred in the 9th section during the same period. The same remarks apply to some of the sections in which the average sickness throughout the year is great; as in the Grassmarket and West Port. There it is low during winter, and increases as the season advances, proving that the malaria in these districts is, upon the whole, more pernicious to the health than exposure to the northern blasts of winter and spring. If the 4th, or Cowgate section, is compared with the 9th during the three summer months, it will be observed that the ratio of sickness is completely reversed. Now, the sickness of the former is raised 360 per cent per annum above the latter; and in the 6th section, or Grassmarket, has increased nearly in the same proportion. There are three sections in which the amount of sickness throughout the year is nearly uniform—these are the 5th, 8th, and 12th. The first, includes Newington, and all the district south of the Crosscauseway, all of which is well sheltered during winter, and more exempt from malaria during summer than the other districts which have been alluded to. The 12th, though much nearer to the sea, lies low; the ridge, along which the Leith and Queensferry road passes, being higher than the greater part of its area, and thus protecting it in a great measure from the sea-breeze, which blows with such intensity upon the 9th section; and then there is none of that filth which generates malaria, and to which we look as the source of disease in the centre of the town. The 8th certainly occupies a more elevated situation than the section which has been referred to, and it is much more irregular in its surface. Some parts of it appear sheltered, and some exposed. Taking it, however, as a whole, it may be considered well protected during the winter, and free from malaria during the summer. The Water of Leith lies low, and its southern and western bounds are well sheltered. The only part, therefore, which appears exposed, is that situated immediately to the south of the Dean Bridge, which is of very limited extent, and consequently cannot materially affect its general salubrity. None of the other sections present any thing particularly deserving of consideration, with perhaps the exception of the 10th, in which the ratio of sickness was very high in the months of February and May. In both of these, the wind was from the east, and

accompanied, especially in the latter month, by a cold fog, which enveloped the city during the greater part of the night. These circumstances may, in some measure, account for the great increase of sickness which took place, although some other cause may have been in operation, which has entirely escaped observation.

I proceed next to inquire into the effects produced by *residence* upon the health of the men in connection with the Police Establishment.

Following out the system adopted by the Metropolitan Police in London, the superintendent established here, what is termed a Section-House, in which accommodation is provided for 37 men. It is similar to what is called a bothy in the north of Scotland. The men cook their own victuals, make their own beds, and pay a certain sum per week for their lodgings. The house taken by the Commissioners of Police for the purpose, is situated in Chessels' Court, Canongate; a locality, perhaps, not the best adapted for the object they had in view, yet free from any circumstance which rendered it entirely objectionable. In a very few months after it was opened, the health of the men who lodged in it became affected, the precise cause of which I was at a loss for some time to determine. It soon occurred to me, after examining the premises several times, and experiencing the disagreeable odour of the apartments, that whatever other causes might be in operation, bad ventilation, at least, was the most prominent. Besides being more subject to the ordinary run of complaints than the men in connection with the establishment who resided elsewhere, I found only one individual out of 37 free from well-marked functional disorder.

The most striking, and I might add uniform symptoms were, foul tongue, thirst on awakening from sleep, a secretion of a tough glary mucous about the mouth and fauces, great sensibility to cold, skin constantly bedewed with a copious cold perspiration; a sensation, as if a cord were tightly tied around the head; pain and fulness in the eyeballs; loss of appetite, and inability for the performance of the usual routine of duty, without great fatigue. These were the symptoms common to those who were able to continue on duty. Besides this general suffering, the number of men laid off duty by sickness was much greater in proportion to the number of men in the section-house, than among those residing out of it.

The following table exhibits the number for the whole year, both in and out of the section-house. Only one month during this period was the ratio of sickness less than amongst the men who resided in houses of their own, or in private lodgings.

3.—Table showing the difference of sickness amongst the policemen in the section-house and out of it.

Total number sick residing out of section-house.	Rate per cent of do.	Total number sick residing in section-house.	Rate per cent of do.	Total number sick in the whole force.	Difference between section-house and out.
625	205·59	130	351·35	755	145·76

It will be observed that the *ratio* of sickness amongst the men out of the section-house is 205·59, and amongst those in it 351·35, making a difference in favour of the former of 145·76 per cent per annum, a difference which appears the more remarkable as those who reside in the section-house are the youngest and best men connected with the force.

These facts are so striking and important, that I considered it my duty to bring them under the notice of the Commissioners of Police, with a view to their remedy. A minute investigation followed—the matter of fact was found as I had stated it—and means for better ventilation were immediately adopted. The superintendant, during the discussions which took place, laboured hard to overturn my calculations, and to prove that there was less sickness amongst those residing in the section-house than amongst those residing elsewhere, and for this purpose adduced the following table, to which I am indebted without labour, for answering a question of some importance, viz.—Whether there is a difference in the number of days' sickness during the year, between the men *in* and *out* of the section-house? It is entitled “Sick Return of the Police Force, from 19th June 1844 to 15th May 1845, inclusive, distinguishing between the men residing out of, and those residing in the section-house; also showing the average number of days' sickness, and the average amount of sick allowance for each respectively.”

Total number of days' sickness in the Police Force.	Number of days' sickness for the men <i>out</i> of the section-house.	Number of days' sickness for the men residing <i>in</i> the section-house.	Average number of days' sickness to those residing <i>out</i> .	Average number of days' sickness to those residing <i>in</i> .
2081	2487	314	9 $\frac{4}{5}$	8 $\frac{1}{2}$

As the amount of sick allowance is of no importance in the present inquiry, I have considered it unnecessary to introduce it into the table, because, if the number of days' sickness be accurately determined, the amount of pay received by each can easily be inferred. I may simply explain here, that a sick constable draws no sick pay for the first 7 days, but receives 5s. a-week for whatever period he is sick afterwards. Men hurt on duty receive full pay from the date of the injury.

I can say nothing against the accuracy of the numbers here produced, and shall take it for granted that the data are correct,

so far as they go. But from the small sum of sick allowance mentioned as received by the men in the section-house, I was led to infer that in his calculations, the superintendant had omitted to include one who, alone, had drawn more than the whole sum mentioned, and had inadvertently placed him in the other class. This person was 97 days on the sick-list. The discovery of this fact, leads to a most important difference in the number of days' sickness. Deduct 97 from 2487 and add them to 314, and the average number of days for the section-house men is raised to 11, and those out reduced to 9 ; thus showing that the amount of sickness is not only greater amongst the men residing there, but that it is also of greater severity.

Before concluding this part of the paper, I beg to introduce the following table, showing generally the nature of the diseases with which the policemen have been affected during the past year. It of course only exhibits the affections of those who have been laid off duty. There are many who have been under treatment, who have never been a single day confined ; such, for example, as those with venereal, dyspeptic, catarrhal, and chronic bronchitic affections, diseases of the skin, piles, &c. Where any of these appear in the table, it must be understood that they were so severe as to render confinement to the house or bed for some time necessary. In classifying these diseases, I have made no distinction between those with which the men *in*, and those *out* of the section-house have been affected, but have grouped them together for the sake of convenience. I have, however, preserved the original documents from which I might, should circumstances require it, compile a table on a different principle, and thus compensate for the defects of the present.

Table showing the nature of the diseases with which the policemen have been affected during 1845.

NATURE OF DISEASE.	No.	Deaths.
Disease of Respiratory Organs,	264	1
„ Stomach and Bowels,	180	
„ the Brain, . . .	18	
„ the Eye, . . .	9	
„ the Throat, . . .	10	
„ the Teeth and Gums,	10	
„ the Skin, . . .	3	
Rheumatism, . . .	31	
Carbuncle, . . .	1	
Bunion, . . .	2	
Jaundice, . . .	1	1
Purpura, . . .	1	
	<hr/>	<hr/>
Carry forward,	530	2

NATURE OF DISEASE.	No.	Deaths.
Brought forward,	530	2
Gerçure,	2	
Insanity,	2	
Hydrocele,	1	
Venereal diseases,	10	
Fever, { Continued,	7	2
{ Intermittent,	1	
Small Pox,	1	
Piles,	10	
Abscess,	9	
Tænia,	2	
Whisky Fever,	51	
Accidents,	86	
Neuralgia,	5	
General Functional Disorder,	38	
	755	4

The diseases with which the policemen have been attacked during the past year have, upon the whole, been mild. In the long list of affections of the respiratory organs, there was only one well marked case of pneumonia. One or two cases of bronchitis which came under observation were rather more severe than cases of the same description that are met with in practice amongst other classes of the community. Bronchitis, either in an acute or chronic form, is by far the most common disease to which policemen are subject. Catarrh in a mild or more severe form—as in influenza—is also of frequent occurrence. It is a remarkable fact, that whilst the men residing out of the section-house generally assumed the symptoms of the former, those residing in it almost always took the form of the latter affection. The death marked as referrible to the respiratory organs took place without the individual being on the sick-list, *i. e.* that although he belonged to the police force, he was not one of the 755 patients to whom I have formerly alluded. He was phthisical, but continued at his duty, and died suddenly at a distance from home, after travelling 40 miles on the top of a coach in a severe rain last autumn.

Amongst the diseases of the bowels, diarrhœa is the most frequent, and this is generally traceable to cold and wet. There was a very stormy night only last month, to which I was indebted for no fewer than six cases of this affection, all on the second day after. Every one of the men seized on that occasion, traced the attack to wet feet, from the rain dripping from the trowsers into their shoes.

The case of jaundice, which terminated fatally, might rather be denominated disease of the liver, as I am satisfied that that organ

was considerably affected. The patient had only been a few weeks on the establishment, and had been recently discharged from the army. He had always a particularly sallow complexion, and the first night's exposure to severe weather laid him off duty. Spontaneous salivation and jaundice appeared simultaneously. He was sent to the Infirmary, I think, on the 4th day, where he soon afterwards died.

The average ratio of deaths is not so great as might have been anticipated from the great number of cases of sickness which have occurred. But I am not altogether satisfied that I am correct in the ratio as here given. There can be no doubt that these are all who have died while actually in the service of the Commissioners of Police, but how many in the prime of life have either had to resign, or have been discharged on account of diseases contracted or excited in the discharge of their duties as police constables in the course of the year, and have since died? Ought not these to be added to the deaths in the establishment? For example, the individual who had an attack of purpura performed duty only for a few weeks after he recovered, till I declared him unfit for the service, and advised him to resign, which he did, and he died shortly afterwards of a pulmonary affection. Several others were similarly situated. Now, in calculating the number of deaths amongst any other class in the community, would these have been considered policemen or not? Suppose a tailor is seized with some disease which incapacitates him for his usual work, and that his master discharges him, in consequence, from his employment, and that he lingers on, and dies some months afterwards, there would be little difficulty in bringing one's mind to believe that that individual died a tailor, and that he would be placed amongst the deaths of that class by any statistician. I am of opinion that the same rule ought to be applicable to the police force, in which case the ratio of deaths for the last year would be nearly doubled.

I proceed next to the second subject proposed in the present inquiry, viz. how the sickness in the Edinburgh police force stands in respect to that of other classes of the community; and in this part of the investigation, I shall have to confine myself almost entirely to the statistics furnished by the benefit societies of this city for the last year. I consider this the best mode of comparison, as it will show more distinctly the contrast than if the sickness of other years had been brought forward in illustration. I have already stated that the sickness in the police force was 20 per cent greater in 1844 than in 1845, and also of greater severity, and for aught we know, it may have been proportionally great among other classes of society; or if we go back to 1843 we will find it still greater, and it would therefore be unfair to prefer any of these years as a comparison, with an amount of sickness which had actually occurred during the last. I by no means prefer a limited to an extended series

of observations; but being confined, by circumstances, to a short period on the one hand, it is considered better to limit the period of observation on the other also; and as the facts, year by year, accumulate on both sides, then we shall be better prepared to determine upon an average.

I have not been able to procure the annual statement of all the societies in Edinburgh, and some which I have received cannot be made available on the present occasion, on account of the mode in which they are drawn up. It will be observed, however, that I have succeeded in obtaining no fewer than 28, amongst which are some of the largest and most prosperous in the city, amounting nearly to 5000 members.

The first table introduced gives the name of the society—the number of members of which it is composed—the proportion of those who have been sick during the year—the total number of days' sickness amongst the members—the average number of days' sickness—the number per cent of the members who have been sick—and the number of deaths.

1.—Table showing the amount—percentage—and duration of sickness amongst 4265 members of male and female yearly societies in Edinburgh, 1845.

Name of Society.	No. of members.	No. of members sick.	Total No. of days' sickness.	Average No. of days' sickness.	Ratio per cent of sickness.	No. of deaths.
Mr Brown, N. B. of Canongate.....	784	126	4441	5·66	16·07	15
Mrs Paterson, St Leonard Street.....	605	152	3583	5·92	25·12	7
Mr Tait's, High Street.....	342	81	2963	8·69	23·68	8
„ Martin, Carnegie Street.....	281	47	1280	4·55	16·72	0
„ Thomson, India Place.....	189	52	1698	8·47	26·26	3
„ Dick, Dean Street.....	134	26	678	5·05	19·40	0
„ Mushet, Carnegie Street.....	210	65	1731	8·24	30·95	2
„ Watt, St Leonard Street.....	123	34	772	6·27	27·64	2
„ Rouse, Leith Wynd.....	116	28	726	6·25	24·13	1
„ Cameron, Canongate.....	113	30	883	8·16	26·54	1
„ M'Donald, Canongate.....	67	20	643	9·59	29·85	1
„ Forbes, High Street.....	64	14	590	9·21	21·87	1
„ Clark, Low Calton.....	66	7	143	2·16	10·60	0
„ Paxton, Simon Square.....	231	56	2064	8·93	24·24	5
„ Bain, Fountainbridge.....	102	19	621	6·08	18·62	0
„ Ross, Hill Place.....	58	10	277	4·77	17·24	0
„ Cooper, Salisbury Street.....	214	42	1055	4·93	19·67	3
„ Denham, Simon Square.....	136	20	426	3·13	14·70	1
„ Campbell, Richmond Lane.....	42	7	291	7·09	17·07	2
„ Kennedy, Lawnmarket.....	137	22	621	4·53	16·05	2
Grassmarket Society.....	182	34	1105	6·07	18·68	5
Mr Mooney, Cowgate.....	69	8	350	5·07	11·59	0
	4265	900	26,940	6·31	20·75	59*

* Average deaths 1·38 per cent.

This table, it will be observed, gives the analysis of 22 male

and female societies, differing considerably in their proportion of sickness, and in its average duration. The highest in amount of sickness is nearly 31 per cent, and the lowest a little more than $10\frac{1}{2}$, and the average of the whole is 20·75. It would have been interesting to know, had it been possible to obtain the information, whether there is a difference in the amount of sickness, and to what extent between societies, whose members are exclusively males or females. The 22 societies embraced in the table are mixed, *i.e.* are composed of both males and females. I have only succeeded in procuring a report of two female societies, consisting of 113 members, certainly too small a number to warrant any general conclusion. The same remark applies to the returns from 4 purely male societies, which have been received, consisting of 564 members. As such returns, however, may become useful, I have arranged them separately in the two following tables:—

2.—Table showing the amount, the percentage, and duration of sickness amongst 113 members of female yearly societies.

NAME OF SOCIETY.	Number of Members.	Total number of Members sick.	Total number of days' sickness.	Average duration of sickness.	Ratio per cent of sickness.	Number of deaths.
Mr Nelson, M'Dowall Street	63	15	441	7·00	23·80	~
„ Cranston, High Street	50	12	259	5·12	24·00	~
	113	27	700	6·60	23·90	~

Table showing the amount of sickness, &c. amongst 564 members of male yearly societies.

NAME OF SOCIETY.	Number of Members.	Number of Members sick.	Total number of days' sickness.	Average duration of sickness.	Ratio per cent of sickness.	Number of deaths.
Scavengers and Lamplighters	157	73	1069	6·80	46·49	1
Mr Nelson, M'Dowall Street	186	36	1103	5·93	19·35	3
„ Cranston, High Street	95	17	336	3·53	17·89	0
„ Bain, Fountain Bridge	136	23	649	5·15	18·25	3
	564	149	3157	5·35	25·49	7

So far as the data go, the difference is in favour of the male societies. The ratio per cent of sickness is against these, when

the scavengers and lamplighters are included ; but these I think should be under a separate arrangement, as the class, and also their employment, is somewhat peculiar, in which case the percentage, and also duration of sickness, would be considerably greater in the female than in the male societies. Taking the scavengers as a body, they may be considered a feeble and aged class of men, and on that account ought to have more sickness than the generality of yearly benefit societies, who lay their account to admit only healthy members, and some of them limit the age to 45 and 50. Under the next table I have taken the scavengers and lamplighters as a distinct class, and compared their ratio per cent and duration of sickness with those of the yearly benefit societies, and the police watching force, and also the ratio of deaths in each class.

3.—Table showing the ratio per cent of sickness, and its duration amongst the Edinburgh police force, as compared with the yearly friendly societies (male and female) in the same city, for 1845, and with the scavengers and lamplighters in connection with the police establishment for the same year, and also the percentage of deaths in each, during the same period.

Ratio per cent of sickness.			No. of days' sickness for each person.			Number of deaths.		
In the Police Force.	In the Scavengers, &c.	In the Yearly Societies.	In the Police Force.	In the Scavengers, &c.	In the Yearly Societies.	In the Police Force.	In the Scavengers, &c.	In the Yearly Societies.
248·35	46·49	21·07	10·31	6·80	5·54	1·34	·63	1·31

Of the three classes here compared, the amount of sickness is greatest amongst the watching force ; it is in fact five times greater than amongst the scavengers ; and in the latter more than two times greater than in the benefit societies. The number of deaths, however, amongst the men in the lighting and cleaning department of police is only the one half of the others.

The scavengers' occupation has often been asserted to be unhealthy ; but I do not think that we have here any evidence to that effect. It cannot in the face of this table be denied that there is more sickness amongst them than amongst members of yearly societies. This difference, however, may be accounted for independently of their occupation. The body being composed only of second and third class labourers, aged and infirm, is one circumstance already referred to ; and if the nakedness, dirtiness, and general wretchedness of their dwellings be next taken into

consideration, there is more than a sufficient cause to account for the amount of sickness which actually exists amongst them. They appear to be so much familiarized with dirt and dampness in the exercise of their callings, as to consider these as requisite for their happiness and comfort at home. It is a fact that more cellars are occupied by scavengers as a body, than by any other class in the community; and they congregate in the dirtiest and most unhealthy closes in the city. The same tendency to reside in unhealthy dwellings exists amongst the Irish portion of the police force, and I have often had opportunities afforded me of tracing their diseases to dampness and imperfect ventilation.

The only other body with which I intend to compare the amount of sickness in the police force, is the infantry regiments which successively occupied Edinburgh Castle, from 1832 to 1839, both inclusive. And for this purpose I propose introducing the following table:—

4.—Table showing the number of men—the numbers sick—the ratio per cent of sickness, and the ratio per cent of deaths in the police force, as compared with those of the infantry regiments that have occupied Edinburgh Castle for seven years, from 1st April 1832 to 31st March 1839, inclusive.

Strength.		Total Cases Sick.		Average, Annual ratio per cent.		Deaths, Annual ratio per cent.	
Police Force.	Infantry for seven years.	In Police in 1845.	In Infantry for 7 years.	In Police Force.	In Infantry.	In Police Force.	In Infantry.
304	4796	755	4570	248.35	95.20	1.34	1.30

Although the sickness of the military far exceeds that of the civil population, we here find the amount amongst the police force 153.15 per cent per annum above it. If there is a difficulty in accounting for the tremendous amount of sickness amongst the police, I think the difficulty in accounting for such a sickness amongst the military is much greater. Take the age, habits, exercise, duty, and clothing of a soldier into consideration, there is nothing in them calculated to excite, but, on the contrary, every thing combined that can reasonably be supposed essential for the prevention of disease. After witnessing the effects produced by imperfect ventilation in the police section-house, I am satisfied that the same cause prevails to a great extent in Edinburgh Castle, and probably in most military stations. Overcrowding of sleeping apartments is a greater source of disease than any other cause which exists, and ought to be more attended to in accounting for disease, than either filth, poverty, or locality; and all of these are agents of no ordinary activity.

The last subject to which I mean to advert is, the duration of

sickness amongst the Edinburgh police force, as compared with that of other classes in the community, and I prefer illustrating this also by the introduction of a table.

5.—Table showing the average duration of sickness per annum for every constable in the Edinburgh Police Establishment and members of yearly societies in Edinburgh for 1845, as compared with the Tables of the Highland Society—Finlaison—Ansell—Neison—Labourers in the warehouses of the East India Company—Individuals employed in cotton factories in Lancashire—Males of families residing in the Wynds of Edinburgh—Males in confinement in Edinburgh Prison.

Average number of days' Sickness in the Police.	Average do. of members of Benefit Societies.	Average according to Highland Society.	Ditto, according to Finlaison.	Ditto, according to Ansell.	Ditto, according to Neison.	Ditto, amongst Labourers in E. India Co.'s Warehouses.	Ditto, amongst Individuals in Cotton Factories in Lancashire.	Ditto, amongst Males of Families in Wynds of Edinburgh.	Ditto, amongst Males in Edinburgh Prison.
10.31	5.74	4.72	6.33	6.69	6.88	4.55	3.85	8.3	2.72

In this table, I have taken 35 as the average age of the police, although I am satisfied that it is too high. The average number of days' sickness in the Tables quoted, corresponds with that age. Taking the average number of days' sickness of the nine different classes with which the duration of sickness in the watching force is compared, we find it 5.54, being a fraction more than the one half of the latter.

Such being the amount and severity of disease amongst the police, it becomes a question of the most anxious consideration, how is it to be remedied? I regret that I have been unable to fall in with any published documents by which the health of the men employed in other police forces can be ascertained.¹ If disease exists in any to the same extent as it does in Edinburgh, it is a matter which has too long escaped observation, and ought at once to attract the attention of all Commissioners of police. It is possible that there may be some local cause in operation in Edinburgh, which does not exist in other towns, and the amount of sickness amongst the police force in them may be less, but this is very doubtful. The police in this city are now better clothed than any other body of a similar description in Scotland—the routine of duty in all, is nearly alike—and unless the beats are more exposed here than elsewhere, we have no reason to believe that

¹ The average annual sickness in the Metropolitan Police, as stated by Mr Chadwick, is $10\frac{1}{2}$ days to each man.

the amount of sickness will be less in other towns. And if it is a fact, that the sickness amongst the police of other places is as great as it is in Edinburgh, it is a duty imperative upon every Board of Commissioners to follow out the practice introduced here, of appointing a medical officer to watch over the health of the men in their employment, and more especially with a view of investigating into the causes of such sickness, and suggesting the best means of preventing it. It was only on looking into the statistics of the last year, that my attention was directed to this important subject, and I have not yet devoted so much time to the consideration of the causes, as their importance demands. Before another year expires, I hope to lay before this Society the result of my observations on this particular point, and be better prepared than I am at present to propose appropriate remedies. In the meantime, I would suggest that the Commissioners of police provide for each man, in addition to his present clothing, a full suit of flannel underclothing, and a pair of boots. The clothing which they at present possess is not sufficient to protect them from the severity of a winter's blast. Their dress is neat and apparently complete, but what is a coat and a pair of trousers, if their is nothing beneath them? which I am sorry to say, is too frequently the case. The practice too of providing new clothes at the commencement of summer is most absurd. If health and comfort were attended to more than vain show and profitless parade, the commencement of winter would suggest itself as the proper season for a new suit, and the poor men would reap immense advantage from the change. Dry and warm feet are absolutely essential for the preservation of health, and unless the Commissioners of police interfere, and either provide or enforce the men to wear good shoes or boots, comparatively little benefit will be derived from any other improvement. As boots are greatly preferable to shoes in wet weather, I strongly recommend, that a pair should be provided for each man at the commencement of winter. In considering the question of health, I entirely disregard that of economy, the latter being only of secondary importance; but after all, it is questionable, whether any change introduced for the improvement of health, may not be in favour of economy. At all events, the amount of suffering which policemen at present endure, and the proportionate shortness of life, consequent upon their unhealthy occupation, demand an instant remedy, even should it be at the risk of additional expenditure. It is the duty of all endowed with one spark of benevolent feeling for their fellow creatures, but especially of members of the medical profession, to urge upon all Commissioners of police, as the representatives of the public, the great importance of directing their attention to this subject, and adopting such measures as appear to them best adapted for remedying the evil.

The only remaining improvement which I have at present to

offer, is an alteration in the present system of night duty. Nine consecutive hours patrolling the streets, is enough to exhaust the strongest man that ever was created, and the only idea that suggests itself to one's mind is, how is it possible that any man can long survive such slavery? Numbers are daily reported for falling asleep on their station, but how can it be otherwise? the powers of man are not inexhaustible, and the laws which have been appointed for their government, ought not thus to be neglected. Five or six hours at most is a sufficiently long period for a police officer to continue on duty at a time, and any change which may be introduced, ought to be founded on the knowledge of what man is able to perform.

Pathological and Clinical Researches into the Nature and Treatment of Scrofulous and Tubercular Diseases. By JOHN HUGHES BENNETT, M.D., F.R.S.E., Lecturer on the Practice of Physic, and on Clinical Medicine; Physician to the Royal Dispensary; Pathologist to the Royal Infirmary, &c. &c.

ON opening the bodies of those who die labouring under scrofula, one or more organs are found to contain a foreign matter, which has universally received the name of *tubercle*. The term tubercle is of Latin derivation, and literally implies a little swelling. In this sense it is still used by dermatologists, and serves to distinguish a class of skin diseases. The same name was unfortunately applied to the rounded masses so frequently found in the lungs or other organs. It has also been employed to characterize the same substance when infiltrated in masses, or under circumstances where its original signification cannot apply. At present, tubercle is generally considered to be a peculiar morbid deposit, sometimes grey, but more frequently of a yellowish colour, varying in size, form, and consistence, which sooner or later undergoes a process of softening.

This definition of tubercle is very vague, and may be applied to various kinds of exudation which materially differ from each other. Indeed every morbid anatomist must frequently have experienced much difficulty in endeavouring to determine by the naked sight whether a certain morbid deposit be or be not tubercle. With a view to establishing a correct pathology therefore, our first efforts must be directed to determine what tubercle really is; how it can be accurately separated from the ordinary products of inflammation on the one hand, and from malignant or other morbid growths on the other. To arrive at these points we must inquire into the minute structure, and chemical constitution of this substance.

Minute Structure of Tubercle.

If from the tubercular lung of an individual who has died from phthisis pulmonalis, we choose a small mass of tolerably firm consistence, make a thin section of it, slightly press it between two slips of glass, and examine the whole with a power of 250 diameters linear, we shall observe an appearance similar to that represented in Fig. 1. The network of the lung (*a*), constituted of filamentous tissue, preserves its natural appearance and arrangement. The intermediate spaces or cells of the organ, however, are filled by a dense granular matter (*b*), the constituents of which are so closely aggregated together, that their form and character cannot be examined.

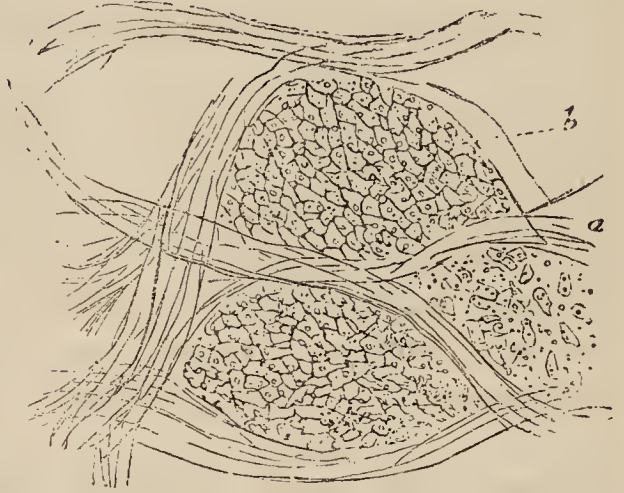


Fig. 1. Section of a miliary tubercle in the lung, (*a*) filamentous tissue of the lung, (*b*) corpuscles of tubercle.

If we add a drop of water to the section, and use slight pressure with the upper glass, so as to squeeze and wash out the granular contents, we shall find the fluid loaded with corpuscles and granules as represented in Fig. 2. The corpuscles are of an irregular form, more or less angular, varying in their longest diameter from $\frac{1}{50}$ to $\frac{1}{100}$ of a millimetre, composed of a distinct wall, containing generally three or more granules, without any distinct nucleus. They are mixed with numerous granules and molecules, varying in size from a point scarcely measurable, to the $\frac{1}{500}$ of a millimetre in diameter.

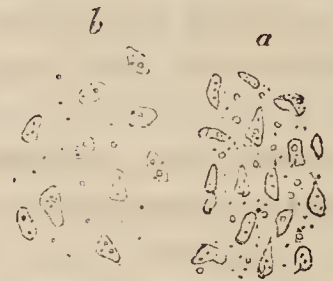


Fig. 2. Corpuscles of miliary tubercle from the lung, (*a*) as washed out with water, (*b*) after the addition of acetic acid.

If, now, we add to this fluid a drop of weak acetic acid, all the corpuscles become more transparent, but are otherwise unchanged, and many of the granules disappear, as in Fig. 2 (*b*). Ether and alcohol produce little change. Ammonia partially dissolves the corpuscles and renders them capable of being easily broken down. They are immediately and completely dissolved in a solution of potash.

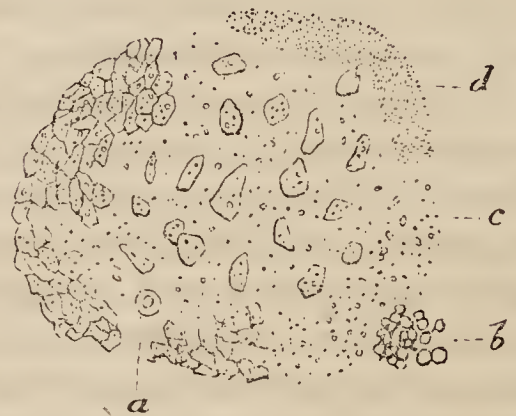


Fig. 3. Corpuscles and granules in softened yellow tubercle from the lung, (*a*) blood corpuscle, (*b*) exudation granules, (*c*) granular matter, (*d*) molecular matter.

Again, if we simply squeeze a portion of soft yellow tubercle between glasses, and examine it with a like magnifying power, we shall see similar corpuscles and granules, as in Fig. 3, mixed perhaps with a few blood corpuscles (*a*) and exudation granules, (*b*). Sometimes softened tubercle seems partially or wholly composed of a granular matter, (*c*). At others, we only observe it to be molecular, the molecules being exceedingly minute, as at (*d*).

In some forms of tubercle the corpuscles are much larger and rounder than they are represented in Fig. 2, still however preserving their peculiar character as in Fig. 4. In this manner, they approach in form to the corpuscles observed in scrofulous pus. But in those the application of acetic acid enables us to distinguish the nucleus characteristic of pus globules.

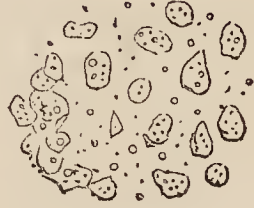


Fig. 4. Rounded and larger corpuscles in tubercle, from a bronchial gland.

The grey semitransparent granulation is of semicartilaginous hardness, and presents to the eye a very different appearance from ordinary tubercle. On making a thin section of it, however, it will be found to be composed of similar elements, although more transparent and not so well defined. The addition of acetic acid, by rendering the fibrous tissue more transparent, and dissolving the granules, will permit the same structure to be seen, as in Fig. 1.

When tubercle presents the cretaceous or calcareous transformation in any degree, the different elements we have described become mixed up with hard gritty particles of earthy salts. These are of irregular form and size, and are larger and numerous in proportion as the tubercle is more and more calcareous. Crystals of cholesterine may also frequently be seen in cretaceous concretions—(Fig. 4. *a*.) When tubercle is converted into a mass of stony hardness, a thin section presents a granular appearance, made up of a congeries of minute earthy particles, without any distinct form.

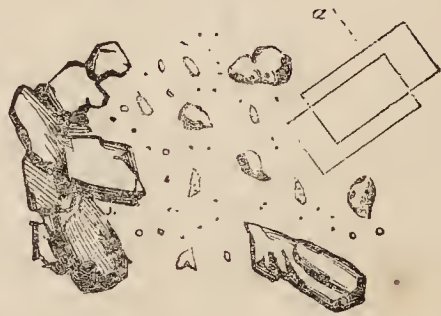


Fig. 5. Earthy matter, and tubercle corpuscles in a cretaceous concretion from the lung, (a) crystals of cholesterine.

Numerous instances occur in which it is utterly impossible to distinguish tubercle from fibrinous exudations on the one hand, or cancerous growths on the other, except by paying attention to the minute structure now described. I have often been deceived in endeavouring to determine this by naked sight, and found on a microscopic examination, that so called tubercular masses were

composed of filaments, more or less mixed up with plastic or granular corpuscles. Again, not unfrequently tubercle has been mistaken for cancer, or the latter for the former. If then we are asked to determine what is positively tubercle, as distinguished from all other morbid products, we must answer, that deposition which is composed of the peculiar corpuscles and granules formerly described and figured. From pus corpuscles they are readily distinguished by the action of acetic acid, which in them causes no granular nucleus to appear. From plastic corpuscles they may be separated by their irregular form, smaller size, and the absence of primitive filaments. With the exudation or granular corpuscle they can scarcely ever be confounded, on account of its large size, brownish or blackish colour, and nucleated or granular structure. The cells of cancer are large, transparent, and distinctly nucleated, and consequently easily distinguished from the small, non-nucleated corpuscles of tubercle.

There are certain fibrinous exudations, granular throughout, which it is very difficult to separate from the granular form of tubercle. This, indeed, can only be done when the granules in the one case are associated with inflammatory, and in the other with tubercular corpuscles.

We frequently find tubercle conjoined with more or less pigmentary matter. This usually appears under the microscope in the form of irregular black masses, (Fig. 6. *a*), which are composed of exceedingly minute molecules (*b*). These molecules may be occasionally seen infiltrated into many of the tissues, and among morbid deposits, especially tubercle. They often surround the minute tubercles deposited on the surface of the peritoneum, as in Fig. 6. Their occurrence in considerable masses is almost uniform, a round chronic tubercle in the lung or bronchial glands, giving a black or blueish tinge to the tissues. Indeed, it may be said that the older the tubercle the greater is the amount of pigmentary matter surrounding it.

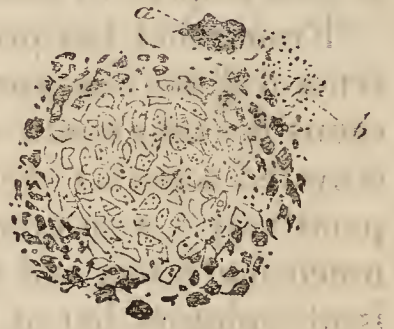


Fig. 6. Corpuscles mixed with pigmentary matter, in a small tubercle taken from the peritoneum, (a) irregular masses of black matter, which may be broken down into (b) granular and molecular matter.

Tubercle is often sought for and found in the sputa of phthisical persons. In such cases it resembles the softened masses, represented in Fig. 3. Inexperienced histologists are peculiarly liable to confound the corpuscles of tubercle with those of pus, or of the epithelium. I have even known the broken down grains of starch, pieces of bread, and other substances, which find their way into a spit-box, confounded with tubercle. A microscopic examination of the sputum, indeed, demands a most extensive knowledge of

both animal and vegetable structure. I have found in it, 1st, all the structures which enter into the composition of the lung—such as filamentous tissue, young and old epithelial cells, blood corpuscles, &c. 2dly, Morbid growths, such as pus, plastic, and granular cells; tubercle corpuscles, granules, and amorphous molecular matter; pigmentary deposits of various forms, and parasitic vegetations which occasionally are found in the lining membrane of tubercular cavities. 3dly, All the elements that enter into the composition of the food, whether animal or vegetable, which hang about the mouth or teeth, and which are often mingled with the sputa, such as pieces of bone or cartilage, muscular fasciculi, portions of esculent vegetables, as turnips, carrots, cabbages, &c.; or of grain, as barley, tapioca, sago, &c.; or of bread and cakes; or of fruit, as grapes, oranges, &c. &c. All these substances render a microscopic examination of expectorated matters in phthisis any thing but easy to the student.

After considerable experience in the examination of sputa, I think myself warranted in saying, that a knowledge of its minute structural composition is of little use in a clinical point of view. The diagnosis of phthisis in its various stages, is capable of being so accurately determined by auscultation, that the microscope is in this respect of secondary importance.

From what has preceded, it must be evident that tubercle presents different appearances, according as it is hard or soft, cretaceous or calcareous. When recent and hard, the corpuscles are crowded together, and the granules accompanying them are comparatively few in number. When soft, the number of granules is much increased, and the corpuscles are easily separated. Lebert¹ is of opinion that at first the corpuscles are kept together by an intermediate substance, which afterwards softens. We can only regard this interglobular substance as the blastema in which the corpuscles are formed. The softening, then, is more probably owing to the development and breaking down of the latter, similar to what we observe in inflammatory exudations generally.

Gulliver² and Vogel³ agree in saying, that at an early period, more especially when in a miliary form, nucleated cells may be observed in tubercular matter. This is denied by Lebert, and I must confess that I have never been able to discover nuclei in the corpuscles of tubercle. They appear to me to be undeveloped cells, which are produced slowly and have no tendency to form perfect organizations, before they break down into a molecular matter. Hence no danger is to be apprehended from the spread of tubercle itself, and if fresh deposits could be prevented, the

¹ Physiologie Pathologique, p. 527—et seq.

² Gerbers' Anatomy—appendix, p. 85.

³ Icones' Histologiæ Pathologicæ, tab. 4.

tendency of this substance to disintegration, is highly favourable to its absorption.

Great disputes have taken place with respect to the vascularity of tubercle. Numerous successful injections I have made have invariably shown the non-vascularity of this formation. It is true that in large tubercular masses, and in tubercle infiltrated to any extent through a parenchymatous tissue, vessels are not unfrequently found. These, however, belong to portions of cellular tissue, which have been imprisoned in the exuded mass. So long as pathologists imagine that naked sight is sufficient to unfold morbid structure, they must necessarily be led into error.

(*To be continued.*)

Clinical Lectures on Midwifery and the Diseases of Women and Infants, during the Session 1845-6. By J. Y. SIMPSON, M.D., F.R.S.E., Professor of Midwifery in the University of Edinburgh, Ordinary Physician to the Edinburgh Maternity Hospital, &c.

(Collated from the Notes of Students.)

LECTURE I.—HEAD PRESENTATIONS WITH THE FOREHEAD ORIGINALLY DIRECTED FORWARDS OR TOWARDS THE PUBES.

At the Maternity Hospital, you have had repeated opportunities of watching cranial presentations in which the face or forehead of the child was primarily directed forwards, or towards the pubis. The Hospital records amply testify to the frequency with which some of you have met with this position of the infant's head. At the same time, you must permit me to remark that, for obvious reasons, I do not place any great reliance upon the perfect accuracy of the reports of positions entered in these records by the younger pupils. In fact, one of their principal objects in Hospital and Dispensary instruction is, to acquire, among other matters, a practical knowledge of the subject of positions,—and to consider them always accurate on this point, is to presuppose them already proficient in a difficult department of clinical observation. But Dr Martin Barry, (our invaluable House Surgeon, and a gentleman to whose talents, and zeal, and humanity, the Hospital is deeply indebted for its prosperity,) has been so kind as furnish me with a table showing the positions of the head in 335 cranial presentations, that he had himself carefully observed and noted among the patients of the Institution, and on which, therefore, we may place implicit confidence. I shall classify these 335 presentations according to the four positions and numerical nomenclature used by many of the German schools.

Table showing the Positions of the Head in 335 Cranial Presentations at the Edinburgh Maternity Hospital.

I.—*Occipito-anterior Positions.*

- | | |
|---|---------------|
| 1. Position ; or occiput directed to left foramen ovale, | in 256 cases. |
| 2. Position ; or occiput directed to right foramen ovale, | in 1 „ |

II.—*Occipito-posterior Positions.*

- | | |
|---|--------------|
| 3. Position ; or occiput directed to right sacro-iliac synchondrosis, | in 76 cases. |
| 4. Position ; or occiput directed to left sacro-iliac synchondrosis, | in 2 „ |

Total, 335

It is to this latter division of cases (*the occipito-posterior*) that I wish particularly to call your attention at our meeting to-day. And I do so, in order to point out to you at some length their mechanism and management,—to show you the strange and instructive errors that have been fallen into by most British authors, in the study and description of them,—and to enable you to examine more fully for yourselves, into the actual phenomena of these cases when they happen to occur in your future hospital and dispensary practice.

NOMENCLATURE AND NATURE.

You will find the class of cases, to which I advert, discussed by different writers, under a variety of different appellations. Dr Clarke has described them as cases in which “the face of the child presents to the os pubis.” Various English authors speak of them as cases in which the forehead, instead of the occiput, of the child is turned or inclined forwards to the pubis, or to either groin. They form the *fronto-cotyloid* positions of some foreign authors, the *occipito-sacral*, and *occipito-sacro-iliac* of others. They constitute, as you are aware, the third and fourth positions of those German authorities, who use the numerical nomenclature, illustrated by the preceding table.

In order that you may understand more precisely the nature of the cases to which I wish at present to direct your attention, allow me to recal to your memory, that anatomists and obstetricians describe four diameters of the brim of the pelvis, viz. 1. the conjugate,—2. the transverse,—3. the left oblique, and, 4. the right oblique; that it very rarely, or indeed, almost never happens that, at the commencement of labour, the long diameter of the child’s head enters the pelvis in either of the two first or direct diameters; and that of the two last or oblique diameters, the left, or that marked by a line running from the left sacro-iliac synchondrosis to the opposite or right foramen ovale, is comparatively seldom occupied by the head, because behind, its length is curtailed by the presence of the rectum. In fact, in 99 out of every 100 cases of cranial presentation, the long diameter of the head of the infant is found placed, at the commencement of par-

turation, in the direction of the *right* oblique or diagonal diameter of the brim, or in a line running from the right sacro-iliac synchondrosis to the left foramen ovale. In the living subject, this diameter—the right oblique—is the longest. The child's head is of an ovoid form, and, consequently, has a long and short diameter; and the longest diameter of the child's head is, as an almost invariable rule, found placed by nature in this, the longest diameter of the brim of the mother's pelvis, in order that it may pass through it with the least possible degree of obstruction, and, consequently, with the least possible degree of difficulty and danger.

In considering, therefore, the mechanism of normal cranial presentations, we hold it as an important and established principle, that the line of the long diameter of the child's head is, on entering the pelvis, placed in the line of the right oblique diameter of the brim; that, at the commencement of labour, it is comparatively seldom parallel with the line of the shorter or left oblique diameter; and that still more rarely, and, in fact, only when the pelvis is misshapen, or the child very small, is it ever found situated in the direction of the conjugate or transverse diameters.

In proof of this somewhat abstract statement, I may appeal to the table of cases which I have already shown you as the result of Dr Barry's observations; or I may illustrate my remarks by the following evidence published by the younger Naegele, with regard to the ascertained positions of the head in 3491 cranial presentations observed at the Heidelberg Hospital, from 1827 to 1841.

Table showing the Positions of the Head in 3491 Cranial Presentations at the Heidelberg Lying-in Hospital.

I.—Occipito-anterior Positions.

- | | |
|---|----------------|
| 1. Position; or occiput to left foramen ovale, | in 2262 cases. |
| 2. Position; or occiput to right foramen ovale, | in 4 „ |

II.—Occipito-posterior Positions.

- | | |
|---|----------------|
| 3. Position; or occiput to right sacro-iliac synchondrosis, | in 1217 cases. |
| 4. Position; or occiput to left sacro-iliac synchondrosis, | in 8 „ |

Total,	3491
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In none, I believe, of these 3491 cranial presentations was the head found lying in the transverse or conjugate diameter of the brim; in 12 only, (viz. in the 4 cases of the second position, and the 8 cases of the fourth position,) was it found placed in the left oblique diameter of the brim, and in all the remaining 3479 it was primarily situated in the right oblique diameter.

To prevent, therefore, unnecessary complications and repetitions, I beg you to observe that in my future remarks in this lecture I shall leave entirely out of view those rare, and, from their

rarity, almost anormal cases in which the head enters the brim in the left oblique diameter. This omission will simplify our subject for us.

Next, observe this other point,—either end of the axis of the long diameter of the foetal head—that is, either its occiput or forehead—may be placed at either end of the long or right oblique diameter of the brim of the pelvis. Most frequently we find the occipital extremity of the infant's head placed forwards, or situated at the anterior extremity of the right oblique diameter. In other words, most frequently the occiput is placed behind the left foramen ovale; and this constitutes the *first* position of most authors who use a numerical nomenclature. But the arrangement is sometimes exactly reversed; that is to say, occasionally the frontal extremity or forehead of the infant is placed forwards or behind the left foramen ovale, and consequently the occiput is, under this cranial position, directed backwards, and to the right sacro-iliac synchondrosis. To recapitulate;—in this last variety of cranial position (the immediate object of our investigations), the long diameter of the child's head lies as usual at the commencement of labour, parallel with the left oblique diameter of the brim, but with the face or forehead, instead of the occiput, placed behind the left foramen ovale; or in other words, pointing forwards to the left groin. Dr Hamilton and others have properly stated, these are not strictly cases of presentations of the forehead “to the pubis,” but of presentations of the forehead to one or other groin. And I have already shown you why the groin to which the forehead points is so far more frequently the left than the right, that, for the present, I leave the latter variety out of consideration, and apply my subsequent remarks entirely to that cranial position in which the forehead points to the left foramen ovale or left groin. This position is the *third* position of the head in the two tables of cases which I have already shown you.

Having premised these dry but necessary details, let me now solicit your special attention to several more important and practical points connected with the clinical history of this important class of cases. I have repeatedly remarked to you, that, in its theoretical and practical results, the study of the mechanism of labour in some cranial and other presentations forms a sad satire upon the general accuracy of obstetric observation. I could not easily adduce a better clinical example of this remark than the whole study of occipito-posterior positions of the head will now afford us. And first, let us inquire when, at the commencement of labour, the occiput is situated posteriorly in passing through the brim of the pelvis, in what relative position does it emerge from the outlet? In other words, in occipito-posterior positions,

DOES THE OCCIPUT MAINTAIN THE SAME RELATIVE POSITION TO THE BACK OF THE PELVIS IN PASSING THROUGH THE BRIM, CAVITY, AND OUTLET ?

In most of your text-books you will find this question answered in the affirmative. For instance, Denman, Merriman, Blundell, Hamilton, and others, allege, that in the natural mechanism of this class of cases, the head retains throughout the same position relatively to the parts of the mother,—that it enters the brim of the pelvis, passes down into the cavity, and makes its exit through the outlet, in the same position ; that is, with the forehead or face always directed anteriorly, and consequently the occiput always pointing posteriorly. Long ago, Solayres showed distinctly that this was by no means the common and natural course of events in instances of this presentation, but his observations were unattended to. Since Naegele, however, wrote his admirable essay on the Mechanism of Parturition, the whole subject has been much more studied ; and we now know, from abundant and accumulated evidence, that the ideas generally held with regard to the mode in which labour proceeds in occipito-posterior positions are quite incorrect. For it has been ascertained, beyond the possibility of doubt and cavil, (and you shall have constant opportunities of confirming it by your own observations), that in almost all cases in which the occiput is originally placed posteriorly, the head, upon descending down upon the floor of the pelvis, so far changes its position as to rotate round, so that at last the occiput, and not the forehead, emerges anteriorly under the arch of the pubis ; and consequently, the face, which looked forwards, or towards the pubis at the commencement of labour, is turned backwards towards the sacrum or perineum at the conclusion of it. In short, in reference to cranial presentations, we may lay it down as a *general law*, admitting of few and occasional exceptions only, that in whatever position the head is found entering the brim, whether with the occiput directed anteriorly, or directed posteriorly, it will ultimately pass through the outlet and vulva with the occiput placed under the arch of the pubis, and the forehead and face gliding over the perineum. When the forehead is primarily situated behind the left foramen ovale, as occurs in the cases forming the subject of my remarks,—the head in passing through the lower pelvic apertures, rotates to the left and backwards a quarter of a circle, and at last comes out at a position at right angles to that in which it entered ;—the occiput which was originally placed opposite the right sacro-iliac synchondrosis, rotates to the right and forwards in a corresponding degree so as to be placed opposite the foramen ovale of the same side, and emerges under the arch of the pubis ; and the long diameter of the infant's head instead of remaining parallel with the right oblique diameter of the pelvis, is latterly born in parallelism with the left oblique diameter of the outlet.

But what evidence have we of the actual occurrence of this curious change in the relative positions of the occiput and forehead at the brim and outlet? I shall state to you the principal

PROOFS OF THE ROTATION OF THE OCCIPUT FROM THE POSTERIOR TO THE ANTERIOR PART OF THE PELVIS.

1. You may have constant opportunities of proving to yourselves the occurrence of the rotation in occipito-posterior positions by observations of this kind. Keep your forefinger, in such a case, steadily upon the anterior fontanelle during the whole passage of the head down into the cavity, and through the outlet of the pelvis—and each of you will by this form of direct and personal observation upon the living subject, readily convince yourself that the forehead of the infant does rotate round from the anterior to the posterior segment of the pelvis when the head is about to pass through the vulva,—or that it makes a rotation from the left foramen ovale round to the left sacro-iliac synchondrosis. The evidence amounts to this—you can actually *feel* the rotation take place.

2. Experiments made by pressing a dead child, placed in an occipito-posterior position, through the pelvis of a dead mother, give the same result. In this experiment, which I have tried in several instances, we can *see* the head placed in the brim of the pelvis in one position, viz. with the occiput directed posteriorly, emerge from the outlet in another position, viz. with the occiput directed anteriorly. This experiment will even so far succeed with the dried foetal skull and the dried pelvic bones, provided you select a skull and pelvis adapted in size to each other, and apply the impelling force in a proper direction. Thus [*showing the experiment*] this foetal skull cannot, for want of space and adaption, be forced through the outlet of this pelvis in an occipito-posterior position—but as soon as the occiput turns forwards, it not only passes easily, but even admits in addition of one or two fingers passing out along with it.

3. I have had occasion to show to you more than once at the Hospital, that, in natural or artificial footling cases when the toes, abdomen, and face point, as they sometimes do, anteriorly—the child rotates round in the course of its expulsion, and at last is born with the toes, abdomen, and face pointing posteriorly. The rotation is of the same extent and nature as the rotation of the head itself in occipito-posterior positions—but in these footling cases we have actual *visual* evidence of the turning,—an observation which, in the living subject, cannot of course be made in the corresponding cranial positions.

But in a few cases, the head in occipito-posterior positions, may be observed by you to pass out with the occiput still placed posteriorly. In other words, you will from time to time see

EXCEPTIONS TO THE GENERAL RULE OF THE ROTATION OF THE OCCIPUT FORWARDS.

Out of 76 cases of occipito-anterior positions, carefully watched by Dr Barry at the Edinburgh Maternity Hospital, within the last year, in 74 the occiput turned forwards and emerged from under the arch of the pubis; and in 2 the occiput retained its primary posterior position, so that the forehead at last passed out under the arch of the pubis. In 96 cases noted by Naegele, he found the head to rotate as I have described in 93; and in the remaining 3, no rotation occurred. These important facts may perhaps be expressed more strongly in a tabular form thus:—

Proportion of occipito-posterior positions in which the occiput ultimately passed through the vulva anteriorly or posteriorly.

	Total cases.	Occiput at last posterior.	Occiput at last anterior.
Heidelberg Hospital,	96	in 3	in 93
Edinburgh Hospital,	76	in 2	in 74

The exceptions to the rotation occur, therefore, not more frequently than once in thirty cases;—and further in the exceptional instances you will generally find either the head of the infant unusually small, or the pelvis of the mother unusually large. Yet, as I have already stated, almost all obstetric authors describe the exception as the rule—and the rule as the exception.—Now,

BY WHAT POWERS OR MECHANISM IS THE ROTATION EFFECTED?

That the rotation of the head in labour is not produced by vital actions on the part of either the infant or the pelvic canals, is demonstrated by this one simple fact—that (as I have already stated to you), the rotation may be seen to occur when, in imitation of labour, the experiment is tried of forcing the body of a dead infant through the pelvic canals of a dead mother. Here, as during life, the rotation of the foetal head upon the floor of the pelvis is, on a contracted scale, like that of the spindle of a screw upon a nut, provided with one half of a single or broken thread. If relatively the spindle is too small, or the nut too large, the former may pass through the cavity of the latter without any rotation—as in the exceptional cases just now alluded to;—but if they are properly adapted in size to each other, the spindle can only make its transit by its helix rotating upon the inclined plane of the corresponding helix of the imperfect nut.

Further, it appears to me that very incorrect and erroneous opinions are generally held by obstetric authorities as to the mechanism of the partial rotation of the head in occipito-posterior positions, and at the same time I am inclined to look upon it as a physical problem of no very difficult solution. In order that you may understand the explanation of it which I have to propose to you, it is neces-

sary to hold in view the following axioms:—1. that the impelling power of the uterus is transmitted to the head of the infant along the line of the spine; 2. that the spine is articulated to the head nearer the occiput than the chin, and consequently (more especially after the flexion of the chin upon the breast) the expulsive force of the uterus bears most strongly and directly upon the occipital region; and, 3. that the mobility of the smooth and lubricated surface of the foetus upon the smooth and lubricated surface of the uterine and vaginal cavities is such, that if the occiput is forced to rotate in any degree, the occiput will, in turn, produce a secondary but corresponding rotation upon the forehead and other parts of the infant's head, and consequently upon the body also, unless it happen to be morbidly and tonically grasped by the uterus, which is rare. Observe one point more—the direction in which the power of the contracting uterus first impels the body and head of the child, is in the line of the axis of the brim of the pelvis,—that imaginary line which is usually represented as running from the umbilicus to the lowest point of the sacrum. In the common occipito-posterior position, the impelling power of the uterus thus forces the *right* side of the occiput (for the head is placed obliquely) against the concave floor of the pelvis, and its further progress downwards and backwards in that direction, is arrested by the resisting structures of that floor. This occiput is thus submitted to two forces meeting at an obtuse angle, viz. to the impelling power of the uterus from above, and to the resisting power of the pelvic floor from below—and these two powers act upon it with similar force—physical action, and reaction being always equal. The necessary result is, that the part acted upon, viz. the occiput moves forward and to the right with a screw-like movement—sometimes rapidly,—sometimes slowly, and in a line diagonal to the lines of the forces acting upon it—exactly as if it were impelled by a single force. Or, as mathematicians express it, it moves in a line diagonal to a parallelogram, two of the sides of which are formed by the lines of the two existing forces. The diagonal or resultant line of motion of the occiput, at this point in the labour, is in a line running anteriorly in the direction of the axis of the outlet, and the movement of the occiput forwards in this direction is further greatly promoted and facilitated by this being at the same time, the direction in which it encounters incomparably the least resistance to its further progress.

What part of the floor of the pelvis serves as the resisting plane upon, and by the aid of which, the occiput is thus made to rotate forwards?—In some—any, and in others, apparently every successive portion of the concavity of the floor of the pelvis seems to serve this purpose. But the spines of the ischia contribute far less than is generally believed. I have repeatedly observed the rotation, when, in fact, the occiput was so low as to be beyond the in-

fluence of the bones and ligaments, and where the required resistance was apparently afforded by the soft tissues alone—as in the very last throes of labour. And I have seen the concavity formed by the prolapsed posterior lip of the uterus serve the same purpose before the head could be much or at all influenced by the counterpressure of the pelvic floor. Generally, however, the rotation occurs on the concavity of the floor of the pelvis itself;—and I consider it of great moment that you should particularly note this fact, as demonstrating that if we tried to turn the head, as some recommend, whilst it is still high in the pelvis, we do not imitate the mechanism of nature in this position, but so far act in direct opposition to the laws with which she has regulated this mechanism.

The best evidence which I can offer you of the correctness of that explanation of the rotation which I have stated, is afforded by this sufficiently rude and simple experiment. Place a full-sized infant's skull in the common occipito-posterior position, and try to force it through the outlet of a well-formed bony pelvis, in which the counterpressure of the soft parts is, for the time being, imitated by the application of your hand placed, as it were, so as to form a continuation of the concavity of the sacrum. Apply the requisite impelling force to the foetal skull by passing a wooden or metallic rod through the foramen ovale, so that the sum of the momentum employed, be, as it is in nature, directed to the occiput. The occiput will become thrown forwards under the pressure acting upon it from above, and the counterpressure acting upon it from below.—No obstetric author has, as far as I am aware, shown what I have attempted to point out to you, that it is the movement of the *occiput* that we are to study in this position, as being that part, the movement of which regulates the whole. We must leave the forehead out of the question of the mechanism of the rotation, as its motions are *secondary* and entirely the result of those of the occiput. And, without holding these facts in view, it will, I believe, be found difficult or impossible to give a rational explanation of the phenomena.

But let us pass on to another and less difficult inquiry, viz.—

ARE OCCIPITO-POSTERIOR POSITIONS OF THE HEAD FREQUENTLY MET WITH IN PRACTICE?

In former times, and up, indeed, to the present day, this position has been generally represented as exceedingly rare. Thus Dr Clarke, of London, in a special essay on the “management of cases in which the face of the child presents to the os pubis,” almost congratulates himself upon having had the good fortune to observe 14 cases in the course of several years of his very extensive practice. A few years ago, Wigand, of Hamburgh, who is said to have seen more midwifery than almost any other European accoucheur, states that he had only met with six or seven cases.

Dr Collins has recorded 12 cases as having occurred from 1825 to 1832, out of 16,000 deliveries in the Dublin Lying-in Hospital.

In contradistinction to the preceding statements, I beg to observe that, so far from seeing such cases rarely and at long intervals, I find that in one out of every three or four cases, among my private patients, I meet with this position of the head, or with the forehead looking forwards to the left foramen ovale, or left groin. It is so very frequent, that I have repeatedly seen two or three of it occur in succession. Among the patients of the Maternity Hospital, you will find this position as frequent as I have just stated it to be. And Dr Barry's results, as to the frequency with which this position was observed among the patients here, contrasts strangely with the frequency with which the same position was observed among the patients of the Dublin Lying-in Hospital as given by Dr Collins in his invaluable Report. The difference may be correctly expressed as follows:—

Absolute number and proportion of Occipito-posterior Positions in the Dublin and Edinburgh Hospitals.

	Total Head Presentations.	Occipito-posterior Positions.	Proportion.
Dublin,	16,041	12	or 1 in 1336
Edinburgh,	335	78	or 1 in 4

If you search the records of obstetric statistics, you will find an infinite discrepancy upon the relative proportion in which this class of cases was noted by different observers. The following table, illustrative of this point, requires no comment:—

Frequency of Presentations of the Face to the Pubis, or of Occipito-posterior Positions, as given by different Practitioners.

Collins reports them as	1	in every 1336	labours.
Bland	1	in —	374
Baudelocque	1	in —	346
Lachapelle	1	in —	171
Cusack	1	in —	151
Maunsell	1	in —	121
Merriman	1	in —	67
Lobstein	1	in —	18
Gregoire	1	in —	14
Murphy	1	in —	7
Villeneuve	1	in —	7
Barry, Joseph Bell, Rigby, Dubois, Stoltz, Naegele, &c.,	1	in every 3 or 4	labours.

I have already stated that my own experience is perfectly in accordance with that of those practitioners whom I have placed last upon the preceding list. Indeed, I feel the most certain con-

viction that if any of you arrive at a different conclusion when you examine cranial presentations upon a large scale, it will not be from the facts being different, but from you interpreting them differently. And do not attribute your results, if they vary from that which I have last stated, to defective powers of observation on your part, but rather to a defective use of those powers which you do possess.

But the question naturally presents itself, how has it happened that, if occipito-posterior positions, are so frequent, they should be reported and represented as so rare by various authors. The solution of this problem is easy when we consider the

FALLACIES COMMITTED IN JUDGING OF THE POSITIONS OF THE HEAD
IN LABOUR.

Many practitioners report merely the position of the head as it is observed to emerge ultimately from the outlet, and not as it may be found higher up in the pelvis. But we have seen, that in occipito-posterior positions the occiput almost always rotates forwards, before it passes the vulva. Hence one enormous source of error. For all, or nearly all those cases which were originally occipito-posterior positions come to be thus inadvertently reported among the number in which the occiput is situated anteriorly.

The following table will enable you to understand another great and common source of fallacy. In constructing and explaining it, I use the numerical nomenclature of positions which I have employed in giving Dr Barry's observations at the beginning of the Lecture :—

Relative Proportion of the four most common Positions of the Head given by different Observers, and calculated to a standard of 1000 Cases each.

	A.—Occiput to left side of Pelvis.		B.—Occiput to right side of Pelvis.	
	Positions.		Positions.	
	1st.	4th.	3d.	2nd.
Naegele,	698	3	298	1
Dubois,	702	6	259	3
Barry,	763	4	228	3
Bell,	750	4	240	7
Halmagrand,	700	4	240	50
Murphy,	632	46	161	161
Boivin,	800	5	50	190
Lachapelle,	770	4	70	200

Now, in examining the returns collected into this table, you will observe that all agree as to the frequency of the first position of the head, or that in which the occiput is directed for-

wards to the left foramen ovale ; and further, that they represent the fourth, or that in which the occiput is directed backward to the left sacro-iliac synchondrosis, as being of very rare occurrence. But of the proportional numbers of the other positions, namely, those in which the occiput looks to the *right*, and either anteriorly or posteriorly, there are very discordant statements. I shall easily, however, be able to show you how to reconcile this difference.

One set of authors, among whom we have Lachapelle and Boivin, makes the second position, viz. that with the occiput directed forward to the left foramen ovale, common, at the expense of the third, or that with the occiput directed backwards and to the left sacro-iliac symphysis, and which they account much rarer. The others, among whom we have the names of Naegele, Dubois, Barry, and an able country practitioner, Mr Bell of Barrhead, give a contrary account, for they correctly describe the third position as a frequent primary position, and the second as, on the other hand, the very reverse. This incongruity arises entirely from the former class of authors, not adverting to the fact, that the second position is an ulterior stage in the progress of cases which originally belonged to the third. And, as they either omitted to make early and careful examinations, or preferred trusting entirely to observations, more easily made in a later period of the labour, so we are not to be surprised that they range and enumerate, under the second position, cases which ought to have been referred to the lists of the third. Every careful observer, however, who takes the pains to examine early, will find the cases of the third, or common occipito-anterior position, to be of common occurrence, while the second position may be almost excluded from our accounts of the mechanism of parturition, unless as a mere *stage* in the course of the other. Probably, one of the most fallacious of all marks, and yet one sometimes relied upon, for determining the position of the cranium at the brim, is to observe the direction of the face after the head has passed the outlet. It is alleged, that if the face turn, during the passage of the shoulder, to the mother's left thigh, it marks that it has been a third or occipito-posterior position, and the reverse if it turns to the right. But such a criterion would constantly lead you into error. For the face of the infant sometimes does turn to the right after it has passed the outlet, even though it were originally an occipito-posterior position ; and, in fact, you will often find, that if you abstain from all interference in the passage of the body, the head will occasionally revolve round to a greater or less extent, so that the face turns more or less anteriorly in correspondence as the body turns in a half spiral mode, in consequence of the shoulders making a screw-like motion upon the floor of the pelvic canal, as they become forced down upon and through the pelvic and vaginal outlet.

The occipito-posterior are also perhaps frequently confounded with occipito-anterior positions in the earlier stages of the labour, in consequence of the distinctive marks between them not being attended to and appreciated. To avoid this error, let us next then consider the

DIAGNOSIS OF CASES IN THE OCCIPITO-ANTERIOR POSITION, OR WITH THE FOREHEAD TO THE PUBIS.

There are three modes by which we may arrive at a diagnostic knowledge of the usual occipito-posterior position of the head with the forehead behind the left foramen ovale, viz. 1st, the locality of the foetal movements as felt by the mother; 2d, the situation of the foetal heart as determined by auscultation; and 3d, the tactile examination of the foetal head itself. The two first may afford us a greater or less degree of certainty as to the position of the head before labour begins, or in the first commencement of it before the os uteri is much opened. It is to the third, however, that we principally or almost solely trust as our guide after labour has fully set in. I shall offer you a few details regarding each of these signs.

I. *The movements of the Foetus.*—The foetal movements are often felt by the mother much more on one side of the abdomen, than on the other. The movements which she feels, are principally the movements of the hands and feet, or rather the extremities of the infant. Hence the side of the uterus on which they are felt, indicates the side to which the extremities, abdomen, and face are turned. Consequently the back and occiput of the child look to the opposite side. Recollecting then, that the infant's head is almost always placed in the right oblique diameter of the brim, we may feel pretty confident that the occiput is placed to the right and anteriorly, if the foetal movements are principally or only felt on the left side; and, on the other hand, that the occiput is placed to the left and posteriorly, if the foetal movements are principally or only felt on the right side. The degree of distinctness with which the sensations of the foetal movements are felt by the mother, confined to one or other side, will principally determine the degree of reliance that we may, in individual patients, place upon this sign. Many mothers, however, are not aware of the movements being greater in one part than another, and in such instances we must depend upon other aid.

II. *The sounds of the Foetal Heart.*—When using the stethoscope, the foetal heart is most distinctly heard over the left scapular region; and, if the foetus is in the occipito-anterior position, the sounds of the heart will be heard most distinctly above the left groin of the mother, or in the left iliac region. If the foetus is in the occipito-posterior position, or with the face towards the pubis, these sounds will be heard most distinctly, on applying the stethoscope to the right iliac region of the mother.

Thus, in most cranial cases, the use of the ear gives you a strong presumption of the position, by marking whether it be placed with the occiput anteriorly and to the left—or posteriorly and to the right.

III. *The tactile examination of the Child's Head.*—Both the signs which I have already mentioned, the sensations of the foetal movements, and the seat of the sounds of the foetal heart, yield in value to the more direct and more certain evidence derived from actually feeling and touching the foetal head with the fingers in a vaginal examination. When the finger is introduced, you feel the sagittal suture of the infant's head crossing obliquely the opening of the os uteri, in a line parallel with that of the right oblique diameter of the pelvis. Both in the common occipito-anterior, and common occipito-posterior position, this is the direction of the sagittal suture—so that the mere direction of the suture will not afford you a distinctive diagnostic sign. Run your finger, however, along the suture to either of its extremities,—say to its anterior extremity, which is generally easily reached, and you may at once fully determine the position of the head, by fully determining which of the two fontanelles is placed at the anterior or pubic extremity of the suture. If the fontanelle which you touch in this situation is four-limbed and quadrangular, it is of course the anterior fontanelle, and necessarily shows the forehead to be placed anteriorly; and consequently the occiput must be directed to the posterior part of the pelvis. But always be perfectly certain, that it is the anterior and not the posterior fontanelle which you are touching, that is, that it is a space or bregma quadrangular, and not triangular in its figure, and formed by the meeting of four, and not of three sutures. If you are not, especially in early practice—strongly upon your guard in relation to this source of fallacy—you will be exceedingly liable to fall into error on the point. But with due care and caution, you may readily surmount such a difficulty. In no case, do I believe, will you find it necessary to force your finger up so far as to touch the ear of the child, as some authorities advise. But your ear may, by the medium of the stethoscope, add to the certainty of the tactile diagnosis by ascertaining, in the mode I have pointed out, the exact locality of the foetal heart.

One subject more remains for our consideration in reference to cases of the occipito-posterior position of the head, viz. their

TREATMENT.

Upon this subject, let me, in the first place, state to you this strong and important fact,—in not one of Dr Barry's 77 cases,—and in not one of the other 2 or 300 cases of head presentation, with the forehead directed forwards, which have occurred among the patients of the Maternity Hospital since its first institution—

in none, (I repeat,) has any kind of aid or interference by the hand, or forceps, or other instrument been required or given. In stating this as the result of our observations and practices here, I state what I believe should be the result of your observations, and the line of your practice, in your future professional experience. In a vast majority of occipito-anterior positions you require to offer no unusual aid or interference. In exactly the same way, in a vast majority of occipito-posterior positions—in 99 out of the 100—you require to offer no unusual aid or interference of any kind or description whatever. You must equally look upon the one position and the other as constituting a perfectly natural labour—so far as in each the mode and mechanism of parturition are concerned.

You will find, however, doctrines and practices very different from this, taught in regard to the treatment of occipito-posterior positions in most obstetric works and text-books, modern as well as ancient. For very many advise and practice interference of an active character in all such cases;—and then, when the case ends favourably, as it generally does, they unhesitatingly ascribe the result solely to their interference—forgetful of the fact, that nature, as I have just shown you, does generally conduct the mechanism of the labour to this safe termination—and that too, sometimes in opposition to, and in despite of the supposed assistance of art. In precisely the same way, in many of those diseases, the natural history of which is, that they will terminate favourably if time is allowed, and quietude and proper regiminal means be enforced,—many practitioners will insist on inflicting upon their patients a continuous system of drugging, and then subsequently arrogate entirely the patient's recovery to the influence of their drugs, allowing nothing to where every thing perhaps is due, viz. the curative influence of nature herself.

In the treatment of occipito-posterior positions, the mode of interference recommended is sometimes most active. And one class of practitioners seem to believe that without interference nature could never, by her own unaided mechanism and efforts, bring a case of this kind to a successful termination.

Thus, a few years ago, Capuron read before the French Academy, and afterwards published in the *Journal Hebdomadaire*, a paper with this significant title, “on the impossibility of natural delivery, and the necessity of applying the forceps in occipito-posterior positions of the cranium.” In these cases Capuron avers, that unless the pelvis be unnaturally large, or the child unnaturally small—if the forceps are not used as a “precaution,” failure of the powers of the mother, pressure, contusion, and inflammation of the intro-pelvic organs will follow, with apoplexy and death of the infant. He attempts to prove all this on mathematical and theoretical grounds, rather than on the results of observation

and practice,—and correctly enough shows, by various admeasurements and arguments that, in the great majority of cases, the head cannot physically pass through the pelvic outlet if the forehead is placed anteriorly;—but he seems quite unaware of the other all-important fact, that in exactly this great majority of cases, the head is rotated round by the natural efforts, so that the forehead is ultimately placed posteriorly, and not anteriorly, and passes with perfect facility.

In relation to the supposed indispensable necessity of instruments in occipito-posterior positions, Puzos, Bazignan, and others, have published opinions more or less similar to these opinions of Capuron. The general mass, however, of obstetric writers do not look upon artificial aid in such cases as entirely indispensable. But many seem to regard it as useful and proper in most cases of the kind, and have advised various modes of interference.

When you detect the occipito-posterior position upon the breaking of the membranes, you are, observes Pugh, “to lay the woman in a proper posture, turn, and extract the child by the feet, being the best and safest method that can be taken; but if sent for after a midwife, who perhaps has kept the patient too long, that turning is impracticable, then you must have recourse to the curve forceps.” Chapman details the case of a “lady of distinction” whom he delivered by turning, in consequence of the forehead or face coming towards the os pubis. Dr Smellie, in the first case of the kind which he details, tells us he first tried to turn the forehead backwards, then attempted to bring the child footling, but, failing in this, he subsequently applied the forceps and blunt hook. In the latter part of his practice, he seems to have trusted to the forceps alone, when aid was required, and rotated the head with them. He details one case where he turned the forehead backwards with his fingers. Exton advises interference upon this last plan. In 1800, Dr Clarke of London published a paper “on the management of cases in which the face of the child presents towards the os pubis.” He speaks of the cases as “comparatively rare,” “attended with considerable difficulty,” and as having had no proper means suggested for their special treatment. The means, however, which he proposed and practised was not novel, and consisted of “introducing one or two fingers between the side of the head, near the coronal suture, and the symphysis pubis, and pressing steadily against the parietal or frontal during the labour pains, till the forehead is pressed backwards, and at length the occiput is brought to the groin.” “I have now, (he states) met with 14 cases, in 13 of which the practice has succeeded, and as some years have elapsed since the first case, I think myself fully authorised in recommending this method to be always pursued, when the face is found in the situation above described.”

From what I have stated of the natural mechanism of these

cases, you know that in 13 out of the 14 cases of which Dr Clarke speaks, nature would have herself performed the rotation in question, and that too, with greatly less risk, and annoyance, and pain to the mother, than by the fingers of the accoucheur thrust up between the head and pelvis, and at the same time less danger to the child. "I have known, (says Dr Merriman) one instance in which the space opened between the pelvis and the child's head, by passing the finger (as Dr Clarke advised) allowed the funis to prolapse, and thus destroyed the infant."

In the "Practical Observations on Midwifery" which Dr Hamilton published a few years ago, he adopts Dr Clarke's practice in this set of cases, though criticizing him, in so far that he properly points out the forehead to lie towards one or other groin, and not directly forwards to the pubis. "In such cases, (Dr Hamilton remarks), there is a risk that the face be turned towards the pubis, if the practitioner have not sufficient intelligence to make strong pressure upon the brow, which is generally sufficient in the course of a few pains to turn the face into the hollow of the sacrum."

Dr Dewees, in his valuable work on midwifery, declares, that he considers that "man incompetent to practice midwifery, who cannot detect and change this position of the head" in the mode recommended by Baudelocque and Clarke. His countryman, Professor Bedford of New York, in writing on the same subject in 1844, after commenting upon nature as "full of wisdom and benevolence, always vigilant and prompt, &c." proceeds to state, that when the practitioner "arrives at the bedside, and in making a vaginal examination, ascertains that the occiput is at one of the posterior points of the pelvis, he should, as soon as the mouth of the womb is sufficiently opened to admit the manipulation, introduce with great gentleness and caution, his hand, and place his thumb on one of the lateral portions of the head, and the fingers on the other, and slowly elevate the head, at the same time bringing the occiput to one of the anterior points of the pelvis, either the left or the right acetabulum; for example, if the occiput be at the right sacro-iliac symphysis, it should be brought to the right acetabulum, if at the left sacro-iliac symphysis, to the left acetabulum. When this change has been effected, nature will usually be competent to accomplish the delivery, and the foetus will not be exposed to the same hazard of a protracted birth. Indeed, if the change be not made, it will often be necessary to resort to the forceps to terminate the delivery; and if the labour be submitted to nature, the child will frequently be sacrificed."

In occipito-posterior positions, Dr Burns recommends, like Dr Bedford, early rectification of the head. "As (he observes) this presentation, whichever way the head turn, is generally productive of a labour more tedious than the natural one, we should co-

operate in the acceleration of the process of turning of the head. If it be discovered early, it is certainly proper to rupture the membranes, and turn the vertex round, which is easily accomplished." Dr Burns further advises us, that "if this opportunity be lost, we may still give efficient assistance," by Dr Clarke's method of interference;—and in corroboration, he adds, that he has been himself successful in thus artificially pushing backwards the forehead in cases "where the head seemed rather to be turning with the vertex towards the sacrum, and had descended so low as to have the nose on a line with the arch of the pubes." It is sometimes at this late point that nature turns the head by her own efforts, and occasionally during the course of a single pain. And I doubt whether Dr Burns does not here ascribe to the efforts of art what belonged to the efforts of nature.

I shall cite only one other esteemed modern authority, viz. Dr Blundell of London. Dr Blundell's rules of practice in occipito-posterior positions are more heroic than that of any other of the writers I have mentioned,—for his rules embrace one and all of the modes of active interference which I have hitherto named. His observations are too long for quotation; but he tells us that "when the case is indisputable, the dexterity great, and the circumstances are conducive, he will not venture to assert that turning the child is universally unjustifiable;" that if the softer parts are lax, the pelvis large, &c. rectification of the position of the head above the brim may be justifiable with the hand, or this may be subsequently done with the forceps, "remembering that you are operating upon the softer sex;" that in all cases, Dr Clarke's method recommends itself to your adoption by its ease and safety, "unless turbulence and violence unfit you for the duties of an accoucheur;" that in the majority of cases, however, and especially if yet inexperienced in the practice of midwifery, you may trust with confidence to the natural efforts; that if all these methods, and nature also fail, the lever or forceps might be tried "with tenderness and prudence;" or at last "compelled by an inexorable necessity you must have recourse to the perforator." "Adhering to these directions, I am persuaded (says Dr Blundell) you cannot wander far from the correct line of practice."

Strangely enough, Dr Blundell introduces his long remarks upon this subject with the following pertinent criticisms. "It seems (he observes) that where the face throughout the labour is lying forward on the symphysis many difficulties are occasioned. What is it then (he asks) that the accoucheur can do in order to diminish, surmount, or remove them? What is there that he can do with prudence, without committing the *unpardonable sin* of midwifery—the sin I mean of those obstetric reprobates, the meddling, and the pragmatic?" And he closes his discussion of the treatment in the following words:—"Under the best management, *unless* you can rectify, these are bad cases, for bruising, laceration,

and sloughing of the parts, and the death of the child, are to be apprehended." I leave you to decide upon the evidence which I have already laid before you, whether or not Dr Blundell's own criticisms do or do not aptly apply to Dr Blundell's own practice, and whether the child's death, and that "bruising, laceration, and sloughing," of the maternal parts which he apprehends in occipito-posterior positions, is more likely to be the result of the natural mechanism and uninterfered with course of nature in such cases, or the result of that formidable list of operative procedures which he prescribes in this form of labour,—and which list includes, in fact, (according to his own enumeration,) almost every obstetric operation except the Sigaultian and Caesarean sections.

Let us now pause for an instant, and recapitulate one or two of the principal results at which we have arrived in the course of the preceding inquiry. We have found many estimable authors considering occipito-posterior positions to be exceedingly rare; I have shown you that, on the other hand, they are exceedingly common. They are generally represented as maintaining throughout the labour their original position with the forehead anteriorly; I have pointed out to you that, on the contrary, in twenty-nine out of thirty cases, the forehead rotates round, and ultimately emerges posteriorly. Formerly it was believed that this internal rotation of the head was never performed by the unaided natural mechanism; now we know it to be easily accomplished in every, or in almost every case, and without the slightest artificial assistance of any kind. Many excellent authors allege that, in occipito-posterior positions, the process of labour as a whole is attended with unusual difficulty and danger; but we have seen abundant evidence to prove that this is a most ungrounded fear, and that the labour,—like that in occipito-anterior positions—belongs most strictly to the class of natural labours. And, lastly, we have seen no small variety of artificial and operative measures more or less strenuously recommended in the treatment of these cases in some of our best and ablest text-books; but on consulting the text-book of nature, we have further found that the peculiarities of cases of this position required, in the way of artificial or operative aid—nothing—absolutely nothing. In commenting upon these cases elsewhere, I some years ago observed "If there is any truth whatever in statistics, we venture to say, from the data we have adduced, that such cases daily occur, and pass over unobserved in hundreds of instances in which the labour is supposed to be, and no doubt is, perfectly natural." Occipito-posterior positions of the head, "require," says Naegele, "no peculiarly favourable circumstances, but these species of labours can be completed by the natural powers under the most usual proportions, in the same time, with the same expense of strength, and without greater difficulty, than when the head takes the more common position."

Perhaps these remarks of Naegele are too absolute ; for, in occipito-posterior positions, the occiput requires to pass in its transit, through a longer and more curved pelvic line, than in occipito-anterior positions ; consequently in the Hospital statistics, drawn up for me by Dr Barry, occipito-posterior positions seem on the whole to require a somewhat greater length of time than occipito-anterior positions. The difference, however, is so inconsiderable as not to invalidate in any, the slightest degree, what I have already stated regarding the perfect safety and facility with which unaided nature is capable of finishing the labour in this common class of cases.

But supposing that, in consequence of inertia of the uterus, or constitutional exhaustion, or the state of the maternal passages, or size of the head of the infant, or any other of those causes which sometimes force us to deliver by the forceps in occipito-anterior positions, we were necessitated to use the same instrumental aid in an occipito-posterior position, is there any notable difference in the mode in which we should conduct the operation in the latter case, from the mode in which we should conduct it in the former ? I believe there is, in one respect, an important difference, and that there is

ONE SPECIAL RULE IN DELIVERY WITH THE FORCEPS IN OCCIPITO-POSTERIOR POSITIONS.

It is this. *In occipito-posterior positions the mechanism of the extraction of the head with the forceps, should be an exact imitation of the mechanism of the expulsion of the head by nature.* In other words, I am strongly convinced that, in the artificial extraction of the head, in occipito-posterior positions, we should make the forehead rotate backwards, and the occiput forwards, according to those rules which we have seen nature following under the same conditions. For here, as elsewhere, the more perfectly we imitate her principles, the more perfect will our own practice be. If the infant's head is of such a size as to pass with comparative facility through the maternal pelvis, we may, after seizing the head, forcibly pull it down and extract it in the position in which it was originally placed, namely, with the forehead still looking anteriorly. But if the head and pelvis are more accurately fitted in size to each other, such efforts will be fruitless, unless at the expense of great and unnecessary bruising and compression of either the mother, or infant, or both. Almost all authorities, however, in midwifery, seem to recommend and practise this direct traction. But the principle of the practice amounts to this,—it is as if (reverting to a previous simile) we attempted to push or pull forcibly the spindle of a screw through its corresponding nut, in a direct and straight line, instead of effecting the

the same object with far more ease and simplicity, by revolving the former upon and within the latter. I have now happened to be called to several cases of occipito-posterior positions, in which the forceps had been applied with the greatest adroitness and dexterity; where, subsequently, every allowable degree of force had been employed, but employed in vain, to pull forth the head in its original position, with the forehead directed anteriorly; and where I have succeeded, with a tithe of the power previously used, by adding to the requisite act of extraction a simultaneous act of rotation of the head, so as to turn the occiput anteriorly, and to the right, and the forehead posteriorly, and to the left.

Indeed, I sincerely believe, that such cases as those I have just spoken of, are not unfrequently regarded as unfit and improper cases for the forceps,—and that, as a consequence, the child's head is opened and broken down by embryulcia,—merely because the forceps have failed from the position of the head having been unattended to, or, if attended to, from the forceps not having been employed in a proper manner, in the attempts at delivery made with that instrument. An obstetric friend told me that some years since he received from nature a most instructive lesson upon this point. He had fixed a pair of curved forceps upon a head lying in an occipito-posterior position, and ineffectually pulled at it in that position, till he was afraid to pull more. He was resting for a pain or two, cogitating what step he should take next—and whether he should perforate the infant's head, or not—when a very strong uterine contraction came on. During the contraction, the handles of the forceps were wheeled round in his hand, and the head was expelled, with the occiput under the arch of the pubes, and the concavity of his forceps turned towards the concavity of the sacrum. Nature thus strongly preached to him how he should have acted in order to assist her.

Dr Smellie knew the propriety of rotating as well as extracting the head in these cases. He tells us, that in 1745 he applied the forceps in a case in which the large fontanelle was at “the left groin.” Under the efforts which he made at direct traction, and so as to bring the forehead out anteriorly, the instrument slipped off three times, one of the blades giving way. He was still (he continues,) “loth to destroy the child by opening the head,” or to apply a blunt hook, and “luckily thought” of trying the forceps again, and turning the forehead backwards into the hollow of the sacrum—and by this last plan he safely delivered the infant. “This method (he ingenuously adds,) succeeding so well, gave me great joy, and was the first hint, in consequence of which I deviated from the common method of pulling forcibly along, and fixing the forceps at random upon the head. My eyes were now opened to a new field of improvement,

on the method of using the forceps in this position, [the occipito-posterior] as well as in all others that happen when the head presents.”

Unfortunately, Smellie's observations on this point appear to have been, in general, completely overlooked by his various pupils and followers. Wallace Johnson, Denman, Hamilton, Ramsbotham, Davis, &c.—tell us to extract the head with the forehead directed anteriorly, and passing under the arch of the pubes. They seem all afraid that if we acted otherwise, and rotated (as I believe we should do)—the forehead backwards from the left foramen ovale to the left sacro-iliac synchondrosis, we would produce a violent and dangerous twisting of the neck of the infant. We have seen, however, that in 29 out of every 30 such cases, nature produces exactly this same rotation of the head in this same class of cases, and without any risk or danger whatever to the neck of the child. But in order that our mechanism should be equally safe with hers, we must imitate nature in the process as nearly as possible, and only turn, or attempt to turn, the head after it has *already* reached the pelvic floor—never when higher,—and only *during* a pain, when the trunk and head are compressed together by the uterine contraction into, as it were, one mass, so that the body readily follows the movements of the head. The highest authorities also in the Continental schools, seem to have similar fears regarding the rotation, and lay down the same plan of extracting the head in the position in which it is already placed, viz. with the occiput posteriorly. Even those obstetricians who know most perfectly the natural mechanism in such cases, totally disregard and deviate from that mechanism in their own instrumental procedures. Thus, Naegele himself advises us to bring out the forehead anteriorly, when we use the forceps in occipito-posterior positions of the head. But then, in explanation of this apparent inconsistency, we must remember that the different varieties of Levret's forceps, used by Naegele, and most other Continental practitioners, are so large and curved as not to enable us to rotate them and the head, after they are applied, without the most imminent hazard to the vaginal structures of the mother. It is in occipito-posterior positions—above all others—that we see the superior advantage of employing a *straight* pair of short forceps—such as those of Dr Denman or Dr Ziegler. They enable us to rotate the head easily and safely, as I can testify to you from sufficient experience. If we employed a *curved* pair in this position, and tried to turn the head with them, we would be obliged either to introduce them at first, or extract them at last, with their concavity, instead of their convexity looking backwards—and consequently with great and unnecessary risk of contusion and laceration of the soft structures of the mother, from the projecting ends and sides of the blades.

MIGHT THE VECTIS BE SUBSTITUTED FOR THE FORCEPS IN OCCIPITO-POSTERIOR POSITIONS REQUIRING INSTRUMENTAL AID ?

I put the question problematically, and must answer it problematically too, because I have no personal experience of the vectis. At the present day, when the vectis is scarcely used by a single practitioner, it does appear to us strange to be told, as we are by Dr Denman, that by many of those men who, before him, had successively enjoyed "the chief practice" in London, the vectis was preferred to the forceps, and that several of his most experienced and eminent cotemporaries were of the same opinion. Of late, I have sometimes thought that if useful at all, the vectis might be useful in occipito-posterior positions, when such cases happened, from any cause, to require instrumental assistance. In order that the rotation of the occiput forwards should be accomplished with adequate freedom, I have shown you that the head must be flexed upon the neck, in order that the impelling force sent from the uterus along the infant's spine, may act in a proper line upon the occipital region of the cranium. Sometimes, however, when the head is not sufficiently flexed, and the occiput and forehead are thus placed too much upon the same plane, (*when* they reach the floor of the pelvis), the momentum of the action of the uterus is received upon the middle or forepart of the head, and not upon the occiput. The mechanism of the labour thus comes to be perverted, and delay and danger may follow. In such a complication, three alternatives present themselves:—1. Rectification of the position, by depressing the occiput, or raising the forehead. 2. Rotation; and, 3d. Forcible extraction of the head. With the straight forceps we may fulfil the *two* last objects—rotation and traction—but with that instrument we have no power of affecting the first, or rectification.

On the other hand, the lever or vectis, introduced over the left mastoid or occipital region of the infant's head, would enable us to fulfil *all* the three indications, that is, rectifying the position, rotating the head, and probably applying any sufficient degree of further extractive force that might be required. In most cases, the rectification and rotation—one or both—are the only conditions that are required under such circumstances, the unassisted uterus readily finishing the expulsion, when the normal mechanism of the labour is so far restored. And Smellie, Lachapelle, and Montgomery, have all shown us that we may occasionally and completely effect these two first objects in such morbid cases, and when the head is at the same time transverse to the outlet, by raising and rotating the forehead with the fingers alone. If these fail, the vectis applied over and above the occiput would sometimes perhaps greatly and safely aid in the operation, the fingers being applied to the opposite temple or forehead; and we know that afterwards the fingers may be thus further made to serve as a kind of second

blade to the vectis, if we wished subsequently to use that instrument with the extractive action of the forceps. If the delay, therefore, were owing to the perversion in the mechanism which I have alluded to, the vectis might be occasionally of as great or greater use than the forceps. But if the delay were the result of simple inertia of the uterus, or of any other cause in which the flexion of the head was not interfered with, or the forehead not made to descend too low,—and when extraction and rotation were required *without* rectification, then I believe the forceps would certainly be the safer and preferable instrument. These remarks apply to the action of the *straight* forceps, as compared with the action of the lever, in occipito-posterior positions. But if we compare the *curved* forceps with the vectis, or with one blade of the straight forceps used as a vectis, in this class of cases, then the result, I believe, must be still strongly in favour of the lever. For while, with the curved forceps, more especially when the curve is great, or the instrument of a large form, it is impossible to do ought but simply extract. We may, on the contrary, with the vectis, successively or simultaneously, (as circumstances require), alike rectify, rotate, and extract. But, *above all*, it is necessary for you to remember, that it is rare—very rare, that you will be driven to apply any instrumental assistance in either occipito-posterior, or occipito-anterior positions of the head; for in the one class of positions, equally as in the other, nature seldom—very seldom indeed—so far fails as to require the direct aid and operative interference of art.

PART II.—REVIEWS.

The Practice of Surgery. By J. MILLER, F.R.S.E., F.R.C.S.E., Professor of Surgery in the University of Edinburgh, Surgeon to the Royal Infirmary, &c. Edinburgh, 1846. 12mo, pp. 688.

IN a former number of our Journal, (Vol. II. p. 47,) we briefly noticed the excellent manual of the “Principles of Surgery,” by Professor Miller, commending it as strongly as our limited space, at the time, admitted, as supplying the deficiencies of our existing manuals, and bringing up in that form, the *dissecta membra* of recent observations to the present advanced state of the surgical art. We gladly take advantage of the present publication to devote a little more space and leisure to the duty of bringing before our readers the peculiar merits of Professor Miller’s labours.

This work, with the preceding one, forms a complete text-book

of surgery, and has been undertaken by the author at the request of his pupils. Although, as we are modestly informed in the preface, it is not put forth in rivalry of the excellent works on practical surgery which already exist, we think we may take upon ourselves to say, that it will form a very successful and formidable rival to most of them. While it does not offer the same attractive illustrations, with which some of our recent text-books have been embellished, and while it will not, as indeed is not its design, set aside the more complete and elaborate works of reference which the profession is in possession of, we have no hesitation in stating that the two volumes form, together, a more complete text-book of surgery than any one that has been heretofore offered to the student.

Had Mr Miller appended to the several sections of these volumes a brief but select bibliography, or given, in foot notes, references to the best sources of information on the different subjects treated of in the text, the work before us would have formed not only an admirable text-book for the student, but a very complete book of reference for the general practitioner. We make this remark, not in disparagement of the work,—as the author probably omitted purposely such references, as not entering into the design of his undertaking,—but as evincing our sense of its completeness, when compared with the more scanty outline of general principles characteristic of most other surgical text-books.

The volume now before us, in many of the more important parts of it, is eminently practical. It contains not only accurate descriptions of the different diseases and accidents of which it treats, and the management proper to each, but descriptions of those complications and transitions which such affections are liable to present, and of the modifications of treatment thereby rendered necessary. The peculiar pleasure and profit which we derive from the perusal of monograph works on surgery or medicine, arises from the fact, that the author has devoted his special attention to a particular disease, and describes it in all its phases;—the description pleases and instructs us, because it is a graphic delineation of nature—and places the disease before us, as we meet with it in practice, with all its adjuncts and modifications. In systematic works on surgery and the practice of medicine, and more especially in works designed as manuals for the use of the student, diseases are carefully separated in general from their complications. They are isolated, and outlined, and by a process of analysis, so systematized, as to lose much of their truth as descriptions of what the student actually sees when he comes to observe nature for himself. They are, in fact, more adapted, as we fear they are not unfrequently only intended, for cramming the student with a set of answers to such questions as may be put to him by examining boards, than for instructing him in the true history and characters of diseases.

So far as it is possible to avoid such objections—inseparable to a certain extent from text-books and elementary works—we think that Professor Miller has, in many parts of these volumes, succeeded in a remarkable degree. Of the truth of these remarks, we think the first part of the work now before us, that devoted to injuries of the scalp, (Chap. II.), and cranium, (Chap. III.), affords a very good illustration, and a favourable specimen at the same time, of the author's style and execution.

After describing the causes of concussion of the brain, and the mode in which that organ is affected, Mr Miller goes on to say—“ This vibration of the brain, with disturbance of its circulation, and perhaps temporary condensation of its substance, is attended with symptoms of marked disorder in the organ's functions. Sensation, mental power, and voluntary motion are more or less disturbed; and a depressing effect is exerted on the general circulation. The patient, stunned, and more or less insensible, lies motionless, pale, and cold. Insensibility, however, is found not to be complete except in extreme cases; by loud calling, monosyllabic acknowledgment may be obtained; by pinching the skin, or otherwise causing pain, some evidence is usually given of pain being felt, and an attempt is made by the patient to move the part from the supposed source of injury. Power of motion is depressed and latent, not destroyed; and the voluntary muscles, though relaxed, are not truly paralyzed. Respiration is feeble, slow, and sighing. The pulse is rapid, small, and fluttering; and especially weak at the extremities. The pupils are usually contracted, and insensible to light; but their state is variable; sometimes one is contracted, while the other is either natural or dilated. Squinting is not uncommon. Vomiting is often present; rather of favourable portent than otherwise,—premonitory of recovery from this state of depression.

“ The patient becomes more easily aroused; and responds more distinctly to interrogation, either by words or by gesture. Respiration becomes more full and composed. The pulse is less frequent, and more distinct; but, at this time, the circulation is peculiarly irritable, the mere effort of change of posture usually inducing a very marked increase in the frequency of the heart's action. Pain now is more fully felt by the patient; and is referred to the head. Vomiting may continue. The returning mental power is apt to prove errant and deceptive for a time.

“ Not unfrequently, a state resembling somnambulism continues for some hours during the transition to recovery. Motion, sensation, some of the special senses, and much of the mental powers seem to be restored, yet the patient remains as if in a deep sleep. He may rise, wash, shave, dress, perambulate; all the while unconscious.

“ But reaction seldom stops at mere restoration of the normal state; the boundary of health is crossed, in an opposite direction.

Reaction proves excessive; and symptoms are evinced of an inflammatory process begun in the injured part—the brain, its membranes, or both. The pulse becomes full and hard; the skin hot and dry; the face flushed; the eyes bloodshot; the pupils more contracted and insensible to light. Pain, great and increasing, is complained of in the head; restlessness increases; the mind again loses its healthful balance; delirium supervenes; and so the symptoms advance. Resolution may occur. Or effusion accumulates; coma is induced; and the issue may be fatal.

“Practically, concussion may be divided into three stages. 1. Depression; marked by insensibility, and feeble circulation. This may be intense and enduring; proving fatal, and that speedily—the patient quite unconscious throughout. 2. Reaction. The symptoms of depression pass off; circulation is restored; and cerebral function returns. In the slighter examples of injury, often no further progress is made untowardly. Reaction does not prove excessive. The head is confused and giddy for a day or two; but the pulse remains quiet; and, within a few days more, all has passed off in safety. 3. Excessive reaction. The inflammatory symptoms set in, and a state opposite to that of depression is established; all is excitement and perversion, both in the general circulation, and in the functions of the brain; and life is brought into imminent jeopardy, by phrenitis, or meningitis, and by proportionate inflammatory fever.”—Pp. 16, 17.

The *treatment* of concussion in its various stages and degrees is laid down with much judgment; and our author then proceeds to the subject of compression of the brain. After pointing out the mode in which this may be effected—by depressed fracture, extravasation of blood, inflammatory exudation and suppuration, and also the fact of similar symptoms being produced by alcohol and other poisons, and by disorganization of the brain by inflammatory action, the symptoms are described in the following terms:—

“The most characteristic symptoms are to be found affecting the respiration and the pulse. Breathing is slow, labouring, and loudly stertorous; in concussion it was gentle and sighing. A peculiar whiffing, by the mouth, is not unfrequent, during expiration—as is observed in smoking, or in the ordinary repose of heavy sleepers; it is a symptom of untoward portent. The pulse is distinct and full, usually slow, but often at first not much altered as to frequency—not unfrequently intermittent; in concussion it was from the first rapid, low, and feeble, perhaps wholly imperceptible. Loss of consciousness is more complete than in concussion; the patient cannot be roused by any movement or noise. Loss of sensation is more complete; he may be pinched, or burnt, without in any way evincing perception of pain. Special sense is wholly dormant; he neither sees, nor hears, nor smells;

at least no result follows the application of stimuli to the eye, ear, or nose. Power of motion is wholly gone; the voluntary muscles are relaxed, flabby, and powerless; the limbs lie loose and incapable of motion. The eye is fixed: its pupils are dilated, and insensible to light. The skin is of a normal temperature, or perhaps even warmer; not unfrequently wet with perspiration; in concussion, it was cold, pale, and shrunken. The sphincters are relaxed; fæces pass involuntarily. Expulsive muscles are similarly affected; the urine is, in consequence, retained—or, from paralysis of the sphincter as well, the urine may pass off involuntarily, not in a stream, but insensibly by drops.

“Such is the general character of the symptoms peculiar to compression; varying, of course, in degree, according to the amount or nature of the injury sustained. They are of immediate or secondary accession, according to the cause; immediate, when the consequence of sudden hemorrhage, depressed bone, or impacted foreign body; secondary, when the result of tardy extravasation, suppuration, or inflammatory exudation. However originating, they are, after a time, masked and modified by the results of the inflammatory process which seldom fails to become established in the injured part.

“But the brain has the power of recovering from the effects of pressure to a certain extent, even although the agent of compression undergo no alteration; the organ seeming to accommodate itself gradually to its change of circumstances. Thus, in depressed fracture, symptoms of compression may be at first marked and even urgent; and yet may pass off in a day or two, without any elevation of the depressed portion of bone. This being borne in mind, we can readily understand, how, by the time that the inflammatory process has begun, the symptoms of compression, at first marked, may have, in a great measure passed away; and how the case, consequently, may only present the ordinary symptoms of urgent inflammatory action in the brain and its membranes. This is something more than mere masking of compression, by the inflammatory process; it is supersedence. Certain functions of the brain are plainly re-established, though perverted; convulsive movements of the limbs occur; and delirium may supervene.”—Pp. 27, 28.

The symptoms of the two affections are afterwards ably contrasted, and the whole subject is rendered very complete by the successive description of extravasations of blood, external and internal, to the dura-mater, compression from the formation of pus, and from depressed fractures, whether punctured or otherwise, and by judicious directions for the treatment proper to each affection, and the circumstances justifying the operation of trephining.

With reference to trephining, the conclusions deduced from the pathology and history of compression, are as follows:—

“It is had recourse to, 1. On account of punctured fracture,

as soon as possible ; whether head symptoms exist or not ; the object being to remove splintered fragments of the inner table. 2. On account of depressed fracture, accompanied with urgent symptoms of compression ; when elevation of the depressed portion cannot otherwise be effected. 3. On account of dura-matral abscess, when local and constitutional symptoms sufficiently concur in pointing out the existence and site of this morbid state ; the object being to effect external evacuation of the pus. 4. On account of urgent compression caused by extravasated blood ; only when the circumstances are such as to indicate the seat of the extravasation, and when that happens to be accessible."—Pp. 55, 56.

In the main, we entirely agree with Mr Miller in his conclusions ; yet with reference to the second, although we must admit that the general verdict of the profession would be against us, and would coincide with that just cited, and with the rule laid down by Samuel Cooper, that " there can be only one genuine reason for trepanning, viz. " to remove such pressure from the surface of the brain as gives rise to *existing* bad symptoms," we are inclined to advocate some modification of the rule. We have seen cases of compression from depression of a portion of the cranium in which there were no bad symptoms, and yet the patient was suddenly carried off by convulsions. We know of many cases in which, although no symptoms of compression were produced at the time, epileptic convulsions supervened and continued to occur with increased frequency and severity. And cases are familiar to every one in which such injuries apparently recovered from, have yet left behind them a peculiar irritability of the nervous system predisposing to insane excitement from comparatively trivial causes. In such cases, had the depressed portion of bone been elevated immediately after the accident, life might have been saved, or those serious consequences which occasionally ensue and remain permanent, might have been prevented. We are, on those grounds, disposed to recommend a modification of the present surgical rule in such cases, and to contend that wherever there is distinct evidence of actual depression of the cranium to any considerable extent, elevation should be attempted, even in the absence of existing bad symptoms. If this is neglected, sudden death may ensue, or inflammation of the membranes, leading to fatal consequences, or to a state of the nervous system, not much more to be dreaded than death itself.

After a brief chapter devoted to diseases of the scalp and cranium, we have the subject of ophthalmology treated of at considerable length. This chapter contains a very excellent summary of the diseases of the eye, and its appendages. In this chapter we have a few things to find fault with, although we think that, on the whole, it is extremely well executed. The delineations of Scarpa's needle,—the curved needle, used for depression of the lens in cataract, is too large to our taste. We think the smaller

the instrument, the less danger there is of scleratitis, and other disagreeable effects occasionally resulting from the operation. The knife for the operation of extraction, is, on the other hand, we think, too small. It ought to be broader in the blade, or to increase more rapidly in breadth from the point backwards, to ensure the ready division of the cornea during the operation.

In the section devoted to purulent ophthalmia, we think that the severity of that form of it which is met with in infants is not sufficiently indicated. Loss of sight is not only apt to result from "pearly opacity of the cornea," but ulceration and sloughing, followed by escape of the humours, or prolapse of the iris, and hopeless destruction of the eye, are very common effects in the neglected cases so frequently met with in practice. The disease requires all the activity of treatment recommended for the more severe forms of this disease in the adult,—scarification of the eyelids, and the application of the nitrate of silver itself, or strong solutions of it, in order to check its rapid and destructive progress.

Pustular ophthalmia is altogether omitted, and that most frequent of all diseases of the eyes, described by Dr Mackenzie as phlyctænular ophthalmia, and by most others included under the strumous affections of the cornea and conjunctiva, is hardly indicated in the description of the latter affections. The value of quinine and of other tonics in the treatment of the strumous affections referred to, deserved also, we think, to have been specially insisted on.

The length of our quotations, which we have purposely confined to one subject, in order to afford a better specimen of the work, and the criticism we have indulged in on an important subject, have nearly exhausted our limits, and preclude us from following Mr Miller through the other portions of the work. We must, therefore, content ourselves with repeating our general impression, from a careful inspection of the whole, namely, that, for a text-book for the use of the students, these volumes are likely to prove highly useful and popular;—that as such, they are valuable for their completeness, while to the practitioner, they will prove extremely serviceable as a succinct and judicious book of reference.

Abstract of "Researches on Magnetism and on certain allied Subjects," including a supposed new Imponderable. By BARON VON REICHENBACH. Translated and abridged from the German by WILLIAM GREGORY, M.D., F.R.S.E., Professor of Chemistry. London, 1846. 8vo, pp. 112.

Sober minded men cannot fail to be startled by such a title page as this. That an experimental chemist, of Reichenbach's

standing, should announce the discovery of a new imponderable,—should have devoted much time and labour to researches into its nature, and have found it to be not only a force universally diffused through all bodies, but more especially in crystals, and that it is generated by chemical action, light, heat, friction, and electricity,—but that it is the agent in animal magnetism and the real *bona fide* ghost of all ghost-seers, may well excite surprise;—a surprise which tends to curious interest, when we find his researches translated and reported by one of our own “canny” countrymen—an accomplished chemist and professor of that science. With such mingled feelings of wonder and curiosity have we perused this abstract; and while we feel, in some respects, gratified to find experimental inquiries, in the hands of careful observers, extending themselves into the domain of the mysterious, and (as yet) supernatural phenomena of nature, we cannot but express a fear that there is a slight taint of that credulity, which has hitherto characterised all such inquiries, to be found in the work before us. That there are many phenomena in nature,—and more particularly in human nature,—as yet mysterious and incapable of reference to known laws, and too vaguely referred in general to the influence of imagination, diseased states of the nervous system, &c., we readily admit, and we are glad to find that such phenomena are become the subject of experimental inquiries, and that the researches of Reichenbach are to be reported on by such an observer as Berzelius. Such inquiries must lead to some good—a good not to be despised, even should it be a negative one,—the discovery of a great deal in such observations which must be referred to the ingenuity of the observer’s mind, and of a very little that can be referred, when properly examined, to the known laws of matter.

Meanwhile, until such observations shall have been subjected to experiment and repetition, we may briefly inform our readers of the leading facts conceived by Baron Von Reichenbach to have been discovered. In doing so, we may perhaps betray a little natural incredulity; and, although it may be useless to deny assertions which we are without the means of disproving, we trust we may be pardoned for pointing out what in the judgment of our readers may probably, and justly, weaken their confidence in the whole,—the incredibility and inconsistency of a few of the statements.

Baron Von Reichenbach having observed that magnets drawn over the surface of the body, produce, in some individuals, especially in females, and most of all in hysterical females, a somewhat unpleasant sensation, goes on to mention instances in which very sensitive individuals, mostly somnambules, perceived flames or luminous appearances shooting from magnets in the dark.

He afterwards discovered that cataleptic patients were attracted by the magnet, that they could distinguish any body, such, *e. g.*

as water, (according to a common observation of the mesmerists,) over which a magnet had been drawn. He further found that crystals exercise a similar power over the bodies of cataleptic patients, and that they also are luminous to persons thus sensitive. And, believing, from various experiments, that crystals contain no proper magnetic force, he concludes that this power of attraction and luminous appearance affords proof the existence of a new force different from, although analagous to magnetism. It was found that this new force was polarized in crystals, and that light, visible to the preternaturally sensitive, is sent forth at the poles.

Proceeding with his observations, Baron Von Reichenbach found that his sensitive patients were remarkably affected by terrestrial magnetism, so much so, that if their position in bed did not correspond with the magnetic meridian, they suffered all sorts of disagreeable sensations, shiverings, cramps, nausea, headache, and sleepiness. Most of them slept instinctively with their heads and feet directed north and south; and, when placed in beds which lay east and west, rest and comfort were at an end!

These patients "reclected how painful and disagreeable it had always been for them to remain in church, although they could never tell why, and how often they fainted and were carried out." This is now fully explained in the author's opinion by the fact of all churches in Catholic countries being built from east to west. We hail this discovery as one which must be a great comfort to those clergymen who have hitherto addressed themselves to a sleeping flock:—they will doubtless find the true explanation of the frailty of their people in the fact of their sitting with their bodies in the magnetic meridian—directed due north. We recommend them, whatever their sentiments on the subject of Popery and Puseyism may be, at least to keep their congregations awake, and make them do penance, by giving an orthodox direction to their bodies.

The author next found that this new power resided in the human body, and was the cause of the phenomena of animal magnetism. His patients were magnetized alike by magnets, crystals, and the human hand.

In reference to these observations, the translator finds a remarkable confirmation of their truth in the experiments of Mr Smith, which have been generally regarded as having afforded so complete an exposure of the absurdity of the once celebrated metallic tractors of Perkins. Mr Smith found that the same effects as those ascribed to these tractors, were produced on a number of individuals in operating with tractors which, unknown to the patient, were made of *wood*, and referred the whole effects consequently to the *imagination*. It now appears that the cures produced by the wooden tractors were genuine, and to be attributed to the magnetic influence of the operator's *hands*. We cannot help

remarking, however, that in the cases referred to in Dr Haygarth's pamphlet, the *symptoms* produced by the use of these tractors were very different from those now generally produced by magnetism, or observed in the experiments of the Baron. The passes produced not the magnetic sleep, now so familiar to us, but severe *pain*,—so acute as to cause perspiration and shivering in the patients, and considerable dread on the part of the spectators.

Chemical action is also shown to be a source of this new influence, and luminous appearances were observed, by sensitive persons, to accompany even simple solutions of sugar. In the same way actions which go on in the living body, such as digestion, are shown to generate this force. Hence, we presume, the explanation of mesmeric clairvoyantes reading with the pits of their stomachs. The chymification gave them light to read by.

In the same manner, various ghost stories are explained by the Baron—the luminous appearances taken for the spirits of the departed, being nothing but the perception by sensitive beings of this phenomenon, generated by the chemical action which accompanies putrefaction. Of this, an instance is cited, in which the exhumation of some bones, and the removal of some lime with which they had been covered, dissipated a female sprite which had been nightly seen by a young clergyman for a considerable time. Mademoiselle Reichel, one of the author's sensitive subjects, had the courage to visit a churchyard to confirm this hypothesis, and there she saw shining vapours over all the the recent graves,—the light being larger and more vivid on the newest graves, and over the oldest ones it could not be perceived at all.

Our limits compel us to conclude this notice, which we shall do with a quotation referring to the variations in the amount of this new force existing in different parts of the body, which is certainly the choicest application of chemistry to physiology which we know of:—

“ The mouth, with the tongue, is strongly negative, and cool, and appears to enjoy a large share of the influence. When the mouth is approached to any object, even without contact, the sensitive patients find that object as strongly charged as by contact with a magnet, a large crystal, the sun's rays, or the author's right hand.

“ As it appears that the lips are a kind of focus of concentration for the new force, the author hazards the conjecture that the true theory of kissing with the lips may depend on this circumstance. He states that the flames depicted on the lover's lips by poets, do really and truly burn there for those who can perceive them.”—P. 102.—We would say, “ for those who can *conceive* them.”

PART III.—PERISCOPE.

PATHOLOGY.

We have received a very able and instructive probationary essay, by Mr James W. Adams of Glasgow, to whom this Journal has been indebted for several excellent papers. This essay is on Tubercle of the Brain in Children, and is printed on the occasion of his admission into the Faculty of Physicians and Surgeons of Glasgow. We extract the following passages from the author's account of the symptoms of this malady, from which our readers may judge of the ability displayed throughout the essay.

“ Their severity, it may be first remarked, is not in proportion to the amount of tuberculous deposit, nor does the existence of tubercle necessarily infer the appearance of symptoms to indicate its presence. For tubercles may remain latent in the brain for a very considerable period, and give rise to no suspicion of cerebral disorder. This is proved by the fact, that tubercles are sometimes found in the brains of children who have died of other diseases, as phthisis or measles. But such instances are uncommon, and any disturbance of the balance of health is exceedingly apt to bring into action, the irritation and subsequent fatal train of symptoms of which tubercle is the predisposing cause.

“ In almost every case where the symptoms have been noted with any degree of accuracy, headache was present both at the outset of the complaint, and during its course, and it always formed an important feature of each case. The pain is felt in various degrees of intensity, but is usually described as violent and of a tearing or lancinating character. It comes on in sudden paroxysms, which have an intermitting tendency, although it is often more or less present during the whole progress of the case. Sometimes it is the only symptom for a considerable period, and gradually becomes associated with the others. Sometimes it disappears entirely for days, or even weeks, as in Inglis's case, (p. 10), and returns towards the termination of the disease. The seat of pain varies, but it is chiefly in the forehead. Sometimes it is felt at the back of the head, the temples, around the ears, or at the base of the brain. Its situation corresponds not unfrequently with the existence or greater development of the disease near that part. The headache is often associated with vomiting, which symptom does not appear to be altogether dependant on mere sympathetic irritation, for Gerhard¹ states, that in about three-fourths of the cases observed by him, there was ‘ found unequivocal lesions of the mucous membrane of the stomach.’ And it is a fact sufficiently familiar, that a congested or inflamed condition of the stomach frequently co-exists with cerebral diseases.

“ The headache is greatly aggravated by vomiting, or by any sudden or irregular movements of the head; and this fact is considered important by some. Dr Romberg² leans much weight on it as aiding materially to form our diagnosis. He attributes this increase of pain to the circumstance, that ‘ in each inspiration, when it is strong and prolonged, the brain is elevated, the cerebellum is then pressed against the tentorium, and the brain against the skull;’ and he goes on to observe, that ‘ cries, the accession of cough and vomiting, have the same influence.’ It is also worthy of being kept in mind, that the headaches of children are for the most part sympathetic, and are commonly relieved by sickness and vomiting, more especially if, at the same time, the bowels are properly emptied by an active purgative.

¹ Op. cit.² Wochenschrift für die ges. Heilk; No. 3, 1834.

“ To the presence, and especially to the character of headache, I am therefore disposed to attach considerable importance as constituting a trustworthy symptom.

“ Convulsions are observed next in order of frequency. They are often accompanied, or quickly followed by nervous tremors, contractions or rigidity of certain muscles, weakness of the limbs, almost amounting to paralysis, strabismus, and other lesions of the motor powers. They commonly occur more than once, but several days, or even months may elapse before their repetition. Their duration varies from a few minutes to several hours. M. Gendrin¹ has sought to establish a connection between the seat of the convulsions and the part of the brain where the disease exists. But an attentive consideration of the facts supposed to favour this view has satisfied me that the correspondence is not so uniform as to justify a practical inference; for sometimes, where the convulsions are general, tubercles are found only on one side of the brain, while unilateral convulsions are often associated with tubercles scattered throughout both sides of the brain.

“ It is affirmed, with certain reservations, by Drs Rilliet and Barthez, that in proportion to the frequency and violence of the convulsion is the quantity of serum found in the ventricles of the brain; and I think that the facts are sufficient to bear them fully out in this opinion.

“ Contractions or increased rigidity of the muscles is most frequent in the upper extremities, and generally of one side, although not confined exclusively to either. M. Leveillé² has observed, that the posterior muscles of the neck are oftenest affected. This condition is generally persistent, but of varying intensity, being sometimes so slight as to be readily mistaken for voluntary resistance of the muscles, caused by giving annoyance to the child. It is therefore necessary to make a careful comparison of both sides of the body. Sometimes, however, the contraction of the muscles is so marked that the limbs remain in a state of flexion, which can only be overcome by a strong effort. Gerhard remarks, that in five cases out of twelve, in which there was little or none of muscular contractions, the quantity of serosity which was found in the cranium was very great; and he infers, that a great secretion of serum coincides with the absence of muscular contractions observed in the large majority of cases.

“ The intelligence of the child is seldom affected in a very marked degree, and many cases proceed to within a few days or even hours of their termination, and the powers of the mind are little or at all obscured. A change of temper or disposition is, however, of very common occurrence, and the patient is observed to become listless, melancholy, and petulant, although as an early symptom this is not so remarkable. Change of temper is also observed in acute hydrocephalus, but there is a difference in degree, being more decided in the latter, and oftener accompanied with high delirium or incoherence, a condition which, when present in tubercle, is seldom observed until towards the termination of the case.

“ According to M. Bouillaud, who is followed in this by several observers, a disturbance or loss of the faculty of speech is influenced, in a special manner, by tumours existing in the anterior lobes of the brain; and he refers to cases in corroboration. So far as this goes, there may be adduced cases to support the system of localisation, but others could as certainly be quoted directly at variance, and as strongly disproving the supposed connection.

“ The senses, especially, that of hearing, are at first more acute, but they become obtuse as the disease advances. Occasionally there is loss of vision, independent of

¹ Recherches sur les tubercles, du cerebrum, et de la moelle epin; Annales du cercle medicale; fevrier 1823. ² Rech. sur les tuberc, du cerv. Thesè, 1824.

any evidence of effusion upon the brain—amaurosis in fact, more or less complete. The pupils are often dilated, especially towards the end, and strabismus at some period exists in most cases.

“ The pulse varies greatly, so much so, that I am at a loss to state what is its usual condition. According to my own experience, it is natural, or even abnormally slow at first, and gradually increases in frequency as the disease advances, so that from 70 or 90, it reaches as high as 140 or 160 a few days preceding death.

“ The breathing is commonly slow and irregular, accompanied with sighs, and during sleep with moans ; towards the termination it becomes frequent and stertorous.

“ A constipated state of the bowels, requiring the use of purgatives, is very common, but towards the close the dejections are often passed involuntarily.

“ The appearance of the countenance is worthy of note. Dr Gerhard inform us ‘ it is so peculiar, that the sister of one of the wards, at the Children’s Hospital, was accustomed to distinguish the disease with much accuracy, from the mere aspect of the child. The face is pale, with occasional flushes of redness on one or both cheeks ; mouth frequently a little deviated ; lips compressed, or half open ; the eyelids are almost invariably closed, or a little separated ; nostrils widely dilated. But the most distinctive character is the peculiar listless expression, with occasional grimaces and movements of the lips, as if tasting an article of food ; this character does not admit of description, it must be seen to be appreciated.’ ”—Pp. 21—26.

SURGERY.

“ Every practitioner knows that the reduction of luxations of the large joints cannot easily be accomplished with the steady, equable, and continued traction furnished by the careful and patient use of the pulleys. These mechanical appliances often cannot be obtained when needed, in the treatment of such accidents ; and the power resorted to then, is that which may be furnished by awkward and unskilful assistants. Under such circumstances, the efforts at reduction are protracted, unsteady, and, in most instances, unsuccessful ; great force is applied by sudden starts and irregular jerks, which, with bleeding, warm baths, and sedative medicines, exhaust the vital energies of the patient, probably without reducing the luxation ; and cases are not wanting in which serious additional injury has been inflicted upon the parts concerned, by such procedures.

“ The power furnished by *twisted rope* answers every indication, requiring extensive power, as perfectly as the pulleys, and is indeed preferable on account of its simplicity and availability in every possible situation, enabling the surgeon even to dispense with assistance, should that be necessary. The credit of first using this power in such cases, is due to my friend P. Fahnestock, M.D., of Pittsburgh, Pa. He was led to its trial by necessity, and the result was so satisfactory that he has resorted to it in every case which he has met with since.

“ The mode of application is as follows :—Place the patient and adjust the extending and counter-extending bands as for the pulleys ; then procure an ordinary ‘ bed cord ’ or ‘ wash line,’ tie the ends together, and again double it upon itself ; then pass it through the extending tapes or towel, doubling the whole once more, and fasten the distal end, consisting of four loops of rope, to a window sill, door sill or staple, so that the ropes are drawn moderately tight ; finally, pass a stick through the centre of the double rope, dividing the strands equally by it ; then, by revolving the stick as an axis or double lever, the power is produced, precisely as it should be in such cases, viz :—

slowly, steadily and continuously, which, with the aid furnished by the surgeon to the immediate seat of lesion, and to the system in general, cannot fail to conduct the case to a happy issue."—GILBERT, in Amer. Jour. Med. Science.

PART IV.—MEDICAL MEMORANDA.

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY.

FOURTH MEETING.—*Wednesday, 7th January 1846.*—DR GAIRDNER, President, in the Chair.

OBSTRUCTIVE DISEASE OF THE MITRAL VALVE. By DR JOHN SCOTT.—A few observations were made on the general and particular symptoms. A case was detailed of a young lady, who had, two years previously, been affected with chorea, and who, when first seen, exhibited symptoms of general fever, (remittent in its progress), accompanied by severe pains in the left hypochondrium, alternating with acute pain in the head, and delirium, a rapid and sharp pulse, great general agitation, and when the febrile paroxysm was at its height, with a loud bruit obscuring the sounds of the heart. In a state of repose, there was no bruit, but a tumultuous vibrating feeling of the heart to the hand, with sharp clear sounds. The disease terminated in a kind of asphyxia. The disease was accompanied by diarrhoea, which lasted nearly three weeks. On dissection, a warty and fleshy excrescence was found, arising from one-half of the mitral valve. No marks of endocarditis were present. A drawing and preparation were exhibited.

SOFTENING OF THE HEART. By DR JOHN SCOTT.—Dr Scott alluded to a case, in which the principal signs were dyspnoea or undue exertion, a soft irregular pulse, and the apex of the heart pulsating beneath the lower part of the sternum. The patient's general health was good, with the exception of great liability to bronchitis, which was easily manageable by proper care. This state produced great aggravation of the signs. The patient died from having neglected one of these attacks. Dr S. considered this as one of the cases which due care and attention to diet render amenable to treatment, while neglect of rules was certain of leading to a fatal result. The heart was large and soft, and tore on being removed from the body. Dr Scott had several cases of the same kind under treatment, where favourable results had been obtained, and where this state of the heart in all probability existed.

APOPLEXY CONNECTED WITH OBSTRUCTION IN THE VEINS AND SINUSES OF THE BRAIN. By DR JOHN SCOTT.—A young lady was seized with paralysis of the left side of the body, and with coma. She died in thirty-six hours. In the right hemisphere of the brain a clot of considerable size was discovered, surrounded by broken down cerebral substance. From this a large vein, filled with black and firmly coagulated blood, was traced into the longitudinal sinus. The sinus itself, as well as the lateral sinuses, were filled with firm clots, partly of blood and partly of lymph. These Dr S. considered as not of recent formation, and to have been the cause of the rupture of the vessels of the brain. The preparation of the vessel was exhibited.

He had seen several cases of the same kind in young subjects; and wished to draw a contrast between such cases and those arising from diseased arteries at a more advanced age.

THYROID, THYMUS, AND SUPRA-RENAL BODIES. By JOHN GOODSIR, Esq.—Mr J. Goodsir stated, that he had observed the thyroid, thymus, and supra-renal bodies to consist, at an early period of embryotic existence, of two long continuous masses of blastema, extending over on each side of the spine, from the anterior extremity of the Wolfian bodies to the base of the cranium. These two bodies are the last portions of the blastoderma, which become included by the umbilical constriction. The posterior part of each mass becomes converted into the supra-renal body around the omphalo-mesenteric vessels, the middle portion becomes the thymus around the cardinal veins and sinus of Cuvier, whilst the anterior constitutes the thyroid body, around the anastomosing branches of the first and second bronchial vascular arches.

BLACK PHTHISIS. By DR MAKELLAR.

Dr Makellar said that carbon is inhaled, and found in the lungs and in the bronchial glands of others than coal-miners. He adduced the case of a chimney-sweep, whose chest he had an opportunity of examining after death, where the bronchial glands were found enormously enlarged from the impaction of carbon, produced by the inhalation of soot. He had lately seen several cases where carbonaceous sputum was present, amongst iron-moulders and founders who had been subjected for a length of time, during their labour, to an atmosphere charged with charcoal and smoke. In connection with the above subject, a case of melanosis was also reported. The black deposit had much the appearance of the foreign matter found in the pulmonary organs of the coal-miner; and, with the view of ascertaining if there existed any analogy in the component part, the enlarged bronchial glands and melanotic matter were submitted to chemical analysis, with the following results:—The bronchial and lymphatic glandular structure of the chimney-sweep were found, after being boiled in concentrated nitric acid, to contain a large proportion of carbon, while the melanotic cyst, under the same process, did not leave a vestige of colouring-matter—evidently proving the dissimilitude between these substances; the first, that of the chimney-sweep, showing the existence of foreign matter; the second, melanosis, composed of the constituent elements of the blood.

From the above inquiry, Dr Makellar felt himself at liberty to maintain that the bronchial glands, in individuals subjected to a smoky atmosphere, do invariably contain black matter, which has at some period been inhaled.

The microscopic examination showed the carbon most distinct in a molecular form.

FIFTH MEETING.—*Wednesday, 4th February 1846.*—Dr GAIRDNER, President, in the Chair.

Extraction of a Foreign Body from the Cavity of the Uterus. By Dr IMLACH of Sittingbourne, Kent, (communicated by PROFESSOR SIMPSON.)—This communication appeared entire in our March number.

Ligature of the Subclavian Artery on account of Hemorrhage from a wound of the Axillary Artery.—By Dr RICHARD MACKENZIE—This communication appeared entire in our March number.

The Secretary read the following letter addressed to the President, by Mr Syme:—

“SIR,—Having been informed that the Professor of Midwifery, at a late meeting of the Medico-Chirurgical Society, represented one of the cases in which I performed amputation at the knee as having proved unsatisfactory in its result, from exfoliation of the bone, and as calculated to deter from adopting the operation, I desired my clerk in the hospital, Dr Cameron, to write to the patient, and now beg that you will have the good-

ness to read the following extract from her reply, which is altered in no respect, except as to the orthography:—

“ *Fettercairn, 24th January 1846.*”

“ I received your note of the 18th instant, wishing me to write you whether it be true or not that there were any pieces of small bone came out of my leg. I am very sorry to hear that such false reports should be given or received by any one, for there never was any small bone, or part of bones, came from my thigh after my leg was cut off. And I am happy to say that my health has been improving ever since I lost my leg, and the stump is quite whole.

(Signed) “ JEAN MARSHALL.”

“ I have performed amputation at the knee four times, and never met with either death of the patient, or exfoliation of the bone, to lessen the frequency of which results from the ordinary mode of proceeding, the Society may recollect the operation was originally recommended to their attention. I believe that it may be employed with advantage in the practice of surgery, and consider it my duty to prevent the Society from being prejudiced against it by erroneous statements. I send a patient who has been using his wooden leg for two months, that the Society may form their own judgment of the stump, which is afforded by amputation at the knee. (The patient was exhibited.)

“ I further beg to call your attention to the following statement by the Professor of Midwifery, which has been published in the authorized account of the proceedings of the Society at their meeting on the 17th December last. ‘ In the First Number of Dr Cormack’s Journal, eleven cases of ligature of the crural artery for popliteal aneurism, are adverted to as having, within a limited period, occurred in Edinburgh. It is well known, that in five of these eleven cases, the operation was followed, sooner or later, by a fatal result.’ Now, as the author of the paper alluded to, I beg to say that the fatal case did not occur in my practice, and that, as it is stated in the paper, only three of the eleven patients died from the effects of the operation, all the others having survived it, at least six months.—I have the honour to be, &c. “ JAMES SYME.”

“ THE PRESIDENT OF THE MEDICO-CHIRURGICAL SOCIETY.”

SIXTH MEETING.—*Wednesday, 4th March.*—DR GAIRDNER, President, in the Chair.

Before Public Business commenced, the following letter from Professor Simpson, in reply to Mr Syme’s printed above was read:—

To the President of the Medico-Chirurgical Society,

Sir,—A letter from Mr Syme to you was read at the last, or February Meeting of the Medico-Chirurgical Society.

In that letter Mr Syme avers, that when the subject of ovariectomy was discussed at one of the December meetings of the Society, I offered, in the course of the debate, erroneous statements on two points, in reference to surgical observations previously published by him.

Not having been present at the last meeting of the Society, when Mr Syme’s letter was read, I hope you will permit me to state the grounds on which I made the incidental statements of which Mr Syme complains.

First of all, however, allow me to recal to your recollection, that the tenor of the oral observations which I offered to the Society, on the occasion referred to by Mr Syme, amounted to this, that all, or almost all the objections usually urged against ovariectomy—could be urged with equal force and truth against most other capital operations for chronic diseased states.

This explanation is necessary, in order that you may understand how, in discussing a number of surgical operations and statistics, I was led in the two following instances to refer, though certainly never by name, to cases reported by Mr Syme.

1. Dr Cormack argued against ovariectomy on the ground that the records of the favourable cases of the operation, had been ushered into the world with premature haste, and before their ultimate success and effects could be known. I answered that it was an unfortunate argument for Dr Cormack to employ, seeing that in the very same number of his Journal, in which he had previously taken occasion to state this objection against ovariectomy, he had admitted among his original contributions, the description of a case intended to illustrate the advantages of a new mode of performing one of the most formidable and fatal operations in surgery,—namely amputation of the thigh;—and yet the report of this case of this new operation was not carried down beyond the 14th day. As an additional illustration of the premature manner in which capital surgical operations were sometimes reported, I further stated that a friend of mine whom I named to the Society, and who at one time thought of adopting this new variety of amputation in a patient under his care, was deterred by the unpromising state in which he learned the limb or stump (of Janet Marshall), Mr Syme's patient, actually was two or three months after the amputation was performed, and consequently nearly as long after the report of the case, as far as it has been hitherto published, was quite closed. The limb in Marshall's case was amputated early in March. By the time I speak of, namely in June or July, she had been removed to private lodgings, at Bruntsfield Links, and as I and others were informed, was threatened with, if not suffering from some exfoliations. The patient's own statement is sufficient to show, that no portions of bone did separate. Pus, however, collected in greater or less quantity in the course of the remaining portion of the limb, and required to be evacuated by Dr Cameron. To what extent abscesses were thus formed and opened, and how much the patient was debilitated by them will no doubt fully appear, when a continued and more complete report of the case is published, as we have every reason to believe it will be by Mr Syme. In the report already given by him in the Monthly Journal, the case is described as calculated "to remove any doubt as to the safety of amputating at the knee," and the convalescence is described as having gone on, (to use Mr Syme's own words) without any local or constitutional disturbance. Subsequently, however, the local or constitutional state of the patient continued such, that she was not in a state to be sent home for five or six long months after the operation was performed. And, assuredly, assuming the line of argument which I did, a case with such a history was one which I was fully justified in alluding to, in reply to the analagous reasoning of Dr Cormack, against ovariectomy.

2. In answer to some of the allegations about the common operation for aneurism not being dangerous, I remarked *inter alia* that in the First Number of Dr Cormack's Journal, 11 cases of ligature of the femoral artery for popliteal aneurism were adverted to as having within a limited period occurred in Edinburgh, and that in 5 of these cases the operation was followed sooner or later by a fatal result.

Mr Syme, the author in Dr Cormack's Journal of this statistical notice, regarding these 11 Edinburgh cases, alleges, in his late letter to you, that 3 only, and not 5 of the cases were fatal.

I rested my statement of the results of the operation in these 11 cases, partly upon Mr Syme's own authority, and partly upon the history of one of the eleven cases, with the details of which I happened to be acquainted.

Speaking of these 11 cases in the First Number of Dr Cormack's Journal, Mr Syme observes, "for my own part I have been fortunate, having tied the vessel 7 times for aneurism with success." But," he adds, "within the period of doing so, I am not aware of any case that has terminated favourably in this City, while I have either seen

or heard of 4 that ended badly, namely—one by inflammation of the vein,—one by mortification,—one by hemorrhage,—and one by amputation.” In his late letter to you, Mr Syme says, “ it is stated in the paper only 3 of the 11 patients died from the effects of the operation.”

The passage which I have quoted, (the only one referring to the fatal cases) certainly led me, as it would lead others, to infer that four, as is distinctly mentioned of the eleven cases, had terminated unfavourably, and, as I interpreted the passage, fatally. I counted as a fifth fatal case, one of those seven in which Mr Syme states “ he had tied the vessel for aneurism with success.” This fifth case (a man of the name of Lockie) is described by Mr Syme, in the paper referred to, as one in which recovery was much slower than usual, though ultimately effected. Before this account was published, the case had terminated fatally in the hospital under Mr Syme’s care. The femoral artery was tied by Mr Syme in April. The uncured popliteal aneurism burst in October; in consequence of repeated hemorrhage from the site of it, Mr Syme amputated the limb early in December; on the 21st of that month the patient died, and in the First Number of Dr Cormack’s Journal, published in the following January, the recovery was inadvertently described as “ ultimately effected,” and the case given as one of those seven in which “ the vessel was tied with success.”

It is with extreme pain and regret that I feel driven in self-defence to make publicly to the Society a statement of the preceding kind—but I beg at the same time to add, that when, during the discussion at the December meeting, I had occasion to allude to the two preceding cases or reports, I most sedulously avoided coupling or connecting Mr Syme’s name with them. Dr Cormack afterwards rose and pointed them out to the Society to be Mr Syme’s cases.

I have the honour to be,

Yours, &c.

J. Y. SIMPSON.

52 Queen Street, 4th March 1846.

Report of the Sickness amongst the Edinburgh Police, as compared with that of the Members of the Yearly Benefit Societies in Edinburgh for 1845.—By WILLIAM TAIT, M.D., Surgeon to the Edinburgh Police—This communication is contained entire in the present Number.¹

¹ We have deviated from our rule of abstaining from publishing the proceedings of the Medico-Chirurgical Society, till the minutes of the preceding meeting have been read to the Society and approved of, for the sake of placing Professor Simpson’s reply in juxtaposition with Mr Syme’s letter. As Dr Tait’s paper is contained entire in this Number, there is no farther breach of our established rule, to which we design in future, as heretofore, to adhere.

Want of room compels us to postpone several articles, among others, the continuation of Mr Bremner’s papers, an interesting communication by Dr C. L. Robertson, and one of equal interest transmitted from Vienna by Dr G. W. Balfour.

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PART I.—ORIGINAL ARTICLES.

Report of the Obstetric Practice of the Royal Public Dispensary for the year 1845, including some additional cases in Midwifery, amounting in all to 401 deliveries. By WILLIAM CAMPBELL, M.D., one of the Medical Officers of the Institution, Lecturer on Midwifery, and Consulting Physician to the Royal Maternity Hospital, &c. &c. &c.

THE foregoing deliveries produced 212 male, and 195 female children, there being 5 twin labours. In 311 instances, the face of the foetus was directed to the right *ilium*, in 66 to the left: and in three labours, the face, instead of turning towards the *sacrum*, was urged into the pelvic arch. In these last cases, the process was protracted, and the sufferings of the patient considerable.

In one of the foregoing cases, the patient was permitted to be about five days in labour; a second 50 hours; a third 48 hours; a fourth 36 hours; a fifth 35 hours; a sixth 30 hours; and a seventh 28 hours. The individual who was 5 days in labour resided a little distance from town, and was, after a consultation, delivered by the crotchet in less than an hour after she was visited; but from the protracted detention in the pelvis of the foetal cranium, enlarged with water, the maternal structures suffered considerable injury, and the delivery was followed by a *vesico* and a *recto vaginal fistula*.

Laborious Labour.—Exclusive of the seven foregoing deliveries there were other 19 laborious or instrumental labours, 3 *viz.* which required the reduction of the cranium; 15 in which forceps were used; and one in which the extraction was accomplished by applying, in a breech case, the hook over the thigh. In the hook de-

livery, and in all the forceps cases except one, the children were born alive and uninjured. The still-born foetus must have been dead before forceps were used, as the instrument had not been applied for more than 15 minutes, and the extraction was accomplished with ease. Of the infants extracted with forceps, 9 were males and 6 females.

Twins.—Five twin labours produced 8 female and 2 male infants. The *first* twin case produced 2 female children, the first of whom presented the head, the second the feet; the *second*, a female and a male, both of whom were head presentations; the *third*, 2 females, both of whom presented the head; the *fourth*, 2 females, the first of whom presented the breech, and the second the head; and the *fifth*, a female and a male, the first of whom presented the breech and feet, and the second the breech. Two of these mothers produced twins in a former pregnancy, and the parent of one of these two mothers had twins at the age of 50. The paternal aunt of one of the mothers produced twins three times in succession; and another paternal aunt of the same parent, was twice delivered of twins.

Breech.—In 11 instances the breech alone presented; once the breech and both feet; once the breech and one foot.

Feet.—Both feet presented in four labours; one foot only in one case.

Placenta.—In five cases the placenta presented, and in all of these except one, the foetus was still-born. The case in which the foetus was born alive, the placenta preceded, and as it were covered, the head. There was but one case of hemorrhage unconnected with placental presentation. Including the cases now particularized, the writer possesses a record of 22 placental presentations treated, not by galvanism, nor by the detachment of the placenta, but by the *version* of the foetus; and with success to the parent in all of them with one exception, in which more than six pounds of blood were lost, before the patient was visited.

Convulsions.—There was but one case of this nature. The fits recurred eight times in the commencement of labour, for which the patient was freely bled by the practitioner in attendance, and with such effect, that the convulsions were completely suspended. Towards the close of the first stage, another practitioner took charge of this patient, whose labour was terminated with forceps in consequence of an enfeebled state of the circulation in the funis, which was entwined around the neck, and which the medical attendant said he was enabled to reach with his fingers, though the foetus was considerably larger than an average size.

Version.—This practice was adopted in five instances, viz. three times for placental presentation, once in a shoulder case, and once in a twin-labour to economise the energy of the uterus, which had been enfeebled by the efforts required for the expulsion of the first child. In all these cases, the extraction was accom-

plished by grasping the knee, as originally and long since recommended by Breen, and not by seizing one, or both feet, as generally practised in the present day. I have only once met with a case in which nature effected that change in the position of the foetus, styled by the late amiable Dr Denman, *spontaneous evolution*, by which the necessity for turning has in occasional instances been superseded. I may here notice a practice which, in cases where we are foiled in accomplishing the *version* of the foetus, as far as I am aware, was first promulgated (Med. Journ. Lond. vol. 52, p. 211), by Robert Brown, Esq., an eminent practitioner of Preston, Lancashire, to whom I embrace this opportunity of acknowledging my obligations for a recent communication with cases, in corroboration of his views. In the communication alluded to, Mr Brown states, that *he can predict* when spontaneous evolution is likely to occur, and that his views have been frequently confirmed in a very extensive practice during the last 24 years, not only in his own sphere of observation, but also in that of several of his brethren in the same district, to whom he communicated his sentiments. In continuation, Mr Brown writes, “ I have felt some hesitation in making my opinion known, except to my personal friends, fearing lest inexperienced practitioners might either from rashness, or timidity, trust in all cases to this process, rather than employ manual assistance to turn the child where this could be accomplished with facility. In all presentations of the upper extremities, in which it is the rule of practice to accomplish delivery by the operation of turning the child, spontaneous evolution, *under the circumstances of powerful uterine action, may occur*. When called to a case of arm presentation, accompanied by severe and violent uterine spasm, should the os uteri be fully dilated, I satisfy myself that the bladder and rectum are unloaded, I then administer a tea-spoonful tinc. opii, by the mouth, and direct the same quantity of this drug to be given in the form of enema,—repeating this every hour until the pains are mitigated. If, however, after the third dose, the pains continue severe, and unsubdued, *evolution of the foetus within no very long time may certainly be expected* to happen;—the child being usually still-born.” From the very sensible and candid manner in which Mr Brown has expressed himself in the foregoing passage, it is unnecessary to caution practitioners against availing themselves of the aid of the interesting fact in question, except where the foetus, owing to violent contractions of the uterus, cannot be turned without risk to the parent, where the latter is free from danger, and where there is reason to apprehend that the child is dead.

Funis.—Only one case of this nature occurred, and, as generally happens, the foetus was still-born. Whatever plan be pursued, we are not very successful in managing such cases. I prefer turning, in all cases where I am called, before the head has entered the brim, and more especially in females who have formerly

been mothers ; but when the head has entered the pelvic cavity, I prefer forceps to all other plans.

Embryotomy.—In the case of this nature already referred to, it was the woman's second illegitimate pregnancy, and she was of a sound constitution. The cranium, which was twice the size of a healthy one, was almost completely ossified, and hence was not known, until after perforation, to contain water. In a *second* patient it was at once discovered, during labour, that the foetus was hydrocephalic, by the cranium, during a contraction of the uterus, resembling exactly the distended membranes of the ovum ; while, in the absence of uterine action, the cranial bones were felt floating freely within the integuments. This was the second hydrocephalic foetus in succession borne by this woman, who was an inveterate drunkard ; and it was the fourth case of congenite hydrocephalus that I have known produced by females of this character. In this case, the head was about four times the size of a healthy one. Although the whole *cerebrum* and *cerebellum* could have been contained in a soup-divider, and these organs were completely broken up before the head was extracted, yet whenever the foetus was born, it began to moan loudly, and continued doing so for at least half an hour. This was a most unexpected and affecting phenomenon, but exhibiting in a remarkable manner both the tenacity of foetal life, and its little dependence on the brain during foetation. Both these foetuses were males, and their bodies were unusually well developed.

The influence exerted on the development and structure of the foetus in utero, and on its intellectual powers at a future period of life, by a male parent of drunken habits, or by a mother of similar propensities, or who has been subject to much mental distress during pregnancy and lactation, has long perhaps been familiar to some of the profession. The writer presumes that others as well as himself must have observed that parents of dissipated habits engender a sickly, dwarfish progeny ; and not a few instances have come under his observation of individuals who have sprung from such a stock, being in point of intellect, little removed from idiocy, or subject to epilepsy. The writer has also good grounds for believing that enfeebled intellect and epilepsy may not only arise under the foregoing circumstances, but likewise from injuries inflicted on the cerebrum during the protracted compression of the cranium in cases of malposition of it, or confinement of the pelvis. In a numerous family, it may sometimes be remarked that all of them with one exception, are more or less intellectual, while the intellect of the latter is considerably below mediocrity ; and when the history of this individual is traced to its origin, we have, generally speaking, little difficulty in establishing the presence of one or more of the causes particularized. The attention of the writer has been directed to this subject from his being occasionally consulted in cases of epileptic children and

those of weak intellect. Sometimes, either from confinement of the pelvis or malposition of the foetal head, the bones of the latter, from the pressure to which it is subjected, are forced to slide over, or overlap each other; and after birth, they do not, in some rare instances, regain their natural position, but continue misplaced, and hence very elevated ridges can be traced along the coronal, sagittal, and lambdoidal sutures; and where the foetus survives the injuries inseparable from such an amount of compression of an organ so necessary to life after birth, and so intimately connected with the intellect, it cannot occasion surprise if, in occasional instances, the functions ascribed to this organ should, at a future period of life, exhibit considerable derangement. The histories of cases are known to the writer of enfeebled intellect and epilepsy having arisen under these latter circumstances. A day or two after having made some remarks on this subject in one of his lectures, Dr Kompst, a highly talented foreigner, who honoured him with his attendance, put into his hand the following note, containing information very much in point:—"At Jena, in the Grand Duchy of Weimar, Germany, a large number of idiots and deformed individuals are to be found. This fact is, by the medical men of the place, coupled with the circumstance of there being brewed at Lichtenhain, a neighbouring village, a very strong beer of pleasant taste, which is a great favourite with the inhabitants of Jena. This beer is very intoxicating, and the state of intoxication produced by it is far more violent than that brought about by any other beverage in common use. These highly intoxicating qualities of the Lichtenhain beer are ascribed to belladonna, which it is said the brewers mix with the beer. Now, no day passes without some of the inhabitants of Jena returning home in the evening highly intoxicated; and the idiotical and deformed children are supposed to be the offspring of fathers who begot them in a state of intoxication, produced by the beer of Lichtenhain."

The mother of the *third* foetus extracted by the crotchet, was of rather low stature, and slightly rachitic. She was long in labour, and I was foiled in an attempt to embrace the head with forceps, owing to some irregularity of formation towards the right side of the pelvis, the nature of which I could not decide from the pelvic cavity being completely occupied by the head. Although after birth, as the cuticle was seen detached from different parts of the body, it was evident the foetus must have been dead before labour supervened, I nevertheless had greater difficulty in penetrating the cranium than I had ever experienced on any former occasion. Here also the child was a male and large. The *fourth* case of embryulcia was an illegitimate male child, larger considerably than the ordinary size, and a first labour. The brim was contracted owing to an injury on the lumbar spine, received by the woman at an early period of life. After the head had been

perforated and some of the cerebrum had been evacuated, the head was embraced by the ordinary obstetric forceps,—a much more expeditious mode of accelerating the extraction than by any kind of crotchet. Very considerable exertion was required to bring the shoulders through the brim, but the mother recovered without an unpleasant symptom.

Puerperal Fever.—Fourteen cases of this disease occurred, and two of the women died,—being the only deaths among the parents. In one of those who recovered, the abdomen became much tumefied, accompanied with distinctly general fluctuation, and in a few days sero-purulent matter, in considerable quantity, escaped per vaginam, and continued to flow more or less copiously for some days. There was, moreover, one case of pelvic abscess in which also the contents were discharged through the sexual canal. Five foetuses died before labour supervened, and they were all females. During parturition, thirteen foetuses died, including three in which the head was perforated: of these, nine were males, and four females.

Edinburgh, 4 Picardy Place, March 14, 1846.

On the Rules applicable to the employment of Venesection and of Opium in Obstetric Practice. By JOHN BREMNER, Surgeon, Marnoch. Communicated by DR THATCHER.

(Continued from p. 144.)

Having expatiated at greater length than was originally intended, on the history of the principal affections incident to the pregnant state, as regards their relationship to the development of genuine uterine action, when the period of labour arrives, and shown the intimate connection which subsists betwixt several of them, and a loaded condition of the vital fluid; it is only necessary towards completing the illustration of the first indication specified, (viz.) “the circumstances demanding the abstraction of blood,” to say, that by means of a proper consideration of these (affections), provided the views entertained respecting the manner of their production be found in accordance with the evidences deduced from strict pathological research, the state of excitement alluded to at the commencement of the series, can scarcely fail of being discovered to be, with the exceptions which have more lately been adduced, the only one whose consequences are such as in any case to render recourse to venesection indispensable, agreeably to the rules already and hereafter to be pointed out.

Certain other conditions, such as rigidity of the muscular fibre, a tendency to obesity, &c., occasionally spoken of as requiring similar treatment, seem entitled to no respect whatever, apart from the other symptoms described, including that of wiry or incom-

pressible pulse, as constituting at least the commencement of the state peculiarly termed phlogosis.

Circumstances limiting the extent of Venesection.—With regard to the second topic selected for investigation, (viz.) the extent to which it is to be carried, &c., it will be found upon reference to the quotations formerly given, that the discrepancy which exists amongst the opinions advanced is such as to involve the subject in much obscurity, on account either of the imperfect manner in which these opinions are expressed, or the apparently defective nature of the *data* on which the inferences are founded.

Upon a farther reference to the case selected from Dr Smellie, we are informed it was one of several days' duration, supposed to arise from a rigid state of the os internum, of such a degree as to cause it to protrude half an inch without the external parts, and in which twelve ounces of blood were abstracted with the happiest results.

The rule prescribed by Dr Denman is, that “the quantity of blood be suited to the degree of fever and constitution of the patient.”

Dr Gooch, in the milder description of cases, states the *quantum sufficit* at a “few ounces;” and in those of greater difficulty, limits it to about fourteen.

A tendency to syncope and the condition of the pulse, “on which, before we desist, we are invariably to make an impression,” are the standards adopted by Dr Campbell.

In the quotations from Dr Burns, no fixed rule is specified to regulate the conduct of the practitioner in this respect; but from a consideration of the symptoms described, and the impressive manner in which he endeavours to prevent its abuse in cases of exhaustion, and individuals much enfeebled, it is obvious that he comprehends the state of the constitution and strength of the patient.

The number of from sixteen to twenty-four ounces by weight is the quantity sanctioned by the experience of Dr Hamilton, without particular reference to the constitution or state of the sanguiferous system. An impression on the system generally, without allusion to the state of the circulation or any other consideration, is a law declared unchangeable by Dr Ramsbotham. The reduction of the circulation to a proper standard—meaning, it is supposed the abstraction of blood, effectually to subdue the state of excitement or congestion generally, is that enjoined by Dr Rigby; whereas the rule recommended by Dr Blundell is so indefinite, and seems more the suggestion of others, than the results of his own experience, as to afford no sort of information.

Thus, whilst by Dr Smellie, but more especially Drs Gooch and Hamilton, the evacuation of a determined quantity is recommended with very little reference to the state of the circulation or patient, others, viz., Drs Denman, Burns, and Rigby, with cer-

tain modifications, seem anxious only to carry it so far as to restore the equilibrium of the circulation; whereas a third class, including Drs Campbell, Ramsbotham, and we may also reckon Dr Blundell, appear agreed in judging it necessary that, in particularly difficult cases, a still greater impression should be made on the system.

In the midst of such profusion of crude and conflicting evidence, it is no easy matter to arrive at the truth.

Before proceeding farther in the investigation, a question of great delicacy and importance, in assisting to determine with any sort of accuracy the point at issue, appears here to stare us directly in the face,—Ought venesection to be employed in obstetric practice, with the view simply of affecting the state of the circulation, or proportioned to the degree of resistance to be encountered and persevered in till this be overcome? In other words, Is it only to be had recourse to for the purpose of relieving an excited or congestive state of the system, and discontinued as soon as the restoration of the pulse to its natural standard indicates the same to be subdued? Or is the loss of blood called for in cases where considerable resistance is found proceeding from the parts through which the foetus must pass till it thoroughly gives way? Prior to the satisfactory solution of the queries here proposed, the intelligent and discerning practitioner will easily comprehend that a consideration of several circumstances must be taken into account.

We have, first of all, the originally strong, or robust, or weakly and delicate constitution of the patient, varied, as it must of necessity be, by the degree of excitement and the length of time she has been subjected to its influence. 2dly, As to whether she has given birth to many children, of what description have proved her former labours—if she has been the victim of one or repeated miscarriages, is the subject of phthisical or scrofulous symptoms, or has suffered from any other disease of a debilitating tendency; and 3dly, Whether the energies of her constitution may not be greatly impaired by a life of severe and protracted toil, or by one of a too sedentary and luxurious, if not intemperate nature, with sundry such like particulars, it may chance either of the depressing or exciting kind.

It must, therefore, from slight reflection on the subject, appear self evident, and carry along with it convincing proofs that blood-letting cannot be admissible in the different descriptions of patients, and under a diversity of circumstances upon equal terms and with the same effects.

Having, as formerly reported, been deceived in my expectation with regard to the effect produced by venesection in certain cases, I was thereby progressively led to attend more minutely to the state of the pulse—the results of which inquiry were such as to assure me that the presence of the incompressible or wiry condi-

tion, tested in the manner already related, was the alone sure indication for recourse to phlebotomy—whilst a conviction of the reality of the above fact served as a stepping-stone to forward the belief that, in proportion to its intensity, in a corresponding measure would the evacuation of blood be employed with advantage,—a line of practice, the accuracy and utility of which, the experience of succeeding years has amply attested.

In every case, therefore, which comes within the range of observation, whether labour be actually commenced or not, laying all other considerations aside, upon a thorough conviction of the presence of excitement or phlogistic action, although in a very circumscribed degree, the invariable practice is to make use of the lancet, till a change in the nature of the pulsations, ascertained by examination of the liberated arm or temporal arteries, demonstrates the same to be, in the meantime at least, fully subdued—uniformly endeavouring, by means of a free and well adjusted incision through the integuments into the vein, that the current of blood be as full and uninterrupted as possible, otherwise the beneficial ends of the operation will likely be entirely frustrated—a circumstance to which attention becomes the more necessary in the case of reduced and delicate individuals, where the loss of a very limited quantity of blood removed, in a contracted and unequal stream, or as it were drop by drop, has no effect in aiding the progress of dilatation, whilst it must tend to augment the debility still farther.

Agreeably to the principle already laid down, viz. that the state of excitement during pregnancy “differs nothing from a similar affection of the system under circumstances entirely the reverse,” instead of the extensive general bleedings recommended by some, no valid objection save motives of delicacy and the unsurmountable difficulties presented by labour can be urged, it is presumed, in cases where the same is communicated to the sexual organs, against the local abstraction of blood by leeches, &c., as in other complaints. That such would, in certain cases, prove serviceable, if properly conducted, previous to labour, there seems every reason to believe.

Should not syncope, or at all events a degree of faintness occur before the reduction of the pulse to the proper standard, it may be supposed that, in the younger and more robust class of females, the lancet may be employed with greater liberty, not only with impunity, but with more extended usefulness than would accrue from a rigid conformity to the rule lately laid down—a concession which experience does not authorise me to grant.

Were the case to prove only one of general excitement, the reduction of the pulse to the extent proposed, will, if timely effected, with few exceptions, serve to render the process of delivery comparatively expeditious and easy; whereas, in those instances in which it has “settled down upon important organs,” particularly

the os or cervix uteri, the objections which may be urged against the same limited mode of practice, can be counterbalanced by others equally forcible and decisive.

In all such cases, it must be remembered, that when an organ or part becomes the seat of inflammatory action, even for a brief period, the same, notwithstanding the prompt application of the curative measures, is subjected to a corresponding degree of debility, which, according to circumstances, may remain for a considerable length of time, rendering it an easy prey to a renewed attack, as may be witnessed in the case of ophthalmia, and also of wounds, and injuries inflicted upon the lower extremities, &c., thereby unfitting such for the proper performance of their respective functions; and in proportion to the weight or length of the period the affection may be located, not only will the part or organ suffer a diminution of its powers, but the effects are extended over the system at large, although, unless in instances of previous extreme delicacy or weakness, in an inferior degree, compared with the former.

Should these premises be found correct, it requires but little stretch of intellect to comprehend that there is here not only the state of excitement, but also its effect, viz. that of debility more or less to encounter; which, as formerly related, never fails to add greatly to the difficulties of the case.

Connected with the preceding, is the well established fact in the history of inflammation, that in like measure with its duration and extension, the more acute symptoms, provided its advance be not ushered in with rapidity and violence, gradually lose their prominence, so that a case which would have required in its earlier stage, the abstraction of perhaps from eighteen to twenty-four ounces of blood to allay fully the excited state of the circulation, at the expiry of a few weeks, would apparently, in the view of an inexperienced attendant, be equally subdued by means of from twelve to sixteen.

The results of the experience derived from cases in which a larger quantity had been abstracted than was requisite to relieve the congestive state of the system, have gone to prove that, if the effect were such as to expedite and facilitate delivery, it is in the majority, at the expense of a greater reduction of the patient's strength and energy than what is necessary, or in many instances warrantable, and which could have been more effectually and safely accomplished by other means. The cases related by Dr Dewees, the great advocate for extensive bleedings, more especially the one of over-distension of the uterus and density of the membranes, stated in the 8th edition of his work, p. 378, is believed, in the absence of evidence in support of the contrary, to be of this description.

Instead, however, of labour being shortened or simplified by means, as it may be termed, of an over-effusion of blood, its pro-

gress upon a careful observation and comparison of cases, will be found to be retarded in a degree proportioned to the *stamina* and previous circumstances of the patient in connection with the quantity of the effusion. To understand this the more perfectly, it may be necessary to revert to the fact, that by destroying the *equilibrium* of the system, or any particular part of it, we interfere more or less with the healthy operation of its functions.

In the case before us, it may be objected to the above statement, that frequent instances occur, as Dr Hamilton has observed “of women in the last stage of phthisis pulmonalis, dropsy, as also of those moribund from continued fever, scarlatina, pneumonia, &c., in which, when labour comes on, the uterine contractions are usually strong.”

To explain this paradox, it needs only to be recollected, that whilst of most of the affections alluded to by Dr H., the nature is such as to effect a state of general relaxation over the system; in the whole of them there is but small risk of determination of blood to the generative organs, but rather through some other channel. The difference is, however, very great when an unyielding state of the os and cervix uteri, or parts forming the outlet is met with in an individual whose system is reduced either by disease or profuse evacuations of blood—a point which it is believed he (Dr H.) has fully cleared up, when at p. 130, he says, “There is a wonderful difference in the facility with which the os uteri opens in different individuals; and the appearance of the patient furnishes no correct indication on this point; for in many strong muscular women the dilatation proceeds easily, while in many relaxed delicate individuals its progress is both tedious and painful,”—expressions which evidently imply, that in the former case the relaxation is complete, whereas in the latter it is quite otherwise. It is to this state of relaxation or balancing of the system and generative organs that we ought uniformly, in framing and adjusting our plans for the management of labour, to have our attention more particularly directed in all the varied descriptions and conditions of patients; and is therefore to be regarded as the grand hinging-point whether they (the patients) be strong or weak. Should a state of faintness or even syncope take place before the reduction of the pulse to the required standard, the object in view will be greatly advanced, if not entirely accomplished, and a considerable saving of blood in some cases be the consequence. In a good many, however, no such effect will be produced, when it becomes the duty of the practitioner to exercise caution, lest he should defeat the ends he is anxious to promote. To manage this adroitly, when his patient is furnished with veins of good diameter, he has only to replace the ligature upon the arm, provided the wound has been at first of proper dimensions, and resume the operation till the circulation has been sufficiently lowered. The advantages of the plan here recorded

have been witnessed with the utmost satisfaction, and seem peculiarly adapted for all cases where the patient is delicate, or the state of the arterial system doubtful.

Instead of fixing a certain number of ounces of blood as the standard by which the practitioner is to be guided, as has been recommended by some, or its positive effects on the system, as suggested by others, the restoration of the circulation to its *medium* or healthy state, by the means and in the manner above introduced to notice, will be found a much more efficacious and salutary mode of procedure as respects his patient, and eventually a saving of time and trouble to the attendant, of which he can previously form but a very inadequate conception. Should any feel desirous to contemplate the effect of venesection performed in a random and fearless manner, they have only to peruse the history of the case related by Dr F. H. Ramsbotham, and quoted at the commencement of the present series of papers.

When the veins at the bend of the arm are diminutive or greatly puckered from the frequent use of the lancet, it would be of essential service to select for the purpose one of the jugulars, could the consent of the patient be obtained.

The appearance and consistence of the blood will be found almost invariably to confirm the truth of the propositions advanced. The fibrinous coat, so indicative of the presence of inflammatory action, in general, has by certain been considered as bearing an alliance so close with uterine gestation, as to be seldom if ever disconnected. The results of observation in a good many cases have served to establish the falsity of this assumption; and that whilst its coincidence is only the effect of the state of excitement already spoken of, the frequency with which it is met, has acted as the cause of the supposition in question. In every case where the phlogistic state prevails, the thickness of the crust, and the degree in which its edges are retracted, will furnish a pretty correct index of its severity and duration; whereas its entire absence, provided venesection has been performed with adroitness, proclaims to us in language which need not be misunderstood, that we have been mistaken in our calculations respecting the necessity of the operation.

The appearance of the crassamentum will likewise assist in enabling us to judge of the degree of stamina or strength of constitution possessed by our patient. The coagulum and "buffy coat" in those of delicate and reduced constitution, is uniformly of looser texture than otherwise.

In chancing to perform venesection in several cases prior to confinement, when general appearances betokened health and vigour, and in which the blood exhibited the character described, it was not without considerable surprise that such a circumstance was beheld. Upon the approach of labour, however, the mystery was speedily developed—these individuals being discovered to

possess such delicacy of constitution as to become very soon exhausted, should not the particular difficulties been removed out of the way; so that by attention to this circumstance, we can occasionally determine pretty correctly the nature of our patient.

In the sketch here furnished, relative to the extent to which venesection ought to be carried, in order to overcome resistance to the regular action of the uterus during parturition—whilst attention has been chiefly directed to the consequences resulting from the evacuation of a more than requisite quantity of blood, silence has almost been maintained respecting those of an opposite description, (viz.) the effects dependent either on its entire omission, or very partial and perhaps awkward performance. As with these, however, practitioners in midwifery are believed, taking a general view of the subject, to be better acquainted, it will suffice here to say, that in addition to the hints thrown out, when treating of the nature and influences of excitement, they are such as to impede the progress of labour, and subvert the harmonious state of the system, which is so essential to its natural course in an equal, if not a more extensive degree, than the former.

They are, likewise, independent of the dangers to which they expose the life of the patient during the puerperal state, frequently the source of diseases which baffle the utmost efforts of medicine to subdue.

As future opportunities will not be wanting of reference to these, the perusal of the quotations from the works of Drs Burns, Hamilton, and Rigby, relating to this subject, is recommended as being replete with instruction on several of its most important topics.

(*To be continued.*)

Remarks on Insanity, the result of Injury to the Head. By C. LOCKHART ROBERTSON, M.D., Resident Physician in the Cumberland Provisional Lunatic Asylum at Dunstan Lodge, Gateshead-on-Tyne.

(Read before the Medico-Chirurgical Society of Edinburgh, 1st April 1846.)

SEVERE injuries of the head, whether producing, in the first instance, concussion, or compression, are occasionally, though rarely followed by permanent mental alienation. Thus, of 1220 cases, reported by Mons. Esquirol,¹ 18 or 1·4 per cent only were caused by blows or falls on the head.

Every variety of insanity may result from this exciting cause.

¹ Des Maladies Mentales, considérées sous les Rapports Médicales Hygiéniques et Médico-légales, tom. i. pp. 62, 64. Paris, 1838.

Thus, of 482 cases of melancholia¹ (*Lympémanie ou Mélancholie*) 10 or 2·0 per cent were the result of injury to the head. Of 588 cases of mania,² 13 or 2·5 per cent were caused in the same manner. Of 235 cases of dementia,³ 3 or 1·2 per cent had the same origin.

Injuries of the head likewise produce moral insanity, *i. e.* perversion of the active and of the moral powers of the mind, the intellectual powers being sound. There are instances," says Dr Prichard,⁴ "in which a slight peculiarity of character, not amounting to insanity, has remained long, and perhaps through the life of the individual, who has sustained a severe injury of the head. Sometimes this constitutes a kind of moral insanity; the temper is more irritable, the feelings are less under restraint than previously." The case of Robert Driver, below related, is one of moral insanity, the result of injury to the head.

Injury to the head may act either as a predisposing or as an exciting cause of insanity. "*Les chutes sur la tête,*⁵ *même dès la première enfance, prédisposent à la folie, et en sont quelquefois la cause excitante.*" "A fall or blow may predispose to maniacal excitement.⁶ In some cases of slowly advancing insanity which I have met with, connected with general paralysis, there has been reason to suspect that a predisposing cause was a violent fall on the head some years previous to the appearance of the mental disorder."

Many years may elapse between the receipt of the injury and the decided manifestation of the mental disorder. "*Un enfant de trois ans fait une chute sur la tête;⁷ depuis il se plaint de céphalalgie; à la puberté le mal de tête augmente et la manie se déclare à l'âge de dix-sept ans.*"

In all cases of insanity, the result of injury to the head, the *prognosis* will be very much influenced by the existence or non-existence of a depressed portion of skull. In the latter instance we must be guided by the variety and extent of the mental alienation. In the former, a reasonable hope may be entertained that by the removal of the predisposing or exciting cause, namely, the depressed portion of bone, the patient may once more be restored to the use of his faculties. In stating this opinion, I am fully aware that I differ from Dr Conolly, who says⁸ "that a depression existing even to a small extent, often appears to induce in-

¹ Esquirol, *op. cit.* tom. i. p. 435.

² *Ib.* tom. ii. p. 144.

³ *Ib.* p. 235.

⁴ A Treatise on Insanity and other Disorders affecting the mind, p. 202. London, 1835.

⁵ Esquirol, *op. cit.* tom. i. p. 68.

⁶ Dr Conolly's Clinical Lectures on the Principal Forms of Insanity, delivered at the Middlesex Lunatic Asylum at Hanwell. *Lancet*, Nov. 29, 1845.

⁷ Esquirol, *op. cit.* tom. i. p. 68.

⁸ *Loc. cit.*

curable insanity." I have not met with any other notice in works on insanity regarding the influence of a depressed portion of skull on mental alienation.

The following is a well marked case of moral insanity, the result of an attack of acute mania, complicated during its progress, as is frequently the case with monomania, and cured by the removal of the exciting cause.

A case of Moral Insanity caused by a Depression in the Skull, and cured by the Operation of Trephine.

Robert Driver, æt. 23, a sailor, was admitted into the Dunstan Lodge Asylum on the 10th of February 1845.

Ten years since, he fell from the mast of a ship, which accident was followed by an attack of acute mania.

On his return home, he became more and more ungovernable in his temper, and violent in his conduct.

He also suffered from frequent pains in the part of the cranium on which he fell, and which he imagined were caused by his mother beating him.

After being some time in this asylum, this delusion gave way, and the intellectual powers of his mind remained sound, but his conduct continued ungovernable, and his language abusive, and kind words made no impression on his wayward temper. He still complained of pains in the injured part. On examining his head, I discovered a very distinct depression on the posterior superior margin of the right parietal bone, the situation to which he referred the pains.

In consultation with Mr Furness of Newcastle, consulting surgeon to this institution, it was decided that the depressed portion of skull be removed by the trephine.

On the 3d of January, the operation was skilfully performed by Mr Furness. The patient bore it well, and the wound healed, without a bad symptom. The portion of the cranium removed was healthy in appearance on both of its surfaces. It adhered very firmly to the dura mater, requiring considerable force for its removal. It was altered considerably in form, appearing to have been indented, rather than fractured, which is not improbable, seeing the accident occurred to the patient when only thirteen years of age.

His conduct is now, and has been, since the operation, in every way improved. He has had no bursts of passion; answers civilly when spoken to, and is grateful for the relief afforded him. He looks forward with pleasure to his return home, which will take place as soon as the weather improves. He has, for the last fortnight, been working in the farm, and states, that since the operation, he has been free from pain in the head, under which he formerly laboured.

Sir A. Cooper, in commenting on a case of Mr Cline's, in

which, by the operation of trephine, a man had been restored to health, who had passed 13 months in a "state of perfect oblivion, deprived of all powers of mind, volition, or sensation," in consequence of a fall from the yard-arm, which had caused a slight depression on the head, says¹ "it appears therefore, that in cases of depression we should not be prevented from trephining, however distant the period may be at which the accident occurred; and the patient may, after any interval, be restored to the powers of body and mind." The case I have related corroborates this opinion of Cooper.

It would appear, that injuries to the head, instead of producing insanity, may even occasionally improve the mental powers. It is related by Dr Cox,² that a son of the late Dr Priestly was restored to reason from idiotcy by a fall from a window. "In other instances," says Dr Prichard,³ "there has been, after injury to the head, greater energy and activity, more of excitement in the general character, which has been thought a change for the better, rather than a morbid alteration."

"Cases of this description are sometimes very remarkable. I have been informed on good authority, that there was some time since, a family, not far from this city, consisting of three boys who were all considered as idiots. One of them received a severe injury of the head: from that time his faculties began to brighten, and he is now a man of good talents and practises as a barrister. His brothers are still idiotic or imbecile. Van Swieten⁴ mentions the case of a girl who was imbecile till she received an injury of the head, and underwent the application of a trephine for the removal of a depressed portion of skull: she recovered and became intelligent. Haller has reported the case of an idiot, whom a wound in the head restored to understanding."

"A somewhat similar case is that of father Mobillon,⁵ who is said to have acquired, after the operation of trepanning, a sudden increase of his intellectual faculties."

Dunstan Lodge, 1st February 1846.

P.S.—The patient, Robert Driver, was dismissed cured on the 20th March, having shown no symptom of his previous malady since the performance of the operation on the 3d of January.

¹ Lectures on the Principles and Practice of Surgery, p. 135. London, 1835.

² On Insanity, p. 104.

³ *Op. cit.*, p. 202.

⁴ Comment. in Boerhaavii Aphorismos, tom. i.

⁵ Dr Cox, *loc. cit.*

Pathological and Clinical Researches into the Nature and Treatment of Scrofulous and Tubercular Diseases. By JOHN HUGHES BENNETT, M.D. F.R.S.E., Fellow of the Royal College of Physicians, Lecturer on the Practice of Physic, and on Clinical Medicine, &c. &c.

(Continued from p. 216.)

On the Chemical Composition of Tubercle.

DR ABERCROMBIE¹ showed that a mass of tubercle, on being plunged into boiling water, contracted, and became more dense and firm, when it presented all the characters of coagulated albumen. This was well observed in the mesenteric glands, which, when only slightly affected, lost a considerable amount of their weight. This loss became less and less as the tubercular deposition increased, until at length the whole gland appeared to be converted into solid coagulated albumen, and scarcely lost any of its weight by boiling.

Dr Abercrombie observes, "the deposition of albumen, therefore, in these glands, appears to be a process of disease. In the early stages of the disease, it seems to be deposited in a soft state, and to be involved in the structure of the gland; the gland in other respects being vascular and organized, and probably capable of performing its functions. It is in this state that we see the albumen coagulated, when the gland is plunged into boiling water, producing so immediate and remarkable a change in its appearance and texture. As the disease advances, the proportion of albumen seems to increase, while at the same time it assumes a more concrete state, and the mass in general becomes less vascular and less organized. In the last stage, the vascular structure of the gland seems more and more to disappear, until it passes into a mass presenting the properties of coagulated albumen, with little or no organization."

Dr Abercrombie further pointed out that the tubercular disease of the peritoneum presented characters very different from that of the lungs or lymphatic glands. By boiling in water, the tubercles were nearly dissolved, leaving only a small central part to which they seem to have been attached, and which had undergone little or no change during this first boiling. The part that was dissolved seemed to consist entirely of the muco-extractive matter, and the part that remained appeared, on further examination, to be the same substance in a more concrete form, with a small trace of albumen.

¹ Medico-Chir. Transactions of Edin. vol. i. p. 687. 1826.

According to the analysis of M. Thénard,¹ 100 parts of pulmonary tubercle, not softened, contained

Animal matter	98·15
Muriate of soda	} 1·85
Phosphate of lime	
Carbonate of lime	
Oxide of iron	

Other tubercles which had undergone the cretaceous transformation, presented the inverse proportions; that is to say, in 100 parts

Animal matter	3
Saline matters	96

Lobstein² gives at length the process which the younger Heeht followed, in analysing, at his request, a portion of crude tubercle. He found six grammes of dense tubercular matter gave

Albumen	1 gramme	4 décigrammes.
Gelatine.....	1 ..	2 ..
Fibrine	1 ..	3 ..
Water and loss ..	1 ..	6 ..
	—	—
	6 ..	0 ..

Lassaigne³ made a comparative analysis between the tubercles of the lungs, and of the liver, in a horse. He found

	Tubercle of Lung.	Tubercle of Liver.
Animal matter	40	50
Sub-Phosphate of lime.....	35	45
Carbonate of lime	9	4
Salts soluble in water	16	1
	—	—
	100	100

He points out that the animal substance is not transformed into gelatine by coction, but rather exhibits the properties of coagulated albumen.

The analysis of pulmonary tubercle of a child 2 years old, by Preuss,⁴ was very carefully made. In ten parts of the diseased pulmonary substance, he found

Water.....	79·95
Tubercular matter	13·52
Fibrous residue, vessels, bronchi, &c.	6·53
	—
	100·00

a. The fibrous residue was composed of

Fat.....	4·13
Substance furnishing glue by coction	20·67
Substance not furnishing glue by coction	75·20
	—
	100·00

¹ Andral. *Precis d'Anatomie Pathologique*, t. i. p. 417. 1829.

² Dupuy, *Journal Prat. de Med. Veterinaire*, 1833, p. 98.

³ *Traité d'Anatomie Pathologique*, 1829, t. i. p. 378.

⁴ *Tuberculorum pulmonis crudorum analysis chemica*. Dissert. Berol, 1835.

b. The tubercular matter contained

1. *Substance soluble in boiling alcohol.*

Cholesterine 4.94

2. *Substances soluble in cold alcohol, but not in water.*

Oleate of soda 13.50

A peculiar substance	}	8.46
Muriate of soda		
Lactate of soda		
Sulphate of soda		

3. *Substances soluble in water, but not in alcohol.*

Caseine	}	7.90
Muriate of soda		
Sulphate of soda		
Phosphate of soda		

4. *Substances insoluble in alcohol, and in water.*

Caseine, altered by heat.....	}	65.11
Oxide of iron		
Phosphate of lime.....		
Carbonate of lime		
Magnesia		
Sulphur		

100.00

Gueterboeck¹ found in the tubercular ganglions of the neck, of the bronchi, and in pulmonary tubercles—1. Albumen in small quantity. 2. Pyin, different from caseine. 3. Phymatine, a species of osmazome, which, according to him, is proper to tubercles. It is soluble in water and in alcohol; it is precipitated from the solution by acetate of lead, but not precipitated by the extract of gall nuts, nor by a solution of sulphate of copper. 4. Fat, not only of cholesterine, but also fat capable of saponification.

An analysis made by Wood, gives²

Substances soluble in ether	3.18
Substances soluble in cold alcohol, and not in water	9.24
Substances soluble in cold alcohol, and in water.....	10.66
Substances soluble in water, not in alcohol.....	9.14
Substances insoluble in ether, in water, and in alcohol.....	67.78

100.00

Simon³ analysed tubercle from a horse. It was deposited in masses, from the size of a nut to that of a pigeon's egg; it varied from a yellow to a flesh colour, and its consistence was such as to admit of its ready division by the knife. Internally it was green, and resembled coagulated caseine. It was composed of

Water.....	84.27
Fat, containing cholesterine.....	1.40
Alcoholic extract with salts	1.52
Caseous matter with watery extract.....	1.14
Watery extract and salts.....	3.80
Insoluble constituents.....	4.44

¹ De pure et granulatione. Berol, 1837.

² De puris natura atque formatione. Berol, 1837.

³ Animal Chemistry, 1842. Trans. by Day, 1846, vol. ii. p. 478.

Scherer¹ has given some very careful analyses of various kinds of tubercle. In each case he has described the general appearance of the mass, and its minute structure, points in which it would be well if all other chemists would imitate him.

Scrofulous tubercle from the mesenteric glands of a child, is thus described. The mass is of a yellow colour, soft consistence, not fibrous, but rather of a fatty granular structure. In the centre of each swelling is a softer and whiter nucleus. Under the microscope were seen nuclei, granules, and nucleated cells, but no fat globules. When triturated with water, a milky fluid was procured, which, after standing some time, deposited a flocculent, granular sediment. The supernatant fluid, after filtration, gave a clear fluid, which, after standing 24 hours in the air, became hazy, and separated molecular granules. It contained albuminate of soda, but on the other hand, no caseine or pyin. When the residue not soluble in cold water, is boiled, a trace of pyin is detectable in the fluid. Boiled with spirits of wine, a yellow extract is obtained, and with alcohol and ether, a tolerable quantity of fat, namely elaine.

1000 parts of the fresh mass removed from the body gave

Water.....	776·78
Solid residue.....	223·22
Inorganic constituents.....	5·26

The last were composed of a little chloride of sodium, much carbonate of soda, alkaline phosphates and sulphates, much carbonate, and a little phosphate of lime.

The mass purified with boiling water, alcohol, and ether, yielded by elementary analysis, in two analyses:—

Carbon.....	54·125	
Hydrogen.....	7·281	
Nitrogen.....	15·892	16·086
Oxygen.....	22·702	

Upon the basis of the formula of protein, and the assumption of an equal amount of carbon, as the ground-work of calculation, the analysis leads to the following formula,—C 48, H 78, N 12, O 15, or protein + H 2, O + H 4: or calculating from the azote, C 46, H 76, N 12, O 12, = protein—C 2, O 2, + H 4.²

The second analysis is of tubercular deposition from the right hemisphere of the brain of an individual 27 years of age, who had formerly laboured under scrofula, and latterly chronic tubercle in the lungs. The mass was externally reddish, internally yellowish-grey, elastic, and without organization. The substance of the brain surrounding the deposit was softened. Triturated with water, a turbid milky fluid was procured, which exhibited under

¹ Jahresbericht von Canstatt, 1844. Leistungen in der Pathologischen Chemie von Scherer.

² The original numbers used by Scherer are here given. It will be, of course, necessary to divide those representing H and N by two, to render the equivalents analogous with those used by British chemists.

the microscope, drops of oil, and numerous nuclei and granules. Perfectly formed cells were not seen. The filtered fluid contained less pure albumen than albuminate of soda.

The organic substance cleared from albumen by maceration in solution of nitre, and purified by boiling in water, alcohol, and ether, yielded on an elementary analysis

Carbon	54.410
Hydrogen.....	7.147
Nitrogen	16.366
Oxygen	22.077
	<hr/>
	100.000

Calculated with protein, and assuming the same amount of azote, the following formula results : C 46, H 74, N 12, O 14, or assuming an equal amount of carbon, it gives C 48, H 77, N 12.5, O 15.

The third analysis is of tubercular deposits from the liver of an individual aged 67 years, in whom similar deposits existed in other parts of the body.

The deposits presented externally the consistence and structure of fibro-cartilage. The liver was in a state of cirrhosis. The mesenteric glands were normal. The lumbar glands, on the other hand, were infiltrated with the morbid deposit, a portion of it even was found in the substance of the psoas muscle.

A microscopic examination of the compact white deposit in the liver, exhibited round irregular nucleated cells, with granules, also caudate cells with numerous free granules.

1000 parts yielded

Water	826.04
Solid residue	173.96
	<hr/>
Fat taken up by ether, consisting of olein and margarin ..	18.63
Alcoholic extract	21.75
Watery extract with very slight traces of pyin	8.24
Insoluble organic substance	120.34
Fixed salts	4.90

The insoluble portion contained, after being carefully cleansed with a solution of nitre, alcohol and ether, upon an elementary analysis

Carbon	54.554
Hydrogen	7.121
Nitrogen	16.928
Oxygen	21.397
	<hr/>
	100.000

Calculating from the formula of protein, and from an equal amount of azote, we obtain the formula, C 45, H 72, N 12, O 13, calculating from carbon, we have C 48, H 76, N 13, O 14.

The fourth analysis is of tubercular depositions, found in the abdomen of an individual, aged 23 years, of phthisical habit, in whom were also in the lungs old and crude miliary tubercles. The principal deposition was in the adherent loops of the alimentary

canal, in which grey, cheesy, greasy masses were found, occupying the seat of the mesenteric glands, and varying in size from a lentil seed, to that of a pigeon's egg. The stomach, as well as the small intestines, were perforated by the deposited new formation, which when felt resembled a purulent diffuent matter.

On the serous covering of the spleen, similar miliary tubercles were found, and on the peritoneal covering of the liver, a layer of plastic exudation $1\frac{1}{2}$ lines in thickness.

The tubercular masses exhibited, under the microscope, besides a large quantity of nuclei, partly broken down cells, and a considerable number of peculiar, fibrous-like branched formations, which resembled nervous tubes. The masses possessed a very offensive odour, evolved ammonia, and gave, when triturated with water, a turbid fluid, with a broken down grey sediment.

1000 parts of the fresh substance yielded

Water	893.32
Solid residue	106.18
<hr/>	
Fat	25.40
Caseine and alcoholic extract	12.39
Pyin and watery extract	6.19
Salts	7.43
Crude tubercular matter	54.55

which yielded in three analyses

Carbon	55.299	55.069	55.137
Hydrogen	7.098	7.004	6.944
Nitrogen	16.698	16.534	16.476
Oxygen	20.905	21.393	21.443
	<hr/>	<hr/>	<hr/>
	100.000	100.000	100.000

Compared with protein, and calculated from the same amount of azote, we have the formula, C 46, H 72, N 12, O 13 : and from the same amount of carbon, C 48, H 75, N 13, O 14.

The exudation mass covering the peritoneal surface of the liver, gave, digested with solution of nitre, much fluid albumen and caseine. It contained, however, relatively, less extractive matter and fat, than the tubercular masses.

1000 parts yielded

Water	731.62
Solid residue	268.38
<hr/>	
Fat	15.47
Watery extract with pyin	4.32
Alcoholic extract with caseine	6.23
Salts	5.40
Insoluble organic substance	237.96

The insoluble organic substance yielded, by elementary analysis

Carbon	55.190
Hydrogen	7.186
Nitrogen	16.602
Oxygen	21.022
	<hr/>
	100.000

This substance is consequently identical in composition with the tubercular masses found in the glands. Crude tubercular masses from the lungs yielded little fat, and extractive matter, and on elementary analysis, yielded the following result:—

Carbon	53·884
Hydrogen	7·112
Nitrogen	17·237
Oxygen	21·767
	100·000

which gave the following formula:—

Calculated in relation to carbon = C 48, H 78, N 13, O 15.
 „ „ „ nitrogen = C 43, H 70, N 12, O 13.

According to M. Felix Boudet,¹ tubercles of the lung, in a state of crudity, contain albumen; caseine; matter having the character of fibrine; matter soluble in boiling alcohol, (cerebric acid); oleic and margoric acids; saponifiable fat; lactic acid; lactate of soda; cholesterine 0·045, say $\frac{1}{20}$ of the weight of dry tubercle. The ashes contain soluble salts, the chloride and sulphate of soda, insoluble salts, phosphate and carbonate of lime; silica, and oxide of iron.

The tubercles of the bronchial and mesenteric glands presented a similar composition.

Tubercles of cheesy consistence had an alkaline reaction. Treated with water they furnished a solution partly coagulated by heat. After the separation of the albumen, a liquid remains, in which a precipitate is formed on the addition of acetic acid, as in the milk, and which, evaporated at a gentle heat, gives rise to follicles similar to those which are produced on this latter liquid.

In order not to have any doubt of the identity of this matter with caseine, M. Boudet precipitated comparatively, by means of acetic acid, a certain quantity of cow's milk, and of the liquid obtained from tubercles.

The two precipitates, placed in contact with carbonate of barytes, in order to saturate the excess of acid, then with water, gave two liquids perfectly identical in all their properties. Thus the expression caseous tubercles, founded at first on a simple appearance, is completely justified by chemical analysis.

In crude tubercle, caseine exists in an insoluble state, but by the progress of disease, it is transformed into soluble caseine, under the influence of a certain quantity of ammonia, which is produced under the same circumstances.

M. Boudet states that what is called calcareous tubercle, is composed in reality of a very feeble proportion of phosphate or carbonate of lime, but on the contrary contains nearly 70 per cent of soluble salts, that is, the chloride of sodium, sulphate, and phosphate of soda. It is difficult to conceive, he observes, how a

¹ Bulletin de l'Acad. Roy. de Medecine, t. ix. p. 1163.

mass of soluble salts should thus remain in an organ abundantly supplied with fluids.

Dr Wright¹ of Birmingham, has made many analyses of tubercle, and found its chemical composition to vary, in different specimens, of softened or cheesy tubercle. He gives the two following analyses as the mean of his investigations:—

Fatty matter with oil globules		15·9
Gelatine		6·4
Phosphates } Lime }	}	11·2
Sulphates .. }		
Muriates .. }		
Carbonate of lime		a trace
Oxide of iron		a trace
Albuminous matter with fibrin		65·2
Fatty matter with oil globules		7·4
Gelatine		11·8
Phosphates } Lime }	}	2·5
Sulphates .. }		
Muriates .. }		
Albuminous matter		76·9

He denies the correctness of M. Boudet's statement, regarding the large amount of soluble salts in cretaceous tubercle.

Such I believe are all the analyses of tubercle hitherto published. It will be seen that they differ materially from each other, and that further researches are necessary. It was with much pleasure, therefore, I heard last spring, from my friend Dr Glover, lecturer on chemistry, at Newcastle, that he was anxious to make investigations into the chemical composition of tubercle. At his request I furnished him with many specimens of this morbid deposit in all its forms; and I now publish the note he has been so good as to furnish me with, giving the result of his inquiries.

“ Many attempts have been made by chemists, to ascertain the constitution of tubercle, and to compare the composition of this formation with that of other morbid structures. The great difficulty in the way of such investigation is the exceedingly imperfect state of the means that we possess of recognizing differences in the various forms of organization by chemical means, and between the different proximate chemical constituents of the tissue; that is between fibrin, caseine, and albumen.

“ In the researches which have hitherto been made on the subject, the difficulties have been too lightly estimated. We find constituents, as caseine and gelatine, set down as existing in tubercle on grounds altogether too trivial to warrant such a conclusion. After numerous investigations, I have never been able to convince myself, that either of the substances mentioned, exist in tubercle, although I am not unwilling to believe that the albumen

¹ Medical Times, vol. ii. pp. 418-9.

found may approach towards the nature of caseine. Perhaps the most striking fact which chemistry developes with regard to this subject, is the large quantity of fat existing in tubercle. This observation my analyses confirm. I have also found pyin in appreciable quantity. My analyses completely contradict the observation of M. Boudet, concerning the large quantity of soluble salts found by him in cretaceous tubercles.

“ With regard to the ultimate analysis of the residual albuminous substance of tubercle, or what remains of the mass after the removal of the various fats and extractive matters, I do not find it differ much from the standard composition of protein.

“ I shall now give the following analysis :—1000 parts of fresh mesenteric tubercle carefully freed from membrane was dried. This operation gave

Water.....	803
Solids	197

“ The solids contained 16 grains of watery extract, composed of pyin, a muco-extractive matter, and a peculiar extract. The extract and fats (principally the latter), removed by alcohol and ether, weighed 44.9 grains. They were sent to Giessen, for analysis there ; and the results have not yet been sent me. There were also 4 grains of spirit of wine extract.

“ The ultimate analysis of the residue gave

Carbon	54.97
Hydrogen	4.43
Azote	12.31
Oxygen	26.09

“ This is the smallest quantity of azote which was obtained from such a residue. In another analysis of mesenteric tubercle, the result was 15.56 of azote. I infer, that in the present state of our knowledge, no important inference can be drawn with regard to the difference between the albuminous basis of tubercle, that of lymph, (which I have also examined) and ordinary albumen.

“ The following is another analysis of mesenteric tubercle :—

Water	812.5
Solids.....	187.5

“ In 200 parts of the fresh mass, were

Fats	7.50	
Extracts soluble in spirit of wine and water.....	1.76	
Salts {	Chlorides	0.45
	Earthy salts (phosphates)	0.58
	Alkaline salts.....	0.50
Protein residue.....	21.72	
	—————	
	37.50	

“ The following is an analysis of pulmonary tubercle—a mass of crude tubercle from the lungs of a woman who died of phthisis,

which weighed 500 grains, was selected on account of the completeness of the tuberculization. On being dried, the weight was 106·8, giving thus

Water.....	786·4
Solid residue	213·6
	<hr/>
	1000·0

The fats and substances soluble in ether and alcohol were removed, and weighed with their salts 18·25 grains. They were examined qualitatively, and appeared to consist chiefly of elaine, with some cholesterine. The watery extract = 6·55 was not found to contain either caseine or pyin. The spirituous extract and loss amounted to 4·00. The insoluble protein residue was 78·00 grains, 20 grains of this burnt gave 0·4 of ash, or 2 per cent. This residue consisted chiefly of insoluble salts.

“ The proximate analysis therefore gave

Fats and extractive substances by alcohol and ether, with salts.....	18·25
Alcoholic extract and loss	4·00
Watery extract and salts	6·55
Protein residue and salts	78·00
	<hr/>
	106·80

“ The ultimate analysis of the protein residue gave without ash

Carbon.....	53·43
Hydrogen	6·64
Nitrogen	14·02
Oxygen.....	25·91

“ The following is an analysis of some tubercles in the intermediate stage of cretaceous transformation sent me by Dr Bennett. Dried they gave

Animal matter	24·80
Salts	9·00
	<hr/>
	33·80

“ The salts were composed of

Chlorides, chiefly alkaline.....	1·20
Other salts, soluble in water.....	1·90
Phosphate of lime.....	5·40
Carbonate of lime, a trace and loss.....	0·48
	<hr/>
	9·00

“ The following is an analysis of some cretaceous masses from the lung, sent me by Dr Bennett, and by Dr Charlton of this town :—

30·1 grains of the concretions dried, gave

Animal matter	7·7
Salts	22·4
	<hr/>
	30·1

“ The salts were

Phosphate of lime.....	16·45
Carbonate of lime	5·10
Soluble salts and loss.....	0 85
	<hr/>
	22·40

“ This composition is not very dissimilar to that of bone. I have not had time to make the analysis of a curious mass from the bronchial glands sent me by Dr Bennett, and closely resembling putty.

“ My analysis of blood in scrofula confirms the fact of the deficiency of blood globules in this disease, along with a corresponding excess of solids of the serum.

“ In the urine, the results which I have obtained were chiefly negative.

“ ROBT. M. GLOVER.”

12 Northumberland Street,
Newcastle, 2d April 1846.

In reviewing the different analyses of tubercle which have now been given, we find—

1st, That tubercle consists of an animal matter, mixed with certain earthy salts.

2d, That the relative proportion of these varies in different specimens of tubercle. That animal matter is most abundant in recent and earthy salts in chronic tubercle.

3dly, That the animal matter certainly contains a large amount of albumen. Some chemists have also detected caseine, the existence of which is probable; others gelatine, the presence of which is more doubtful. The statement of Gueterboeck, that it contains a peculiar animal matter (phymatine) has not been confirmed by other analysts. Fibrin and fat exist in small, but variable proportion, as a constituent of tubercle.

4thly, The earthy salts are principally composed of the insoluble phosphate and carbonate of lime, with a small proportion of the soluble salts of soda. The statement of Boudet, that cretaceous concretions are principally formed of the latter, is directly opposed by other chemists, and is quite incompatible with their long persistence in the body.

5thly, That very little difference in ultimate composition has yet been detected between recent tubercle, and other so-called compounds of protein.

The two problems which the pathologist wishes the chemist to resolve are, 1st, What difference exists between tubercle, lymph, and cancer? 2dly, Does the blood undergo any change which bears a relation to the production of these deposits? These questions are not yet answered; but there is every reason to hope,

now that attention is directed to these subjects, some thing positive will soon be ascertained. No doubt, there are great difficulties to be surmounted. Organic chemistry is yet in its infancy. Only lately, Reichenbach discovered sulphur in considerable quantity, as a constituent of animal bodies. Even now, the existence of protein, which promised to facilitate our knowledge of organic compounds, has become a subject of dispute. At the last meeting of the Royal Society of this city, (April 6, 1846,) Dr G. Wilson showed that the fluoride of calcium, which had hitherto been considered insoluble in water, was, on the contrary, soluble to a considerable extent. He detected it in recent and fossil plants and animals, in the blood, and in milk. If, then, the very basis of organic analysis is thus uncertain; if we are as yet ignorant of the chemical constitution of the animal solids and fluids in a state of health, we need not feel surprise at the little assistance pathology has hitherto received from the chemist. We anticipate, however, from the labours of those who follow the tract of Simon, Scherer, and Lehmann, important results at no distant date.

To arrive at positive conclusions, it becomes a matter of the utmost importance, that the different morbid products should not be confounded with each other. This has been done even by Scherer. Thus, in his analysis of tubercle from the liver, the appearances under the microscope, prove the disease to have been cancer, and not tubercle. Hence, it is incumbent on the chemist, to give with each analysis, an account of the minute structure of the matter operated on. Unless this be done, we must anticipate confusion, rather than harmony, from the multiplication of analyses of morbid products.

(*To be continued.*)

On Necrosis of the Jaw-Bones from the Fumes of Phosphorus.
By G. W. BALFOUR, M.D.

(Transmitted from Vienna.)

THE attention of surgeons in Germany has, not long since, been drawn to a peculiar form of necrosis of the jaw-bones—produced by long continued exposure to the action of the fumes of phosphorus, by Dr F. W. Löruse, of the Bezisks Krankenhaus Wieden, in Wien—and perhaps a short notice of this singular disease may prove neither uninteresting nor un instructive to surgeons and others concerned at home.

The attention of Dr L. was first drawn to the cause of this disease from the fact that, since the erection of this hospital, in the surgical division of which 250 to 300 patients are yearly treated,

necrosis of the jaw-bones was never observed save in the persons of such as had been employed in the manufactories of lucifer matches, 3 of which are in its immediate vicinity. These persons were all females employed in dipping the pieces of wood into the phosphoric mixture, (phosphorus and a solution of gum arabic, with a little colouring matter). In the entire number of manufactories 150 to 160 of these girls are employed, whose ages range from 8 to 25 years, the greater number being under 14. On examination of the state of these manufactories, it was found that, in one, the matches were dried in boxes hung around the wall of the room in which the girls were at work, and the ventilation carried on only by means of small windows situated aloft—the temperature ranging from 18 to 30 degrees K. This was higher, (averaging 30 degrees K.) in the other two manufactories, but, in these, portions of the work-rooms were portioned off, as drying apartments, and provided with tubes to carry off the noxious fumes. These partitions, however, required to be frequently opened and the matches looked after, lest they should ignite, which, from the high temperature employed, frequently took place, and also to replace the matches already sufficiently dried, with fresh. In each manufactory from 3 to 4 lbs. of phosphorus are daily employed in the production of 1 to 2,000,000 of matches, the mere drying of which must give no inconsiderable quantity of phosphoric fumes, to which must also be added the quantity of metaphosphoric acid, produced by the burning of sundry parcels, which, in spite of care, is no infrequent occurrence. Yet, in these rooms, exposed to the heat and fumes, the girls pass from 12 to 13 hours daily, and even take the most of their food there.

It would appear probable that an exposure for a length of years to the fumes of phosphorus is necessary for the production of this specific effect, from the circumstance, that no case of it was observed till 1839, when the manufactories had been in work upwards of 11 years. Since then, more than a dozen cases have come under notice. Scrofulous girls suffer most, and in them the disease is most fatal—and in no case but the first, has syphilis, primary or secondary, been discovered.

Almost all the girls employed have the gums more or less affected, and, at their junction with the teeth, a red ulcerated line, like that produced by mercurial salivation, is apparent. The pain in the jaws, where any is complained of, is generally mistaken for toothache, and for this teeth are frequently extracted, which are afterwards found to be quite sound. As the disease proceeds, the affected jaw-bone increases in size, and is painful on pressure. This is followed by swelling of the gums and cheeks, with an erysipelatous inflammation of the skin of the latter, which sometimes extends over the whole of that half of the face, and even down on the neck. The patient becomes feverish; the skin of the whole body, but particularly of the face, of a dirty yellow colour.

The appetite declines, and thirst increases, with irregularity of the bowels. The pains now extend towards the ear or temple, the flow of saliva is increased, nay, even complete salivation occasionally occurs. Some of the teeth become loose, stinking matter oozes from between them and the gum, which also collects in portions of the jaw under the gum or skin, and, after burrowing for some distance, opens outwards or into the mouth, forming numerous sinuses, which, on being probed, lead to a greater or less portion of bare rough bone. The loose teeth now fall out, and the soft parts in the mouth are partially destroyed, so that a portion of the necrosed bone projects naked into the mouth, and from the copious secretion of pus, produces an unendurable stench.

The general symptoms are those of great irritation, and in the hitherto observed fatal cases, those of confirmed and rapid phthisis.

When the individual is robust, and the necrosis confined to a small portion of the bone, exfoliation takes place, and a gradual cure follows.

On the contrary, when the individual is scrofulous, phthisis becomes developed, and the patient sinks under the combination, after an illness rendered more distressing by the horrid stench and unallayable pain accompanying it. The sections have hitherto given extensive necrosis of the jaws, and destruction of the soft parts, along with advanced tubercular disease of the lungs and intestines.

The means employed have been, in mild cases, the use of astringent washes, warm poultices to the swollen face, general warm baths, gentle exercise in the open air, bitter tonics, and a light but nourishing diet. When the process of destruction advanced, spirituous and aromatic additions were made to the astringent washes, and the sinuses frequently washed out; when the salivation was profuse, the frequent use of cold water was found to afford the most relief. The most powerful narcotics gave only slight alleviation of the intense pain, especially remarkable in disease of the upper jaw.

On account of the disagreeable smell, complete separation of the sick from the other patients was found, in many cases, necessary; and in all careful ventilation, and frequent fumigation with juniper wood or nitric acid. Dr Sigmund, in one case, touched a portion of the upper jaw with a hot iron,—the bone exfoliated in 4 days, and a gradual recovery followed.

The attention of Government having been drawn to this disease, a commission was appointed to inquire into its origin, and suggest a mode of prevention. The following were their suggestions:—

1st, That the matches must not be permitted to be dried in the work-room, and, if possible, this must take place in one situated above it. 2d, That every second hour the girls be obliged to wash their mouths well with acidulated water; and, 3d, That

they be sent out twice a-day to take their meals and get some fresh air.

The following is a list of the cases that have hitherto occurred in the Bezisks Krankenhause Wieden, in Wien.

No.	Name and Age.	Length of Continuance at Work.	Necrosis of the Upper Jaw.		Necrosis of the Under Jaw.		Duration of Disease.	Recovered.	Died.	In Treatment.	Left Uncured.
			Total.	Partial.	Total.	Partial.					
1	M. N. 40 yrs.	5 yrs.	1				1 yr.		1		
2	A. D. 32 "	6 "			1		6 ms.		1		
3	F. K. 23 "	8 "	1				9 "		1		
4	J. K. 27 "	6 "				1	5 "	1			
5	A. F. 21 "	5 "			1		7 "		1		
6	E. A. 23 "	7 "	1				1½ yrs.		1		
7	W. B. 19 "	5 "	1				6 ms.				1
8	J. E. 19 "	4 "		1			3 "				1
9	K. H. 22 "	9 "				1	5 "			1	

In the Allgemeines, Krankenhause, under Dr Sigmund, one case already discharged—she was 18 years of age—had been employed $2\frac{1}{2}$ years, and had an affection of the left gum, which was cured after $5\frac{1}{2}$ month's treatment. Under the same gentleman, two cases remain still under treatment. Both cases of necrosis of left superior maxilla. In the one case, the superior turbinated bone has come away. Two other cases occurred in Dr Sigmund's private practice. Both were under 20; both had necrosis of left superior maxilla, and both had been employed for 5 years. The one case was treated for 8 months, and was at last cured after the hot iron had been applied to the socket of one of the teeth that had been previously drawn. The other was under treatment $5\frac{1}{2}$ months; the superior turbinated bone came away and recovery followed. Neither were scrofulous.

Vienna, 23d February 1846.

Case of Fracture and Dislocation of Cervical Vertebrae, with Fracture of Sternum. By PETER BROTHERSTON, Surgeon, Alloa.

J. C., a journeyman mechanic, residing in Alloa, æt. 22, at 6 P.M., on the evening of Thursday the 30th November 1843, was found lying across the foot pavement in the public street, by four young men who were acquainted with him, and who, thinking him to be in a state of intoxication, lifted him on their shoulders and carried him to his house, which was about 8 or 10 minutes

walk from the place where they found him. When he got home his clothes were taken off, and he was put to bed. He could speak and answer questions put to him. He was quite unable to move his lower extremities, but could move his arms to a considerable extent. He passed a restless night, and moaned a good deal, but his friends supposing him to be intoxicated, thought nothing of it, and did not suppose any thing to be seriously wrong with him, till morning, when, seeing that he was no better they sent for me. I saw him about 8 morning. I found him in bed, perfectly sensible, and able to answer all questions put to him. He complained of great pain on the crown of the head, stiffness of the neck, and could not move his limbs when ordered; he could move his hands and arms, but could not put his hands to his head. He also complained of pain in the chest, and seemed to be suffering great pain, and to be very much oppressed. His pulse was 96, full, and strong. On asking him if he met with any injury, he said that he did not remember; that he had taken too much whisky yesterday, and had been tipsy. I ordered him a purgative, and called again in the afternoon. The purgative had not operated, and he appeared more distressed than in the morning—pulse 100—not so strong. He still complained of all he had done in the morning, and mentioned that he had made no water. I sent for a catheter and drew off about two pounds and a-half of urine. After withdrawing the catheter he said he felt sick, and wished a mouthful of water. It was difficult to give him any thing to drink in the position in which he was lying, his head being on a low pillow, and in order to get the vessel to his mouth, his head was raised. The moment his head was raised from the pillow he gave a convulsive struggle, and expired. The sudden death and previous good health of the patient prompted the procurator-fiscal to make inquiry, and at his request I examined the body in presence of Dr M'Gowan of this town, 24 hours after death.

Autopsy—I observed, on removing all support from the head, that it immediately fell to one side, so that whenever the occipital protuberance rested on the table, and support being removed, either cheek came in contact with the table, though cadaveric stiffening still remained throughout the body. When the head was pressed downwards, so as to press the vertebræ upon one another, and rotated, crepitus was heard. An incision was extended from ear to ear, and one directly backwards and forwards through the respective portions of the scalp.

An immense quantity of blood was found extravasated between the scalp and the tendon of the occipito-frontalis muscle, immediately over the crown of the head. The skull cap was removed—it was free from fracture, and the membranes covering the brain, and the brain itself, were quite natural. No fracture or fissure was found in the base of the skull.

On cutting through the integuments and muscles covering the spinous processes of the cervical vertebræ, the muscle and cellular tissue were found infiltrated with blood, and displacement forwards of the last cervical and incumbent vertebræ on the first dorsal was observed. The posterior ligaments were so torn as to expose the membranes covering the spinal marrow. The last cervical, and three first dorsal vertebræ were removed, and the following state of parts was seen:—There was found to be a fracture of the body of the first dorsal vertebræ through the middle, the upper part of the body adhering to the intervertebral cartilage, behind it and the last cervical, and overlapping the other half anteriorly. The inferior oblique processes of the last cervical were in front of the superior oblique processes of first dorsal, and the capsular ligaments were ruptured. The spinal membranes over the chord seemed to be entire, but the chord was flattened, and probably ruptured within the membranes.

Examination of Chest.—An incision was made from the top of the sternum downwards, and in cutting through the textures covering the sternum, no effusion of blood or any thing unnatural was observed; but on dividing the costal cartilages, and removing the sternum, it was found, on examining the posterior surface, that the entire bone was fractured right across in an oblique direction upwards and towards the left side, exactly at the junction of the lower, with the middle third of the bone. There was no displacement, and no appearance of any injury on the anterior surface. The thick tendinous periosteum kept the two portions in complete apposition. There was considerable effusion of blood into the anterior mediastinum, and into the cellular tissue between the pleura and the bone around the seat of fracture. There was also effusion of blood on the external surface of the pericardium, but it did not extend to the internal surface of the membrane. The heart and lungs were in a healthy condition.

Remarks.—The results of the *post mortem* examination at once accounted for all the symptoms; and after examining the place where the man was found lying, it easily showed how the accident occurred. At the side of the foot-path there was a wall, and on the other side of the wall a stair ascending to a door level with the top of the wall, which is about ten feet high. It was supposed that he had ascended the stair, and fallen from the top of the wall on the pavement, the crown of his head coming in contact with the ground. His body then doubling over, his head had been pressed to his chest, and both neck and breast bone had given way. It appears a most extraordinary circumstance that instantaneous death did not ensue from pressure on the spinal chord at the time of the injury, but it can be accounted for by supposing that the gradual yielding of the tissues, ruptured by the fall, allowed time for the body to fall back, before sufficient pressure to cause death had been exerted on the spinal chord.

The sudden fatal termination of the case is easily accounted for by the additional pressure, which must have been made on the spinal chord, when the man was raised to get a mouthful of water after withdrawing the catheter.

The above case is interesting from the rarity of occurrence of fracture of the sternum, except by direct violence, either by pressure or gunshot wounds. I have not heard of a similar case, though I have made the strictest inquiry.

Alloa, March 1846.

PART II.

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

No. II.—*Summary of the Remedies applicable to the cure of Chronic Eruptions.* By WILLIAM SELLER, M.D., one of the Physicians to the Royal Public Dispensary, Edinburgh, &c.

(Continued from p. 167.)

Nitratis Hydrargyri Unguentum, or *citrine ointment*.—The same ointment diluted with three or four parts of lard is applied successfully in sycosis.

A very useful combination of citrine ointment in many cutaneous diseases is with the linimentum aquæ calcis. The proportion is to be varied according to circumstances, from half an ounce to an ounce and a half in six ounces of the liniment; and in some cases sulphur ointment may be added besides, in the same proportion as the citrine ointment.

Hydrargyri Unguentum; *Mercurial Ointment*.—Mercurial ointment is an effectual means of destroying the pediculi pubis in prurigo pubis. Plumbe recommends equal parts of mercurial ointment and simple sulphur ointment to be mixed together for that purpose.

Nitrato-oxidi Hydrargyri Unguentum; *Red Precipitate Ointment*.—The red precipitate ointment answers in many of the cases in which the citrine ointment is used, as in the dry and unirritable state of porrigo furfurans, also when diluted with zinc ointment in porrigo favosa, and with zinc ointment, or with ointment of the acetate of lead in sycosis.

The ointment of deutoxide of mercury, recommended by Cazenave and Schedel in papular diseases of the face, is probably made

not with red precipitate, but with the red oxide obtained by precipitation by an alkali from corrosive sublimate. The formula is deutoxide of mercury half a drachm, camphor four grains, lard an ounce.

Hydrargyri Præcipitati albi Unguentum; Ointment of the Ammonio-Chloride of Mercury.—This ointment is also substituted for the citrine ointment in some cases, as in impetigo sparsa and figurata along with zinc ointment, and in local psoriasis. This ointment is officinal. It has long been celebrated for the cure of pustular eruptions, under the name of cosmetic mercury.

Hydrargyri Iodidi Unguentum, and Hydrargyri Biniodidi Unguentum.—These ointments are very useful in eruptions of the scaly character, when the skin is dry and chapped, and somewhat hypertrophied. To allay itching, camphor is a useful addition. Both ointments are adopted by the London College.

Hydrargyri Cyanidi Unguentum; Ointment of the Cyanide of Mercury.—This ointment is employed in the several forms of eczema and in chronic lichen—about half a drachm being applied at once, and this quantity progressively increased. It consists of a drachm of the cyanide to an ounce of lard, with ten drops of the essence of bergamot.

Hydrargyri Sulphureta; Sulphurets of Mercury.—The black sulphuret of mercury was formerly employed as an alterative in skin diseases; the use of it is now almost obsolete; the red sulphuret or cinnabar is employed in fumigations, the vapour being directed on the affected part. Cinnabar has also been used in the form of ointment with camphor in chronic vesiculo-pustular affections, in the prurigo senilis and impetigo. It consists of half a drachm of cinnabar, ten grains of camphor, and an ounce of lard. Cinnabar is also combined with sulphur for use in scabies and prurigo—cinnabar, two drachms; sublimed sulphur, half an ounce; laudanum, two drachms; lard, five ounces.

Some other preparations of mercury have been occasionally used as the hydrargyrum cum creta and the oxidum cinereum, chiefly as alteratives—and sometimes the blue pill has been prescribed. There are some diseases of the skin which are aggravated by the internal use of mercury—of these, lichen is one, and it may be added, that a perseverance in the use of mercurials is hurtful in psoriasis.

Hyocyamus Niger; Leaves of Hyocyamus.—Hyocyamus, like hemlock, poppy heads, and the like, is a useful anodyne application, yet hardly used for that purpose in this country. Internally, hyocyamus, in the form of extract, answers well for mitigating the effects of local irritation on the general system.

Ice.—Ice has been occasionally used as a means of relief in severe local irritation, as in prurigo podicis.

Iodineum; Iodine.—Iodine has been less used in the uncom-

bined state in eruptions than in various forms of combination, some of which have been already spoken of. As a means of improving the general health, and thus of calling forth the latent sanative powers of the constitution, few remedies will bear a comparison with iodine and its compounds. The iodine remedies, whether directly or indirectly, exert a powerful influence over the capillary and absorbent systems, and thus are peculiarly fitted to restore the action of the skin, in which both systems so abound, to a healthy state. From the remarkable effects of iodine medicines on the general health, greater influence might have been anticipated from the internal use of them than seems as yet to have been proved. The hydriodate of potassa, in particular, combines, to a signal extent, the properties of a tonic, sorbefacient and alterative, such as might be supposed adequate to put an end to local diseases connected in their origin with constitutional disturbance. Perhaps its effects have not as yet been sufficiently tested in this order of diseases. However this may be, it seems certain that, as far as observation has extended hitherto, the local application of the iodine-remedies has gained a better name for utility in eruptions than their internal use. It does not however follow, that the effects of their internal use should not be studied; since it is often requisite, first to improve the general health, and then by powerful local means to destroy what has been not unaptly termed the habit of morbid action, which becomes established in the nutritive organs of the skin.

Among the modes of applying iodine locally, is the iodine-bath; iodine, from two to four drachms; hydriodate of potassa, four to eight drachms; water, fourteen parts: use in chronic diseases of the skin in general.

The iodine ointment, and the ointment of iodine and hydriodate of potassa of greater or less strength, and always weak at first, are useful in acne, porrigo, and scaly diseases.

The combined vapours of iodine and sulphur are of much advantage in lepra and psoriasis, particularly in the local forms of psoriasis, and also in the tubercular eruptions. These vapours may be applied in the following manner:—A powder is made of half a drachm of sulphur; seven grains of cinnabar; two grains of iodine. This powder is placed on a heated iron in the bottom of a jar large enough to receive the patient's leg or arm, when either is the part affected, and the iron being covered with a grating to protect the foot or hand, the part is introduced quickly, and the top of the jar covered to prevent the vapour from escaping. The part is to be kept in the bath from fifteen to twenty minutes, and the application is to be repeated three times a-day. After a few days the strength of the bath may be increased.¹ The same remedy has been used with success in elephantiasis arabica.

¹ Burgess, in translation of Cazenave and Schedel, on Cutaneous Diseases, p. 209.

An ointment of iodine and sulphur is also beneficial in acne, porrigo favosa, porrigo scutulata; ioduret of sulphur, twenty to thirty grains; lard, one ounce.

Iodidum Arsenici; Iodide of Arsenic.—This preparation has been administered internally in some eruptions; and, among others, has been proposed in ichthyosis.

Juniperus Sabina; Savine; the Powder of the Leaves.—The powder of the leaves of the juniperus sabina has been long in repute as an application to warts, especially to those of venereal origin. For the removal of venereal warts, equal parts of verdigris and savine powder, make one of the most efficacious remedies. It is an old practice to mix the savine powder with mercurial ointment for the same purpose. Again, a poultice of oil and roasted onions was first applied several times to the warts, and then the savine powder sprinkled on them, so that they quickly dissolved away. The infusion and decoction are also recommended, but seem to be of little use, either in warts, or scabies and porrigo, in which they have been recommended. The expressed juice of the fresh leaves is more efficacious, and has been commended in the same diseases. Savine, as is well-known, abounds in an essential oil, which might probably prove of service in the treatment of some cutaneous diseases allied to those just referred to.

Krameria Triandra; Ratanhy-Root.—The ratanhy-root possesses some properties which suggest it as not unlikely to be serviceable as a local application to the skin. Lotions containing the tincture are useful in some affections of the mouth; and the powder, one part mixed with one part of charcoal and one of orris-root, forms an excellent tooth powder. Ratanhy is prized for giving redness and firmness to the gums, while it whitens the teeth. It is alleged that the use of a decoction of it, or of a solution of the extract, in the form of enema, cures fissured anus.

Lemon-Juce.—Lemon-juice often relieves pruritus, as in strophulus.

Lime—Lime-Water—Aqua Calcis—Linimentum Aquæ Calcis.—Equal parts lime and castile soap make an application useful for the removal of warts and other small tumours or excrescences. Lime is also used as a depilatory, employed, for example, in porrigo favosa; and for this purpose it is often combined with potassa. Colley's depilatory consists, according to Paris, of quick lime and a portion of sulphuret of potassium. Lime is sometimes added to sulphur ointment, for use in scabies, and some forms of impetigo. Hufeland recommends it in union with olive oil in porrigo.

Lime-water is one of the common applications in porrigo scu-

tulata ; it affords temporary relief in some forms of prurigo, and is occasionally useful in lepra and psoriasis.

The linimentum aquæ calcis (equal parts of lime-water and linseed oil) is a very useful, though rather uncleanly application, in many chronic eruptions, as in porrigo scutulata, and in other forms of porrigo, in impetiginous affections, and generally in the scabby eruptions. Its efficacy is much increased by the addition of citrine ointment, or sulphur ointment, or both—thus R. linimenti aquæ calcis, (Ph. Edin.) ℥vi., unguenti nitratis hydrargyri ℥i. M.—and R. linimenti aquæ calcis ℥vi., unguenti nitratis hydrargyri, unguenti sulphuris, āā. ℥ss. M.¹

Linum Usitatissimum ; *Farina Lini*, or *Linseed Meal*—*Lini Oleum*, *Linseed Oil*.—The linseed meal poultice is often of much service in allaying irritation, as in porrigo favosa, ecthyma, eczema, and sycosis, (see Poultices). The linseed oil is chiefly employed along with lime-water, under the name of linimentum aquæ calcis, or carron oil, (see Lime-water).

Malva Sylvestris—*Mallow, the Herb*.—Uses nearly the same as those of *Althæa Officinalis*, (which see). The leaves are boiled and beaten to a pulp for a poultice, which is useful.

Mezereon ; *Daphne Mezereon* ; *Spurge Olive* ; *Root Bark*.—Mezereon ranks among the alterative diaphoretics, and as such, is useful in many protracted eruptions. It contributes to the efficacy of the compound decoction of sarsaparilla. The simple decoction, for which there is a formula in the Edinburgh Pharmacopœia, is of service in some of the eruptions in which there is much local irritation. It deserves a fair trial in the scaly eruptions in which the utility of *Dulcamara*, like itself, a narcotic diaphoretic and alterative, suggests its use.

Milk, &c.—Milk, asses' milk, butter-milk, enter into the diet proper for some eruptions. Rayer remarks that a milk diet, perseveringly employed, has cured more eruptions than the most judicious use of therapeutic agents. He properly objects to its use in old people, in which he says it is often of pernicious effect. At first, milk disagrees with many, but by perseverance, these commonly become accustomed to it. The occasional use of laxatives, and of lime-water, assist in reconciling the stomach to it. Asses' milk answers better with some, and even goats' milk, and if the latter disagree pure, it should be diluted with barley-water. Butter-milk, like whey, has a laxative and cooling effect. Butter-milk is a popular application to freckles and some other slight eruptions. In prurigo formicans, a milk diet is often of material service.

Mineral-Waters.—Under the head of baths, some of the applications of water impregnated with chemical substances were

¹ See Syme's Principles of Surgery, p. 445.

noticed. Of those that remain, the sulphurous water, natural and artificial, are of most repute. An artificial sulphur bath is made by adding four ounces of sulphuret of potassium to 100 imperial gallons of water; and by the addition of a pound of gelatine to such a bath, the gelatino-sulphurous bath, so much prized by the French, is prepared. Instead of gelatine, starch may be added, the use of either being to mitigate the action of the sulphuret on the surface. Baths of this kind are useful in scabies, eczema especially when of long standing, and confined to the extremities, impetigo of long duration, lichen when it assumes a very chronic form, lepra, and the other scaly eruptions.

It hardly enters into our plan to refer to the numerous natural sulphur waters spread over Europe, the use of which, both internally and externally, is beneficial in the treatment of eruptions. The solution of sulphuret of potassium may be regarded as supplying the place of these in some degree; it must be used, however, with caution, a comparatively small quantity of the sulphuret producing poisonous effects. The dose should not exceed 8 or 10 grains at once, and it should be taken with a full allowance of water. The sulphuret administered in this way has been found to produce excellent effects in scabies, lepra, and psoriasis.

The sulphurous purging waters are rudely but usefully imitated by adding to mixtures of purging salts a portion of the polychrest salt, which is the sulphas potassæ cum sulphure, of the Edinburgh Pharmacopœia. Two ounces of Epsom salts, with half an ounce of this polychrest salt,¹ and a drachm of cream of

¹ *Note.*—The sulphas potassæ cum sulphure of the Edinburgh Pharmacopœia is manifestly the true polychrest salt, though that name is often given, especially in London, to the neutral sulphate of potass. The sulphas potassæ cum sulphure, was a salt of great repute in former times; yet, what old name belongs to it but “sal polychrestus?” On the contrary, there are several old names by which the neutral sulphate is known, viz., “arcanum duplicatum,” and “sal de duobus,” names referring to the mode in which it was produced of old,—being the residue of the distillation of nitric acid, from a mixture of two salts, (the sulphate of iron and the nitrate of potass,) purified from the red oxide of iron by solution and straining.

On the exclusive right of the sulphas potassæ cum sulphure to the name polychrest salt, it is enough to cite Lemery, probably the ablest and most learned pharmaceutic chemist of his time; he applies the name “sal polychrestus” to no other salt but the salt in question, while he terms the neutral sulphate “sal de duobus,” and “arcanum duplicatum.” The term polychrest being of general application, and of attractive signification, it is easy to understand how it should have come to be extended by

tarter, dissolved in a quart of water, make a good purgative sulphurous solution, of which a few ounces are taken daily.

The internal use of the chalybeate-waters is governed by the same rules as the use of the preparations of iron, and these rules depend less on the mere form of the eruption than on the state of the constitution which attends it; or chalybeate-waters are beneficial in eruptions under the same circumstances as in ordinary diseases, and these have been already briefly referred to under “*Ferri Præparata*.”

In some cases the internal use of the effervescing waters is serviceable, as in eczema. The saline-waters are useful merely in so far as they improve the general health. The thermal-waters, in the form of bath, can only be a substitute for the ordinary warm-bath.

Morus Nigra; *Mulberry*; *Syrupus Mori*.—The syrup of mulberries is one of the remedies used in aphthæ. It is sometimes

commercial chemists to such other salts as they wished to recommend to the medical profession, or to the public. We perceive the commencement of this abuse of the name in the following passage from the English translation, (published in 1720,) of the eleventh French edition of Lemery’s “*Course of Chemistry* :”—“*Monsieur Seignette, an apothecary of Rochelle, whom I have spoke of before, hath put in use a certain ‘sal polychrestum,’ which seems at first to be like unto this (the sulphas potassæ cum sulphure,) but when it comes to be examined, there is found a notable difference, as well in the crystallizations, (and when it is thrown into the fire,) as in the effects; for, whereas six drachms of this sort taken, as I have said, do cause gripes in pricking the membranes of the stomach, that of Monsieur Seignette, in the same quantity, doth purge very gently, without any gripes at all, as he proves in a little treatise that he hath made, touching the uses of this polychrestum. And the truth of it I have found myself in several persons. The composition of this salt is known to none but himself, who having given it a reputation in the chiefest towns of France, hath left some quantity of it with me to distribute and make use of here at Paris. Several persons have endeavoured to counterfeit this salt, but failed of success.*”—4th English edition, p. 266. *Monsieur Seignette’s* secret, for which he borrowed the original sounding name of the “*sulphas potassæ cum sulphure*,” is now well known as the “*Rochelle salt*,” the tartrate of potass and soda. We will only add that the celebrated *Dr Cullen*, whose early devotion to chemistry is well known, after speaking of the smell of the polychrest salt, which excludes the possibility of his reference being to the neutral sulphate, says, “*those apothecaries mistake the matter much, who take the residuum of the distillation of Glauber’s acid of nitre (the nitric acid) for the sal polychrestus.*”—*Materia Medica*, vol. ii. p. 514.

acidulated slightly with muriatic or sulphuric acid, or sulphate of zinc, or a little calcined magnesia is added. It appears, however, to possess no particular advantage.

Myristica Moschata; *Adeps Myristicæ*; *Oil of Mace*.—The oil of mace, as it is termed, enters into some popular salves, especially lip-salves. In some cutaneous diseases, the oil of mace is employed as a stimulant. Thus Bateman recommends a liniment composed of two drachms of oil of mace dissolved in three or four ounces of spirit, to be used in porrigo decalvans.

Oils, Fixed.—Fixed oils are occasionally of service in allaying the irritation of eruptions; thus, the oil of almonds is used with advantage in the first stage of psoriasis.

Opium.—Opium is not generally well adapted for internal use in chronic eruptions, owing to its injurious effect on the alimentary canal; yet, in some cases, it must be resorted to. We have examples of its beneficial internal use in the severe irritation attendant on some forms of ecthyma and eczema, as the distressing ecthyma which sometimes follows small-pox, measles, or scarlet fever, and the no less distressing eczema rubrum; in acute pityriasis, and, above all, in the venereal eruptions attended with much irritation, opium is of excellent service.

Opium directly applied, as in the form of diluted tincture or watery infusion, affords temporary relief in some cases of irritation as in prurigo; and in the form of ointment, it is useful in the irritable states of porrigo scutulata. The addition of camphor to such an ointment often increases its effect.

Papaver Somniferum; *Poppy Heads*; *Syrup of Poppies*.—The decoction of poppy heads is of considerable benefit against some local irritations, as in painful states of impetigo, and the irritable condition of porrigo scutulata. It was before noticed (see *Althæa*.) that a decoction of marsh-mallow root, leaves of fox-glove, and poppy heads is of use in the very painful states of impetigo. Syrup of poppies, combined with cream and yolk of eggs, is an old remedy in aphthæ, and where the surface is exceedingly tender and excoriated, is recommended by Bateman.

Petroleum; *Barbadoes Tar*.—Petroleum has an old reputation in some cutaneous diseases. It is recommended in liniment, as one of the stimulating applications fit for porrigo decalvans; which liniment may be made by dissolving it in spirit. Professor Christison says, “it is probably as good an application for lepra, psoriasis, and other scaly diseases, as tar, whose virtues are undeniable.”

Piper Nigrum; *Black Pepper*.—Black pepper is one of the stimulating applications employed in the inert state of porrigo scutulata. The officinal confection may be used for this purpose,

or the pepper, in powder, may be made into ointment in the proportion of four parts of pepper to one of lard.

Pix Liquida, or Tar ; Pix Arida, or Pitch.—Both tar and pitch are used in cutaneous diseases. Both are externally applied, and pitch is, besides, taken internally. There is a tar ointment in the Edinburgh Pharmacopœia, a pitch ointment in the London Pharmacopœia, and the Dublin Pharmacopœia contains a formula for tar-water. The use of these preparations is beneficial, principally in the scaly eruptions, as lepra, psoriasis, pityriasis, and ichthyosis. After the removal of the crusts in lepra, the unguentum picis serves to restore the healthy action of the skin. In the same disease, pitch pills, internally, are believed to sustain the healthy action of the cutaneous system. The internal use of pitch may be carried to a considerable extent, even as far as half an ounce in 24 hours. In pityriasis versicolor, the internal use of pitch is commended, and in ichthyosis it has been pronounced the best remedy. Rayer speaks highly of a pitch ointment in papular inflammations, especially prurigo, and recommends the large internal use of pitch in chronic ecthyma. In porrigo scutulata the tar and pitch ointments are very serviceable. Christison says, “according to my own observation, it (tar) is the best of all topical applications in lepra and psoriasis, and one of the best in porrigo.” The dose of the tar-water, one or two pints.

(*To be continued.*)

PART III.—REVIEW.

On the Alternation of Generations ; or the Propagation and Development of Animals through alternate Generations : a peculiar Form of Fostering the Young in the Lower Classes of Animals. By JOH. JAPETUS SM. STEENSTRUP, Lecturer in the Academy of Söro. Translated from the German version of C. H. Lorenzen, by GEORGE BUSK. London : Printed for the Ray Society, 8vo, pp. 132.

THE work before us is one of the Ray Society's publications. The original work is in Danish. This English translation is made from a German version. The subject it treats of is highly curious. It discloses some singular facts in the mystery of generation ; some surprising contrivances by which, among some of the lower members of the animal kingdom, Nature accomplishes the reproduction of species.

We propose little more by this article, than to make our readers acquainted with Steenstrup's work. It turns on the develop-

ment of the medusæ, popularly termed “jelly-fishes or sea-nettles,” of the claviform polypes, as the coryne and companularia, of the salpæ, well known in the ocean in the form of salpæ-chains, and of the trematoda or fluke tribe.

The term alternation of generation is employed here to designate in a general manner the peculiarities by which the process of reproduction is characterised in these inferior tribes of animals. And the idea proposed to be conveyed by this term is, that among those tribes the parent does not immediately produce its own kind, but an intermediate animal or succession of animals, from which at last the likeness of the parent is reproduced. But in the interpretation of this idea, two things are to be kept before the attention, first, how few and imperfect are the tokens of animal life, as well in the parent and the final offspring, as in the intermediate states of development, the existence of the whole series being chiefly vegetative, and then how many backward and forward metamorphoses of parts take place in the embryos of the most perfect animals in their progress towards the state in which the uterus yields up its product. When we look at the facts detailed by Steenstrup in this light, the deviation from the ordinary law of reproduction which they at first suggest, though still surprising enough, becomes less startling and more reconcileable with our established notions of the uniformity of Nature’s plan in the arrangements of organic nature.

But our readers must judge for themselves. The history of the reproduction of the medusæ will be more easily caught up than that of the other animals referred to in the work before us.

The female medusa of the standard form, that is, as known by the name of sea-nettle, produces ova, which, after undergoing a degree of development in the body of the mother, are thrown off into the water, where they swim about, and at last attach themselves by means of a small suckorial disk each to some fixed body. At the time of their separation from the parent, they are hollow, oval, or suboval bodies, having their external surface covered with cilia, by means of which they move through the water, and are altogether different from the standard medusa, known as a sea-nettle. Each of these hollow oval bodies, after a succession of changes, is destined to pass into a number of young medusæ, which at length attain the standard size and form of the original parent. Our author, then, it will be seen, regards these hollow oval bodies as constituting a distinct generation, intermediate between the standard parent medusæ, and the standard offspring medusæ, into which each hollow oval body at last passes. This is in short an example of what he places before us as “the alternation of generations.” But as it strikes us, the singularity here is not so much that one animal begets another unlike itself, which in turn begets a number like its parent—as that one ovum should give rise to a number of animals. The hollow oval body, it is to be remarked,

does not throw off the germs of the new standard medusæ, but actually passes into these, there being nothing left but the arms or tentacula, by which doubtless nutrition was carried on during the progress of the metamorphosis.

Let us examine the development of some of the other tribes of animals referred to by our author, in comparison with that of the medusæ.

Of the clavate polypes, his account of the coryne is rather conjectural, than made up of certain facts. Of the campanularia, which falls under the same head, he gives the following particulars. "The ciliated embryos which, by their adhesion, lay the foundation of the polypes, originate only from ova, which are developed in the females. These latter are generated between the inner and outer tunic of the polype in the axillary cells, which polypes may consequently be considered as the 'nurses' or foster parents of the female individuals, whilst they are themselves, on the contrary, derived from a previous generation of polypes of a different form, which occupy the extremities of the branches, are of the same shape as the polype of the stem, and must be regarded as of the same kind, although they appear to arise from it by what is called gemination."—Pp. 36, 37.

The campanularia geniculata presents the appearance of a branched stem. There are primary branches and branches in the axillæ of the primary branches. Our author regards this stem as supporting several series of individuals. One of these supposed series of individuals occupies the extremities of the primary branches, having a definite form: another series, also exhibiting a definite, but different form, constitutes the branches in the axillæ of the primary branches, and out of these last grows another series of individuals, having a third definite form; and these last give forth ova, which being ciliated, move about, and finally become attached in the form of a disk to some fixed body, and this by degrees passes into a new branched stem, like that first described. To bring out the alternation of generations, it is here assumed that the primary branches are the first generation, and that the branches in the axilla of these are their offspring, unlike the parent individuals, and that this second generation produces a third, namely, the bodies which arise out of the axillary branches, and that this third generation gives origin to the ciliated ova, which, on their separation, become developed into the likeness of the original branched stem.

We shall only remark on this account, that it is not sufficiently simple for a proof, though, were the principle of alternating generation already fully established, it might justly enough be regarded as falling within such a principle.

With regard to the salpæ, it seems certain that these animals are met with in the ocean, both solitary and also united into chains. Our author brings these animals under the principle of

alternation of generations by adopting the opinion of Chamisso, namely, "that all the solitary salpæ produce associated ones or chains; and on the contrary, that all the associated salpæ are parents of solitary ones; and these again of the associated, and so on." The facts here are plainly imperfect, and Chamisso's view manifestly derives its chief support, in the opinion of our author, from the assumption that the principle of the alternation of generations is already established as a portion of the plan of Nature in the reproduction of a part of the animal world.

Our author considers it as well established, that several of the trematoda, "when young, are not connected with any organ, but enjoy the power of free locomotion in water externally to the animal which, in their future state, as entozoa, they infest." This is the larval existence of these animals, and during it they have been known to naturalists under the generic name "Cercaria." Though it was known that this form was not permanent, our author believes he was the first to discover the ulterior changes which take place on it. In this larval state, these animals have a tail, and in some respects resemble a tadpole, though of a size almost microscopic; and by means of this tail, which is long and flexible, they move briskly through the water; the body is brought into a curve, so that the head approaches the caudal extremity, and then the tail strikes out right and left in innumerable sigmoid flexures, so as to propel the animal onwards in the water. The cercaria echinata is found by thousands in the water, in which the large fresh water snails, the planorbis cornea, and limnæus stagnalis reside. And this cercaria finally penetrates into the body of these snails, and becomes a distoma or fluke. First attaching itself to the body of the snail, it disembarrasses itself of its tail, and passes into a pupa state, the adjacent mucus hardening into a pupa-case. In this sluggish state it continues even for many months. The transition of the lively cercaria into this pupa state was before known to naturalists: what our author claims as his own discovery, is that after this pupa state it penetrates deeper into the body of the snail, becoming a distoma or fluke, a true entozoon. But the point we wish to come to is the reproduction of the cercariæ. The perfect animal, or fluke, produces ova—these ova pass at last into slender yellow worms, termed king's yellow worms, found in great numbers in the interior of snails; and from these yellow worms, according to our author, the new cercariæ are derived, and he considers these yellow worms as the nursing or foster parents of the cercariæ. Further, he thinks he has discovered that these nurses do not come directly from ova produced in the distoma, but are derived from a previous generation of nurses like themselves. He seems, however, to have been hitherto unsuccessful in tracing these parent nurses distinctly to the development of the ova of the distoma—that this is their origin is still an assumption. Our au-

thor's view then is, that the ova of the perfect animal or fluke produce a first generation of parent nurses—that these give rise to actual nurses, namely, the yellow worms—that these yellow worms generate the cercariæ, which pass first into a long-continued pupa state, and thus at last become the fluke or perfect animal. We are still, we think, entitled to remark, that the principle of the alternation of generations is hardly proved by the facts stated, but rather applied, after being assumed, to afford a probable explanation.

We cannot take time to follow our author through his account of the development of other trematoda, in which our readers may rely on finding the statement of many curious facts, but still a lack of clear and distinct evidence of the justness of determining what he terms intermediate generations, to be really distinct animals, and not rather to be regarded as different stages of development of the original germs. We are very far from undervaluing the importance of the researches of our author, and of those who have successfully engaged in the same field of inquiry; but before we adopt a new principle, or a new mode of speaking into the physiology of reproduction, we should wish to see a larger collection of facts, and time given for a careful comparison of these new facts, with those before ascertained in this department, with a view to a just determination of the exact relations which these two series of facts bear to each other. In the mean time, however, we must acknowledge our satisfaction at the evident approach made to the long-sought solution of the mystery of the origin of those living tribes which are permitted to prey upon the vitals of the rest of animal nature.

We shall conclude with some passages from a preface by the author, prefixed to the German translation, sometime after the publication of the original work in Danish:—

“The special subject of this essay is the fundamental idea expressed by the words “*Alternation of Generations*,” or the remarkable and till now inexplicable natural phenomenon of an animal producing an offspring, which at no time resembles its parent, but which, on the other hand, itself brings forth a progeny, which returns in its form and nature to the parent animal, so that the maternal animal does not meet with its resemblance in its own brood, but in its descendants of the second, third, or fourth degree or generation; and this always takes place in the different animals which exhibit the phenomenon, in a *determinate* generation, or with the intervention of a determinate number of generations. This remarkable precedence of one or more generations, whose function it is, as it were, to prepare the way for the later succeeding generation of animals destined to attain a higher degree of perfection, and which are developed into the form of the mother, and propagate the species by means of ova, can, I believe, be demonstrated in not a few instances in the animal kingdom.”
—Pp. 1, 2.

“ In what precedes, the object of the essay, and the modes in which the results at which I believe myself to have arrived, have been obtained, will be sufficiently apparent. The ‘ alternation of generations ’ is, as has been said, the fundamental idea followed throughout the book ; I have wished to represent it in the reality which I am convinced it possesses, from the researches of others as well as from my own, however much it may have been combated, in the one particular in which an ingenious naturalist surmised its existence, even twenty years ago ; I have also been desirous of reviewing this phenomenon and its real significance, so far as I have as yet observed them in nature. With regard, however, to other points which have come out during the course of these observations and researches, viz. that the *cercariæ* are larvæ of entozoa, of the genus *distoma*, and in fact of those species which inhabit the interior of fresh water snails (in the liver, &c.) ; *that* the entozoa pass part of their existence in a state of freedom in the water external to the snail, which they afterwards inhabit, and that they re-enter them from without ;¹ *that* whole established divisions of families of animals must be abolished, since they include only undeveloped forms, or forms which bear the same relation to the true and perfect form of the species, that the ‘ workers ’ among ants and bees bear to the fertile females of those insects ;² and finally, *that* several forms which have been considered as of different species and genera are seen to be stages in the development of one and the same animal, &c.—*All* these must be considered as secondary results,—as facts which are only adduced, in so far as they serve to illustrate the fact of the ‘ alternation of generations.’

“ In order to prevent my being further misunderstood, as I have repeatedly been in my oral exposition of this subject, and in the lately published Danish version of the work, I must remark that the phenomena, upon which my view of the alternation of generations rests, are, as every naturalist knows, new only in part, but that they have in this work received another, and, in my opinion, a natural explanation. They have generally been looked upon as instances of metamorphoses or transformation, the essential objection being overlooked, that a *metamorphosis* can only imply changes which occur in the *same* individual ; but when from it other individuals originate, something more than a *metamorphosis* is concerned. Thus, it is quite erroneous to term a *Scyphistoma* the larval condition of *Medusa aurita*, since a *Scyphistoma* never becomes a *medusa*, but is the *quasi* mother of some scores of them. Sars and Lovén have taken a more correct view of the relation in which these creatures stand with regard to each

¹ Facts which I can now multiply from several other species besides those which I have adduced.

² This may doubtless be assumed of most, if not all the genera of the *Coryne* family, and of Siebold’s division of the “ *Asexual Trematodo*,” &c.

other, seeing in the development of the *Medusae* and *Campanulariae* a series of *generations* undergoing metamorphosis.

“ It is of the more essential importance that the distinction between an alternation of generation and a metamorphosis should be understood, because a metamorphosis may readily occur in one or other of the alternating generations themselves, as we see, for example, in the *Distomata* and *Aphides*. There is no transition from a metamorphosis to an alternation of generations, and a metamorphosis once commenced, cannot be continued beyond the generation, nor from the living or dead individual to another individual. I am not aware that any one has published concerning the alternation of generations of the *salpae*, except those who have been disposed to see something paradoxical in it. Professor Eschricht has recently expressed himself upon it, and is of opinion, that although in appearance it affords an instance of alternating generations, yet that the whole may be more readily explained by supposing a double mode of propagation in the solitary individuals; that is to say, that the *salpae* in their younger state produce solitary young, and at a later period those of the associated or catenated form,—an opinion to which I have more particularly adverted in the proper place.”—Pp. 5—7.

“ I beg it may be observed that I have tried as much as I could to collect scattered fragments into a whole, but that I have always considered this only as the first loose introduction to more extended labours in the same direction :—labours which I had hoped to have seen entered upon by others, whom this essay of mine might probably stimulate to the undertaking. I believe that I have given only the first rough outlines of a province of a great *terra incognita* which lies unexplored before us, and the exploration of which promises a return such as we can at present scarcely appreciate. Several points of this continent have been touched at by naturalists, who have there erected their beacons usually without guessing that they were all in the same region; the recognition of these visited points, the discovery of a few new ones, and the tracing out of their connexion with the adjoining coast line, so that the connected figure of the continent might be more authoritatively laid down, is all that my researches claim. From the beacons erected by my predecessors, I have endeavoured to make a survey of the surrounding country, as far as it was possible for one to do so; I have been able to raise some of them to a greater height, in order to take a more extended view from their summits; and I have wished to render the general impression of the peculiar aspect of the continent derived from these isolated views as correctly as my conception of it would allow, being persuaded that by so doing I threw a clearer light, by means of this general picture, on the separate views of the landscape, and perhaps was thus afforded the only correct mode of viewing them.”—Pp. 7, 8.

PART IV.—PERISCOPE.

SURGERY.

Operation for Harelip at an early period.

A short time ago we made some observations on the practice of operating on cases of harelip, almost immediately after birth, recommended by Professor Dubois, and among other advantages, which we believed to result from the early operation, was the fact that the infant was able to suck, on closure of the cleft, with much greater freedom than before. M. Roux, however, in a late clinical lecture at the Hotel Dieu, mentions a case where he consented against his own opinion to perform the suture on a newly born child, and was surprised to find after the reunion of the division, that suction had become impossible; the mouth could no longer be adapted to the breast. The infant was reared with the spoon, and fell into an alarming state of weakness, although it ultimately did well.

M. Roux explains the circumstance of simple harelip occurring so much oftener on the left side, than the right, thus:—

“Harelip being due to an arrest in the development of the lip, and the two sides of the body being supposed to be endowed with a different degree of vitality, the left, the weaker of the two, more frequently presents the traces of imperfect nutrition.”—*Med. Times, Feb. 7.*

Lithotrity. By SIR PHILIP CRAMPTON.

The first number of the Dublin Quarterly Journal of Medical Science contains the substance of a lecture delivered in the Meath Hospital, in the session of 1845, by Sir P. Crampton, on the operation of Lithotrity.

The views given in this admirable essay must convince all of the absurdity of the *parallels*, which have been so often drawn between the operation of cystotomy, and that of lithotrity, by the bigoted advocates of each operation.

Its object (one on which far too little attention has been bestowed) is the *discrimination of the cases*, which are peculiarly adapted to each proceeding.

No controversy in medicine or surgery has in later years been conducted with more acrimony, and apparent want of candour, than that which has been carried on by the professed lithotritists, and those in favour of the old operation: and it is surprising to see how few of the great surgeons of the present day, have had the good sense, shown by Sir Philip Crampton, to look upon the question dispassionately, and to attempt to establish, as nearly as can be done, rules of guidance in the selection of the one or the other operation in the different cases which present themselves.

The following are among the remarks of the author on this subject:—“Where, I would ask, is the young practitioner, desirous of being on a level with the improvements of the age, and, at the same time, feeling the want of a guide for his practice, to seek for information on this subject? If he looks into the systematic works, he will find the highest authorities in direct opposition to one another, not merely on matters of opinion, but on the facts on which those opinions must be based. If, turning with disgust from statistics, which point to directly opposite conclusions, according to the views of the parties by which they are used, he endeavours to collect the opinions of practical men, his embarrassment is only increased; professed lithotritists on the one hand, and hos-

pital surgeons on the other, taking very different views of the subject ;—the lithotritist maintaining that the new operation is applicable to almost every case of stone, is unattended with any considerable pain, and is, *when properly performed*, quite devoid of danger ; the hospital surgeons denying all this, and asserting that lithotrity is applicable to a very limited number of cases, that it is to the full as painful, and far more fatal than cystotomy.”

With regard to the plan which has been so frequently followed, of drawing a parallel between the two operations, Sir Philip remarks :—“ It appears, then, that cystotomy and lithotrity are not to be considered as rivals, and that the question, as to which of the operations should be the rule, and which the exception, should never be brought into discussion ; each operation has its special province, the boundaries of which (if indeed they admit of being fixed at all) can be determined only by a comparison of a vast collection of facts, carefully noted, and above all faithfully reported, and properly authenticated.”

With this view the author gives a short history of every case of calculus of the bladder which has fallen under his care ; and the successful issue of his cases, (which, however, are not very numerous) is not more favourable than may be anticipated, should a careful discrimination be made between the cases, in which the one or other operation is admissible.

The following is a summary of the cases :—

“ It would appear then, that the thirty-five cases of stone in the bladder, which have applied to me for relief, between the months of March 1834 and November 1845, have been disposed of in the following way :—

“ Two—the Rev. Gideon Ousely, aged eighty-one, and a gentleman, who resided at Coolach, but whose case I did not note—were set aside as unfit for any operation ; both had diseased bladder and kidneys.

“ Four were sent to Baron Heurteloup, and were cured by lithotrity.—See the Baron’s treatise on lithotrity, in which those cases are detailed.

“ Twenty were operated on by me (by lithotrity) ; and nine ditto by cystotomy.—Total, 35.

“ Of those operated on by lithotrity, all were adults.

“ Of those operated on by cystotomy, three were under twelve years of age, two boys and a girl.

“ Six were adults and males.

“ All that were operated on by lithotrity were cured with the exception of Clarke, and in his case, the operation cannot be said to have failed, because it was performed for the express purpose (as stated in a clinical lecture which preceded the operation) of bringing the stone into a condition to be removed by lithotomy, and this the operation fully effected ; the man lived for three months after the last operation by lithotrity, and died of rupture of the stomach caused by an excess in drinking.

“ In the case of the Rev. Mr Druet, the operation (as far as it went) was perfectly successful ; the cure was not completed from causes that had no reference to the operation.

“ All that were operated on by cystotomy recovered—Major Percival, it is true, died three months afterwards, of inflammation of the kidney and testicle, but the wound had nearly healed. It is right to observe that six months previous to the operation, Major Percival had suffered a similar attack of inflammation of the kidney, attended with suppuration, which reduced him to such a degree, that no expectations were entertained of his recovery.

“ It appears, then, that of the thirty-three patients operated upon, nine only were submitted to cystotomy (about one-fourth) ; it is not, however, to be inferred from this statement, that out of any given number of cases of calculus, only one-fourth should be

operated on by cystotomy; such a conclusion would be manifestly erroneous, for if ten or twelve of the twenty-four operated on by lithotrity, instead of being adults, were children and old persons, the proportions might possibly be reversed, and the cases suitable to lithotrity might be reduced to ten or twelve, and the difference placed to the credit of cystotomy—and this affords a striking illustration of the utter uselessness (not to say absolute mischief) of drawing any inference, favourable or unfavourable to lithotrity, from a statement (however accurate) of the mere *numbers* operated on without reference to the *circumstances* of each particular case. It is on this account that I have ventured on the somewhat unusual course of giving a detailed and authenticated list of every case of calculus that has been presented to me within a period of eleven years, (commencing at the time at which I began to practise lithotrity) with the circumstances of each case and the result, up to the present day. The numbers (I admit) are very far from being sufficient to justify any general conclusion being drawn as to the respective values of the old and new operations, but they are sufficient to establish some points of great practical importance, upon which surgical opinion is still much divided.

“ It is proved that when the urinary organs are in a healthy state, stones of great hardness, and upwards of an inch and a half in diameter, may be removed by lithotrity with safety. It by no means follows, however, that in such cases, lithotrity is *always* to be preferred to cystotomy; the choice of the operation must often be determined by various considerations (not purely surgical) connected with each particular case, and having reference to the operator as well as to the patient. A very skilful and successful cystotomist may not have sufficiently practised lithotrity to qualify him to perform it with the same chance of success, with which he might perform cystotomy; and a patient, who might be able to make up his mind to suffer one operation, however painful or dangerous, might be quite unequal to the effort of submitting to several comparatively slight ones.”

The circumstances forbidding the employment of lithotrity are stated as follows:—

“ In hypertrophy of the bladder, the patient is harassed by the almost incessant desire to pass water; the quantity discharged seldom exceeds an ounce, or an ounce and a half; the pain, especially in expelling the last drops, is excessive, the urine is always high coloured, and deposits on cooling, a mucous sediment, frequently tinged with blood. In such a case the mere operation of sounding, or even of injecting warm water into the bladder, may excite a severe, or even fatal inflammation of the organ. I have knowledge of two cases, in which the injection of tepid water into the bladder, (though done with the utmost care) proved fatal in three days, by exciting acute inflammation of that organ. On examination after death, the mucous membrane was found inflamed, thickened and corrugated. In such a state of the bladder it is scarcely necessary to say that lithotrity is not to be thought of.”

In the opposite state of atrophy or wasting of the walls of the viscus; in such a case “ as the bladder never empties itself completely, its walls scarcely come in contact with the stone; the consequence is, that the pain and peculiar sensation in expelling the last portion of the urine (the most certain of the *rational* symptoms of stone) are wanting. Exercise does not cause those bleedings from the bladder, and those painful spasms, of which calculous patients, under other circumstances, complain so much; the urine is loaded, fetid and alkaline; the debility increases daily, the pulse is quick and weak, and there are frequent chills, followed by heat flushes; the bladder is in a state of low inflammation, with diminished vital powers, and the kidneys generally participate in the disease. In such a state of things, M. Civiale justly considers that the operation of lithotrity would almost certainly prove fatal; but I believe the same might be said, with equal truth, of cystotomy.

“ This morbid thinning and atrophy of the walls of the bladder must not be con-

founded with paralysis or want of action from defect of innervation : this last state furnishes no objection to the application of lithotrity, provided sufficient means be employed to rid the bladder of the fragments of the broken calculus.

“ In addition to the morbid states of the bladder, so well described by M. Civiale, I should say, that a contracted and irritable urethra, an enlarged and irritable prostate gland, and above all, a constitution prone to sympathize with a disordered state of the urinary organs in general, and with the urethra in particular, a large and very hard stone, or numerous small ones, forbid the application of lithotrity, and bring the case within the proper domain of cystotomy.”

With regard to children, in whom cystotomy is so generally performed with impunity, Sir Philip expresses a hope, that, considering the great dilatibility of the urethra in young subjects, lithotrity may still be found to succeed in a great proportion of cases.

The author concludes his lecture by a remark, with which every one, who reads the essay from which we have made the above extracts, must agree, “ that, if lithotrity is to be considered as a fatal gift to humanity, it must in this respect be placed in the same category with blood-letting, mercury, and opium—fatal gifts indeed in the hands of ignorance and rashness, but a blessing and means of life in the hands of experience and discretion.”

MIDWIFERY.

We think our readers will be gratified with the perusal of the following paper on Placenta Prævia, which we extract from several recent numbers of the Provincial Medical and Surgical Journal :—

On Placenta Prævia.

(A paper read before the Medical Society of University College, London, on Friday, January 30th, 1846.)

By JOHN ELLIOT WOOD.

The subject which I propose to advance for discussion this evening, is one which has lately engaged the attention of the profession generally, and has been made the basis of much controversy, which, I regret to say, has not in every instance partaken of that calm and philosophical character so indispensable for the elucidation of truth. And whether we regard the subject in a medical or moral point of view, it will be found well worthy of our serious consideration. If we are ultimately to arrive at truth—and that such will be the case, who can doubt?—our progress will be materially hastened by the multiplication of observers and thinkers ; and, with this view, I would request your attention to the matter about to be brought forward.

There are few dangers and difficulties in the practice of midwifery, the advent of which is more to be dreaded than that kind of hemorrhage which necessarily follows dilatation of the os uteri, when the placenta is wholly, or in part, attached over the orifice of the womb ; the hemorrhage arising from the cessation of that intimate connection which exists between the uterine and placental surfaces. Professor Naegelé has well observed, that “ there is no error in nature to be compared with this, for the very action which she uses to bring the child into the world, is that by which she destroys both it and its mother.”

As may well be supposed, these cases of hemorrhage have occupied the attention of writers on midwifery in all ages ; some giving one explanation of their nature, some another ; but all agreeing in their great danger, and the importance of even the minutest variation in point of treatment as regards the established practice, which should even in the smallest degree diminish the risk to the mother and child.

In the very early ages of medicine, we find Hippocrates noticing this complication. In his book *De Morbis Mulierum*, he says "that the after-burthen should come forth after the child, for if it come first, the child cannot live, because he takes his life from it as a plant does from the earth." Dr Rigby's Commentary on this statement is, that "Hippocrates *therefore* evidently supposed that this presentation of the placenta at the os uteri, was owing to its having been separated from its usual situation in the uterus, and fallen down to the lower part of it."¹ The fact is possibly correct, though I cannot conceive by what ingenuity it could be extracted from the above sentence of Hippocrates.

We pass over a very considerable time, during which medicine in general, made but slight advances, until we come to the writings of Guillemeau in 1609. He says that, "when the placenta presents, the most certain and expedient method is to deliver the patient promptly, in order that she may not suffer from the hemorrhage which issues from the uncovered mouths of the uterine veins, to which the placenta has been attached."

There is nothing in this observation that would lead us to believe that Guillemeau was not acquainted with the real nature of placental presentations, though Dr Rigby's inference from it is that he had fallen into the error attributed by this writer to Hippocrates. Dr Lee, however, with more correctness, states that "Guillemeau has made no observations from which it can be inferred that he believed the placenta to have been originally adherent to the upper part of the uterus, and to have descended from thence to the cervix."²

It is generally taken for granted by writers on the history of this subject, that from the time of Hippocrates down to that of Guillemeau in 1609, this erroneous view of the nature of placenta prævia was current, for no reason that I am aware of, except that this medical heresy was promulgated by later observers. Mauriceau, who followed the last writer, and whose treatise was published in 1668, certainly speaks of the placenta when at the os uteri, as being "entirely detached," and urges the necessity of immediate delivery in these cases; but nowhere does he express his belief in the erroneous opinion above alluded to. From one observation, indeed, at page 350 of his work, it is plain that he was aware, at least of the occasional attachment of the placenta to the cervix. Yet Dr Rigby's commentary is as follows:—"These facts prove that Mauriceau considered presentations of the placenta to arise *solely* from its having been separated by some accident from the fundus, and fallen down to the os uteri."³

We next come to Paul Portal, who practised midwifery extensively in Paris, and in 1685 published "*La Pratique des Accouchemens, soutenu d'un grand nombre d'observations*," which was afterwards translated into English. In his sixty-ninth observation he says, "I searched with one finger first, and found the after-burthen foremost, and closely joined round the inner surface of the womb. I again felt the after-burthen fastened to it; I peeled it of, &c." In the forty-third, fifty-first, and seventy-ninth observations, he again expressly points out the attachment of the placenta to the os uteri.

The next author who has alluded to the real nature of placenta prævia is Giffard, whose work was published in 1734. He speaks of it, however, only in a cursory manner, as if of a subject already understood, and concerning which he had nothing of novelty to offer. He makes one remark, which would lead us to infer, that many at that time doubted the attachment of the placenta to the cervix uteri. He says, "I cannot implicitly accede to the opinion of most writers in midwifery, which is, that the placenta always adheres to the fundus uteri." Again, in case 116, "Its adhering to the os uteri was, in my opinion, the cause of the flooding; for the os internum was gradually dilated, the placenta at the same time was separated, from whence proceeded the effusion of

¹ A System of Midwifery, by Edw. Rigby, M.D. p. 249.

² Edin. Med. and Surg. Journal, vol. lvii. p. 382.

³ Midwifery, p. 250.

blood." And in case 224, he says, "The placenta adhered, and was fixed close and round about the cervix uteri, as I have found it in many other cases." Dr Rigby, however, complains that these opinions of Giffard's, apparently so simply and clearly expressed, are given cursorily, and with a degree of hesitation.

Heister, in 1739, says that some of the moderns consider as a cause of hemorrhage the adhesion of the placenta to the mouth of the womb, so that the more the os uteri is dilated, the greater is the separation of the placenta, and the more profuse the bleeding. We next come to Smellie, who in his work published in 1752, relates nine cases to illustrate the adhesion of the placenta to the os uteri. "The edge or middle of the placenta sometimes adheres," he says, "over the middle of the inside of the os internum, which frequently begins to open several weeks before the full time; and if this be the case, a flooding begins at the same time, and seldom ceases entirely until the woman is delivered." Røderer, in 1769, gives a clear account of the symptoms and treatment of uterine hemorrhage, from the attachment of the placenta to the lower part of the uterus. The placenta can be felt, he states, firmly adhering to its inferior segment. He denies the possibility from any cause of the placenta being detached from the fundus uteri, and falling down to the cervix. Levret, in 1761, undertook the somewhat superfluous task of proving,—1st, that the placenta sometimes adheres to the circumference of the internal orifice of the uterus; 2nd, that when this occurs uterine hemorrhage is inevitable in the latter months of pregnancy; and 3d, that the only method of obviating this dangerous accident is to deliver immediately by turning the child. I may so far anticipate myself as to state, that Levret recommended forcing the hand through the placenta, instead of passing it between the uterus and its margin, as Mauriceau and Portal had always done.

Dr F. H. Ramsbotham states that "the placenta presentation was noticed by Guillemeau, Mauriceau, and others, in France; Daventer, in Holland; Bracken and Pugh, who wrote respectively in 1751 and 1754, in this country, besides others; but they all held the opinion that it was not originally apposed to this part of the uterus by nature, but that in consequence of some peculiar circumstances, it had become loosened from its attachment above, had fallen down by its own weight, and had thus accidentally placed itself over the uterine orifice." This observation, however, as regards at least the two former of these writers, we have seen to be incorrect.

To Dr Rigby, in his "Essay on Uterine Hemorrhage," published in 1755, we are much indebted for putting forth more prominently, perhaps, than had hitherto been done, the observations of the preceding writers, and the consequences which would naturally result from them. He insisted strongly on the distinction, so important in a practical point of view, between *accidental* and *unavoidable* hemorrhage; the former being the consequence of numerous accidents which may occur during pregnancy and labour, the latter the result of the adhesion of the placenta over the os uteri. It is erroneous, however, to attribute to this distinguished writer the merit of having been the first to point out this distinction, as we find Giffard, in 1734, and Levret, in 1761, asserting that hemorrhage, in placental presentation, was unavoidable. But if we are compelled, in justice, to deny to Dr Rigby the claim of originality, or at least of priority of observation, we must admit that his work collected, and put in a clear point of view, truths which had hitherto been scattered and obscure, and that he was the chief means of spreading amongst British practitioners a correct knowledge of the subject.

From that time to the present, these views have been adopted by every author of note, and there is now no question either of the seat of the placenta in unavoidable hemorrhage, or that this abnormal situation renders hemorrhage inevitable.

With regard to the *causes* of placental presentations, they are as yet very obscure; and owing to the rare opportunities that we possess of investigation at a sufficiently early

period, and the comparative scarcity of placenta prævia itself, it will be long before we can obtain anything like demonstrative evidence on this point. It is probable that the condition of the decidua, shortly after the entrance of the ovum into the cavity of the uterus, will in some measure influence the situation of the placenta. In the ordinary state this effusion of plastic lymph has already obtained such a degree of cohesion and firmness as to prevent the ovum from passing beyond the extremity of the Fallopian tube down which it has travelled, but it can easily be supposed that if the decidua itself were wanting, or in a semifluid state, the ovum would escape into the cavity of the uterus, and, by its own weight, gravitate to the lower part of this organ, and becoming adherent there, would give rise to a case of entire or partial placental presentation.

Some interesting views on this subject have lately been brought before the profession by Dr Doherty, in the Dublin Journal of Medical Science, July 1845. "Such cases," he says, "may be divided into two classes,—those in which merely a lobule of the placenta overlaps the os uteri, and those in which the placental mass is wholly engrafted on the cervix. In their origin, I apprehend, they are quite distinct. The former arises from the placenta, when originally attached in a natural situation, as denoted by the insertion of the cord, growing irregularly, and thus extending a portion of its margin into the cervical region of the uterus, in which case it gives rise to, for the most part, merely a partial placental presentation, and this is the more usual form of the anomaly. But the occurrence of full placenta prævia, where that substance springs from the whole disk of the mouth of the womb, is, I believe, referrible to a deficiency in the decidua, which should naturally extend across the orifice of the Fallopian tube, and the absence consequently of the support which ordinarily it is thus enabled to give to the ovum as it enters the womb. Thus, in a case, recorded by Dr Lee, of a young woman who poisoned herself in the second month of pregnancy, wherein he found, as in his opinion is invariably the case, the Fallopian tube pervious, the ovum had taken up its position at the os, and was forming its placenta there; and Sir E. Home details the case of a female, pregnant eight days, in whom a small ovum was detected near the cervix uteri."

A question here naturally presents itself, whether a placenta, whose edges extend over the os uteri, can be said to be situated in a normal position, in what portion of the mass soever the cord may be implanted? Again, it is very unsafe to draw any inference, one way or another, from such a doubtful case as that recorded by Sir E. Home. As to the mode of growth of the placenta, however, Dr Doherty is at variance with a great authority; for we find M. Gendrin, in his philosophical treatise on practical medicine,¹ expressing his opinion that this organ increases, not by extending its edges, but by increasing its centre, according as room is made for it by the enlargement of the womb; its margin never making any advance. But M. Gendrin has another theory concerning the source of the hemorrhage in placenta prævia, for the support of which this view is very convenient, if not essential; and it would be well to know, before attaching too much weight to this speculation, whether or not it has the advantage of seniority over its fellow.

The *symptoms* of placenta prævia are decided and unequivocal. The most important of these is hemorrhage; and the time at which this may occur varies very considerably. In the greater number of cases it does not appear before the last month or six weeks of utero-gestation; but instances are on record where flooding has come on at a much earlier period, in the fifth or sixth month, or even sooner. If it take place before this, the case should rather be regarded as one of abortion, as it can scarcely be supposed that any changes in the neighbourhood of the os and cervix uteri could have produced separation of the placenta at that early period.

¹ Paris, 1839, vol. ii. p. 222.

This hemorrhage generally arises without any obvious cause ; the patient has probably been living much as usual ; there has been no excitement either mental or bodily ; no violent efforts or accident to which she can attribute its attack. It is usually more or less profuse according as the patient is near to, or far from, the completion of her pregnancy. Its violence is said to be increased at what would have been a catamenial period in the unimpregnated state ; and when those changes occur in the cervix uteri which immediately precede labour, it is in general very profuse. As labour ensues, the discharge, which may hitherto have occurred at intervals merely, becomes frequently constant, being increased, however, during every pain ; in this particular differing remarkably from accidental hemorrhage, which is controlled by the contraction of the uterus. On examination per vaginam, an irregular spongy mass, communicating a stringy feel to the finger where it has been torn, is found presenting at the os uteri, and in complete cases blocking up the orifice ; in partial cases the edge of the placenta may be felt projecting over one lip of the os, while the membranes and presenting part of the child may be felt at the other. The practised finger will not confound the presence of clots of blood merely, with placental presentation, as the sense of touch communicated by the latter when once experienced can scarcely be mistaken ; it would be useless, therefore, to lay down any express rules in this particular instance. It has been stated by some writers that the abdomen is less distended than usual in these cases, on account of the absence of the placenta in the fundus of the uterus. The observation, however, requires confirmation, and Dr Rigby states that his experience has not as yet led him to such a conclusion.

From the views generally entertained respecting the cause of the hemorrhage, it might, *a priori*, be expected that where the placenta was situated centrally over the os uteri, hemorrhage would inevitably ensue with the gradual obliteration of the cervix, which occurs several weeks before the termination of utero-gestation ; while, on the other hand, where one edge of the placenta merely overlaid the os uteri, the patient might go the full term without the occurrence of this symptom. This view of the case is supported by the high authority of Professor Naegelé, but it cannot be denied that we meet with many instances of hemorrhage occurring early, where the presentation is only partial ; while in complete cases it may be absent till the commencement of actual dilatation. At any rate, as a means of diagnosis as to the exact nature of the presentation, independently of other aid, this symptom is of little value.

This naturally leads us to consider the *source of the hemorrhage* in placenta prævia ; and it will at once be evident that this question is of the very highest importance as directing or modifying our treatment. The principal object in these cases, is to arrest the bleeding, which is at once exhausting the mother and destroying the foetus, whether this be attempted by topical applications in the form of the plug, by artificial delivery, or otherwise ; and it is of course essential, to render our measure of use, that we should clearly understand from whence this hemorrhage proceeds.

It is far from certain, however, that we are as yet acquainted with the exact nature of this serious complication. M. Gendrin, whose views as to the mode of increase of the placenta have been before alluded to, says, that the rupture of the vessels which produces the flooding, is caused by ruptures in, or exudations from, the placenta, and not from denudations of the uterine sinuses. Hamilton was of M. Gendrin's opinion as to the source of the hemorrhage. He says, that, "From the earliest period of his professional life, he has been anxious to show that the hemorrhage in these cases proceeds more from the separated portion of the placenta, than from ruptured uterine vessels." And lastly, Dr Simpson, of Edinburgh, thinks the hemorrhage proceeds from the vascular openings which exist on the exposed placental surface. "Bleeding," he says, "could not readily occur from the venous openings exposed on the interior of the uterus,

because venous hemorrhage by retrogression is here prevented by a variety of anatomical and subsidiary means. On the other hand, the placental orifices are not, like the uterine, surrounded by contractile fibres capable of constricting them; they are in free communication with the general vascular system of the mother, through the medium of the maternal vascular or cavernous system of the placenta, and the blood in that cavernous system readily escapes from the exposed venous orifices on the surface of the placenta, which is, in fact, its natural and *forward* course." He makes the following highly important and interesting observation: that "in common cases of unavoidable hemorrhage, the amount of the attendant flooding seems to be as much regulated by the quantity of placental surface *still* remaining attached to the uterus, as by the quantity *already* separated from it; the degree of flooding depending as much, or more, upon the extent of the means of supply of blood, as upon the extent of its means of escape. And in proportion as we approach nearer and nearer to a total separation of the placenta, the number of its afferent utero-placental vessels is diminished, till at last we find, that when one organ is once completely separated from the other, the flooding is instantly moderated, or entirely arrested, for the placenta ceases to yield any discharge of maternal blood as soon as its own supplies from the maternal system are thus cut off by the disseverment of all its organic and vascular attachments with the uterus."¹

On the other hand, Dr Ashwell remarks, that "it would have been as well if these (placental) orifices and their capacities had been demonstrated. I have never yet seen them, although I have subjected numerous placentae to examination, both before and after injection; nor have I been more successful when I have carefully peeled off an adherent placenta after death. It is, on the contrary, easy enough to show to the satisfaction of the most incredulous, the great openings existing in the lining membrane of the uterus, exactly opposite the attachment of the placenta, and which are covered by interposed decidua. Surely such an organization affords the clearest proof of the source of the hemorrhage in placenta prævia. The foetal economy at no time requires such a supply of blood, as must of necessity be furnished, if vessels or orifices existed in the placenta, capable of pouring out the vast quantity of blood which sometimes, after one gush, proves fatal to the mother in placenta prævia. I do not believe that the placenta ever contains anything like the quantity of blood which is often lost in one or two gushes at the commencement of a placental labour. Another proof of the little probability of bleeding from the placenta when this is partially detached, is furnished by the fact that extensive punctures of its substance by the trocar, when in apposition with the uterus at its fundus, or when implanted over the os, are not followed by hemorrhage."²

Dr Lee coincides with the writer last quoted, in believing that in uterine hemorrhage the blood flows from the venous openings on the lining membrane of the uterus, and also from the arteries that are laid open by the separation of the placenta.

Mr Ingleby gives a case in which a portion of the placenta was cut away by the practitioner, on account of its obstructing the mouth of the womb, and yet no discharge of blood escaped from the cut surface.³ And most of the older authors, as far as I know, attributed the source of the blood to the large valvular openings on the surface of the uterus; unless, indeed, we can except Giffard, who in his 116th case, says, "as the os internum was gradually dilated, the placenta at the same time was separated, from whence proceeded the effusion of blood." If this be the correct interpretation of his meaning, it would be curious as exemplifying the fact, that in ninety-nine cases out of a hundred, so called discoveries, are merely revivals.

¹ Medical Gazette, October 10, 1845.

² Medical Gazette, November 7, 1845.

³ Lancet, vol. i. p. 943, 1839.

Unless we can suppose that a gradual effusion of blood takes place from the placenta and accumulates in the uterus, it seems hard to account, on this view, for the profuse gushes which so frequently attend separation of this organ, whether manual or otherwise; and many more observations are necessary before we can take for granted a theory which has so much of positive evidence, as well as of seeming improbability against it. In cases of extensive lacerations of the placenta, while the extent of its means of supply of blood, (according to Dr Simpson's view,) is very considerable, the hemorrhage in the vast majority of cases is trifling, and not to be compared with what occurs in merely partial separation.

We now come to speak of the *treatment* when hemorrhage occurs at the commencement of labour, arising from the abnormal situation of the placenta over the os uteri. Time would not allow me here to enter fully into the management of those cases in which flooding takes place before the accession of labour.

Guillemeau advocated the practice of delivering immediately, by passing the hand into the uterus, and extracting the child. This was his practice also where the placenta did not present, but had become detached by some accidental cause from the fundus. In cases where the placenta had not entirely escaped, and the membranes were not ruptured, Mauriceau advised the part of the placenta which presented to be put aside with the hand, the membranes to be ruptured, and the delivery completed by turning. When the placenta was entirely detached, he brought it away before the child. Portal separated the placenta from the os uteri, ruptured the membranes, and turned the child. If the patient were plethoric, he recommended the use of the lancet. Giffard was of opinion that the only thing to save the patient was a speedy delivery. Røederer recommends the dilatation of the os uteri to be slowly and cautiously effected by the hand, which is to be passed between the placenta and uterus, and turning is to be immediately accomplished. Levret advocated immediate delivery by turning. He remarked that uterine contractions invariably increased the hemorrhage where the placenta was implanted over the cervix, and that the contrary effect was produced where the placenta adhered to the fundus, and had been detached by an accidental cause. He considered it prudent, therefore, to rupture the membranes in the former case, but not in the latter. He recommended passing the hand through the placenta.

The practice of rupturing the membranes, by which alone in many cases the hemorrhage is stopped, is generally attributed to Puzos, and was claimed by him as a recommendation of his own, but the merit of introducing it is undoubtedly due to Mauriceau. Smellie recommended rupture of the membranes, so that the uterus might contract and squeeze down the foetus; and if this were not sufficient, turning was to be had recourse to as soon as was practicable. He alludes favourably to bleeding in some instances. Plenck, in 1781, says—"Haec menorrhagiae species est periculosissima, nullo remedio, sed solâ foetus extractione, curanda." Dr Rigby recommended passing the hand through the placenta, on the ground that not more than was actually necessary for the introduction of the hand would thus be separated. He delivered by turning. It is probable that he was in the habit of using the plug, though it is not actually so stated in his work. Meriman and Denman advised turning as soon as possible; the former passing through, or by the side of, the placenta indiscriminately. He says the operation should be slowly performed, and the patient's strength recruited from time to time by the administration of nourishment.

Davis insists strongly on the necessity and expediency of plugging the vagina, and recommends it, not merely to rescue the patient from profuse uterine hemorrhage, but also as a powerful means of exciting the uterus to contraction by its mechanical irritation of the vagina and os uteri. He says the hand should not be passed through the centre of the placenta, because it would only separate still more of this organ from

the uterus, and diminish greatly what little chance remains of the probability of saving the child. Thus we see practitioners, so distinguished as Dr Rigby and Dr Davis, each recommending an opposite practice, and using the same arguments to give weight to their adverse opinions.

Dewees recommends that the hand should be passed between the placenta and membranes, and the uterus, to the fundus; that the membranes be ruptured there, the child's feet seized, and the delivery completed. The advantages of this method are:—1. Much less violence is done to the connection of the placenta with the uterus, and thereby the risk of increased hemorrhage is prevented.—2. Much time is saved.—3. We arrive at the feet, and can command their descent with much more certainty.—4. We prevent an atony of the uterus by allowing the waters to escape gradually and at will.—5. It prevents the foetus from being entangled with the placenta, and thus does away the inconvenience that would arise from the increase of bulk, as in the method formerly practised the size of the placenta is added to that of the child.—6. It prevents the rude and sudden separation of the placenta from the uterus.

These reasons are amply sufficient to justify the practice advocated by Dr Dewees, independently of any arguments which might be adduced against the opposite plan of treatment. For,—1. While an attempt to penetrate the placenta is being made, the flooding continues or increases.—2. The further violent separation of the placenta from the cervix uteri is inevitable.—3. The hole made by the hand is too small to admit of the passage of the child, and in the act of delivery the whole placental mass must become entangled with the foetus, and thus be separated.—4. By lacerating the placenta we increase the risk of hemorrhage, in spite of some apparent exceptions to this rule.—5. It is an extremely difficult operation to force the hand through the placenta, even when placed on an unyielding surface; but this difficulty is much increased when the organ is attached to the cervix uteri.

The most approved plan of practice in the present day, in ordinary cases of placental presentation, unaccompanied by any peculiar complication, is as follows:—

1. In the commencement of labour, after making an examination, and satisfying one's self of the nature of the case, the vagina should be filled completely with three or four plugs, in order to control the hemorrhage, and give time for the dilatation of the os uteri without exhaustion to the mother. The external plugs can be removed from time to time, in order to allow of an examination of the state of the case, and to facilitate the introduction of the catheter, which will probably be required. This first stage of the labour may last forty-eight hours, or even more.

2. When the os uteri is moderately dilated, (if the hemorrhage be great, we need not wait till complete dilatation takes place,) the hand should be passed, in the manner advocated by Dewees, but first recommended by Portal, in 1685, and Peu, in 1694. The arm of the operator takes the place of the plug, and restrains the hemorrhage. It is important to bring the feet through the os uteri quickly, in order that the breech of the child may make pressure on the bleeding placenta; with this exception the operation should be slowly performed.

3. After the delivery of the child, the placenta is generally found lying detached in the vagina or uterus, and is to be removed. The usual precautions, as to giving nourishment and stimulants, are to be taken as in other important obstetric operations. These need not be detailed here.

This practice is recommended and adopted by every practitioner of note at the present day, in these, the most favourable cases of placenta prævia, as offering a reasonable chance of safety both to the mother and child; but instances were so numerous in which, owing to common and frequently recurring complications, or from neglect of the appropriate treatment in an early stage of the labour, or both, this treatment was unavailable

to save either mother or child, that it became a desideratum to discover some modification which should promise more successful results.

Cases occurred from time to time, in which, after profuse and long-continued hemorrhage, the unassisted efforts of the uterus sufficed to throw off the placenta, which was thus expelled, and the bleeding having ceased, time was allowed to the mother for recovery from the consequent state of exhaustion, before the foetus was naturally or artificially delivered. In the great majority of these cases, violent hemorrhage ceased immediately that the placenta was entirely detached, and in very many of them even all oozing of blood was put a stop to by this last but successful effort of nature.

(To be continued.)

PART IV.—MEDICAL MEMORANDA.

CORRESPONDENCE.

MEDICO-CHIRURGICAL SOCIETY.

TO THE EDITOR OF THE NORTHERN JOURNAL OF MEDICINE.

SIR,—In the number of your Journal for the present month, you have inserted a letter, addressed by Dr Simpson to the President of the Medico-Chirurgical Society, relative to certain alleged inaccuracies in my reported cases. This letter, fully a fortnight before the time of publication, the Council had unanimously recommended Dr Simpson to withdraw, and at the meeting on Wednesday last—Dr Simpson being present—the Society resolved to omit all notice of it in their minutes. It is needless for me to make any remarks upon the position in which printing the letter under such circumstances, as part of the proceedings of the Society, has placed Dr Simpson and yourself.

The charges of inaccuracy relate to a case of amputation, and a case of aneurism. With regard to the former, Dr Simpson originally informed the Society that exfoliation of the bone had taken place, but being corrected as to this mis-statement, he has restricted his allegation to the continuance of discharge having “debilitated” the patient for many months, while in my notice of the operation, a fortnight after its performance, a satisfactory result was anticipated. Now the truth is, that the wound healed almost entirely by the first intention, and never occasioned the patient any trouble. But supuration took place at a different part of the thigh, where pain had been felt previously to the operation, and an incision made here by my assistant, Dr Cameron, to let the matter escape, proved slow in healing, not from any local obstacle, but obviously from the deranged state of general health. The patient had a cough before the operation, and for a long while after, it excited serious apprehensions for her life, by the frequency of pulse and extent of emaciation. She gradually improved in strength; and, as she did so, a corresponding improvement was observed in the sinus. It is my sincere conviction, that if amputation had been performed through the shaft of the bone, instead of its cancelled extremity, she would not have survived the operation. The case, therefore, in my opinion, so far from invalidating, tends strongly to confirm the principle of practice it was adduced to support.

The operation for aneurism is said to have been represented as successful, though followed by a fatal result. Now, this case was mentioned, not to support the established

principle of curing aneurism by obstructing the artery concerned, through means of ligature or compression, but to illustrate the safety of the former method when employed with certain precautions. It was stated, that I had tied the femoral artery seven, I am now able to say *fifteen* times, without ever causing any alarming symptom; and although all the patients had continued to labour under the disease, or ultimately died from it, instead of being all, with one exception, relieved from it, the value of this experience would be nowise lessened. I stated that, "the artery was tied on the 30th of April, and though no unpleasant symptom followed, the swelling was slow in undergoing absorption; so that when he was dismissed on the 3d of June, there still remained some swelling of the limb. He nevertheless was able to resume his employment, and perform a full share of active duty; but about a fortnight ago, observed a swelling in the calf of the leg, which has since opened spontaneously, and discharged a large quantity of matter, mixed with coagulated blood—no doubt the remains of the extensive effusion which existed previously to the ligature of the vessel." I then fully expected that the patient would not suffer any more trouble from the disease, but soon afterwards finding that hemorrhage had occurred to a large extent, considered it necessary to amputate the limb, when, so far from showing any desire for concealment, I used much persuasion to induce the patient to leave his comfortable home, and go into the clinical ward of the hospital, where he was treated, until his death, and publicly examined after it. The paper containing a reference to this case was sent to press longer than usual before the time of publication, from the Editor wishing it to have the first place in the first number of the Journal, and was therefore printed before any suspicion of an unsatisfactory termination had been excited. But in a subsequent number (for September 1842,) I noticed the result in the following passage of another paper relating to the subject of aneurism. "In some remarks on the ligature of the femoral artery, published in the first number of this Journal (January 1841,) the object of which was to enforce the importance of some minutiae in the process, I stated, that in no instance had any of my patients suffered the slightest bad consequence from the operation, and I am still able to say so. It is true, that in one case, the aneurism being large and diffused, was not cured, though, in the following year, dissection showed that the artery had been obstructed for several inches at the part where the ligature was applied. But this result of course has nothing to do with the success of the operation for obstructing the vessel."

Having now explained the grounds upon which Dr Simpson has thought proper to impugn my accuracy, I leave the profession to determine how far such an attack admits of being justified.—I am, Sir, your most obedient servant,

JAMES SYME.

Mr SYME to the PRESIDENT of the Medico-Chirurgical Society.

Charlotte Square, 5th March 1846.

SIR,—At a late meeting of the Medico-Chirurgical Society, when I was not present, the Professor of Midwifery stated that certain cases reported by me were not consistent with fact. Conceiving that this statement must have proceeded from the heat of discussion, I was satisfied with transmitting, through you, Sir, a simple denial of the inaccuracies alleged, and fully expected that the Professor of Midwifery would have taken the earliest opportunity of expressing regret for his unfounded imputations. Instead, of this, I have learnt that at the meeting yesterday evening, he repeated his accusation, in terms, if possible, still more offensive than before, and deposited it in a written form with the Society.

In these circumstances, the only course left for me is to request that the Society will thoroughly investigate the whole affair, and ascertain, beyond the possibility of question, whether or no the Professor of Midwifery had any ground whatever for his allegations.

I do not presume to express any opinion as to the propriety of the Society accepting statements which, if resting upon the individual responsibility of their author, would not have occasioned me any concern, but which emanating from an association of practitioners united together for the promotion of medical science, seriously affect my character as a member of the profession, and as a clinical teacher. The Society having permitted this injury to be inflicted, will, I trust, not hesitate to grant the simple act of redress which I now very respectfully beg to solicit. I have the honour to be, Sir your most obedient servant,

JAMES SYME.

The SECRETARY of the Medico-Chirurgical Society to Mr SYME.

129 George Street, 2d April.

MY DEAR SIR,—I have been unable sooner to give you any reply to your letter of the 5th March, addressed to the President, because, in fact, it was finally disposed of by the Society only last night.

Your letter was of course brought in due form before the Council, who, after a most deliberate consideration of it, came to the conclusion that, to enter at full length into the inquiry, which you requested, was not expedient for the Society, but that it would be highly proper to endeavour to obtain from Dr Simpson some modification or retraction of the letter from him, which gave rise to your letter of the 5th. Accordingly, a deputation of the Council waited on Dr Simpson, who stated to them, that as he had been the means of placing the Society in an awkward position in relation to you, so he considered it his duty to extricate them from their dilemma, and therefore he placed it in the hands of the Council to do with his letter what they pleased. Accordingly, the letter of Dr Simpson, and all the proceedings subsequently founded on it, were ordered to be deleted from the minute-books of the Society, and the draft minutes, wanting Dr Simpson's letter, were read and approved of by the Society last night.

With respect to its having appeared in print as part of the *res gestæ* of the Society, to which you called our attention in Infirmary Street to-day, all that I can say is, that it was by no aid of mine, or of the Society, that this publication took place, because I was strictly forbidden by the Council to suffer the letter to pass into any hands until the negotiations were completed, and I, of course, obeyed these orders.

You will thus see that the Society have put an end to this discussion, so far as they are concerned, by expunging the whole affair, subsequent to your first letter, from their minutes. Believe me, yours faithfully,

(Signed) DOUGLAS MACLAGAN.

TO THE EDITOR OF THE NORTHERN JOURNAL,

SIR,—I beg to transmit to you the two following notes of which we spoke.

I am sorry to see your pages so uselessly occupied, and the more so as Mr Syme now allows, after all the altercation on the matter, 1st, That the amputation case was virtually, as I had stated it,—an instance of premature reporting; and, 2d, That the aneurism case was really fatal in its result.

Mr Syme now states that 18 or 19 months after publishing the aneurism case, as one in which recovery was "ultimately effected," he published it again as ultimately fatal. No one, but the reporter, could, I fear, know that the two cases as published are identical. In the second report the man's name is not given, nor any one circumstance to prove his identity; both reports omit all mention of the amputation; in the last report, the dissection is stated to have been performed the year "following" the operation; in Lockie's case the leg was operated upon, amputated, and dissected during the currency of the same year, viz. 1840. Yours, &c.

J. Y. SIMPSON.

Edinburgh, 24th April 1846.

52 Queen Street, 22d April.

MY DEAR SIR,—I have not had time to fulfil my promise of writing you, as you wished, on the subject of your late letter to Mr Syme.

It appears to me that your letter unintentionally conveys the impression that the Society "deleted from their minute-books" my letter, and not Mr Syme's letter, to the Council. My letter having been addressed to the Society and never having been entered on their minute-book, could never be deleted from it. Mr Syme's last letter was addressed to the Council, and has, as I understand, been since deleted from their minutes—the minute-book of the Society and Council being, as you informed me, separate and distinct. As it stands, the passage is ambiguous, and leaves the impression that my letter alone, and not Mr Syme's, was expunged; and hence, will naturally lead readers, unaware of the facts, to the conclusion, that the Society or the Council, gave their sanction to what Mr Syme stated in opposition to what I had stated, which, as you know, is not the fact.

The Society properly refused to pass any judgment on the subject: and it was for the sake of the peace of the Society alone, that I consented to allow the Council to do whatever they might deem fit with my letter.

If you have an opportunity of altering your note, I would feel further obliged by your mentioning, that I most explicitly stated to the committee of the Council, when they waited on me, that my letter, though not recorded in their minutes, would still in all likelihood be published. I stated to the committee that (contrary to my earnest protest,) Mr Syme's first letter was allowed to be published; and the whole question thus removed from the Society, and laid before the profession at large; and whilst I might easily have set matters right, if the subject had been confined to the Society, I had no apparent means left of setting myself right with the professional public, except by allowing the publication of the letter.—Yours very truly,

J. Y. SIMPSON.

To Dr D. MACLAGAN.

129 George Street, Wednesday, 22d April.

MY DEAR SIR,—I am sorry that my letter should have been the means of conveying any erroneous impression regarding the recent doings of the Council in the matter of the letters from you and Mr Syme. I should have thought, however, that the expression, which I purposely used, viz., "the draft minutes wanting Dr Simpson's letter," would have shown distinctly that your letter had never been entered on the minutes, and therefore, was merely omitted, not deleted.

You are, to a trifling extent, in error, in supposing that Mr Syme's letter was ad-

dressed to the Council, whilst yours was addressed to the Society. Both the one and the other were, in accordance with common usage, addressed to the President, but Mr Syme's alone appeared on the minutes of the Council, (who, by law, manage the private business of the Society,) because it was the proximate cause of the Council's being summoned to consider the matter. Yours was never entered in the books, because the Council had adopted the resolution to get the whole transaction out of their own and the Society's minutes, before the time came for entering yours.

Of course, I need hardly say that I never intended to convey the idea that the Council passed any judgment on the matter in dispute between Mr Syme and yourself. At their first meeting, they were, I believe, nearly unanimously of opinion that Mr Syme's request for an investigation of the whole affair was quite reasonable, but they did not think it expedient for members to involve the Society in such a proceeding, and therefore they took the course of requesting you to permit the withdrawal of the letter. It was their intention, had this failed, to have summoned a *pro re nata* meeting of the Society to consider the whole affair, but that was fortunately avoided by your placing your letter in their hands, to do with it what they thought would, to use your phrase, "be for the peace of the Society," or, as I have already expressed it, "to free the Society from their dilemma."

I remember perfectly your mentioning, at the second interview which the deputation had with you, that whilst you placed the letter thus in our hands, you thought it right to state that it had already been granted for publication. I do not think you said to whom, but that is unimportant.

I hope that the above explanation will prevent any one from misinterpreting my letter to Mr Syme, and I sincerely trust that this business will, as speedily as possible, be consigned to oblivion. Believe me, yours faithfully,

DOUGLAS MACLAGAN.

Dr Simpson.

Case of Cesarian Operation. Communicated by G. W. BALFOUR, M.D.

About a fortnight ago, a cesarian operation was performed here by the Professor of Midwifery. The woman died 24 hours afterwards. The child is still alive.

On examination, no trace of inflammation, nor even attempt at union of the wound, was found. The woman seemed never to have recovered the effects of the shock and hemorrhage at the time of the operation. Her bones were in an advanced stage of mollities ossium, yet there was a considerable deposition of osteophyte within the skull. Her age was 27, and it was her first child.

The symphysis pubis was quite moveable, and the bones so soft that they could be separated, and the outlet enlarged, by merely separating the fingers after introducing them within it. The correct measurements of the pelvis shall be sent after it has been prepared. Meanwhile, I may mention that the Professor himself stated, that though he had thought the child dead, he most certainly would not have performed embryotomy! Yet, here, the operation is looked upon as quite justifiable.

Vienna, 23d Feb. 1846.

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PART I.—ORIGINAL ARTICLES.

A Lecture introductory to a Course of Military Surgery. By
SIR GEORGE BALLINGALL, M.D., F.R.S.E., Professor of Military
Surgery in the University of Edinburgh, &c.

(Delivered 4th May 1846.)

GENTLEMEN,—In entering upon the present course, I have to express my regret that the state of my health has compelled me to postpone it from the winter to the summer session. I have at the same time to offer my acknowledgments to the Royal College of Surgeons, and to the Directors General of the Medical Departments of the Army and Navy, for so kindly and promptly acquiescing in the arrangement which I was reluctantly obliged to propose, and for having agreed to extend to the course, *pro hac vice*, that recognition which it has hitherto enjoyed in their several codes of education.

Although my absence has been prolonged, I trust it will appear that my time has not been mis-spent, and that I have not lost sight of the duties of this Chair.

By lecturing every day, instead of three times a-week, I shall be enabled to complete the number of lectures which I have heretofore delivered; but those who have attended me in former years are aware that, with the periodical examinations of the class—with occasional meetings in the museum—with daily meetings during the performance of the operations, and with visits to the Military Hospital in the Castle, I have been occupied, upon an average, full four days a-week; and I have felt, particularly of late years, that this is all too little to enable me to do justice to my conceptions of the duties of the Chair—to do justice to the great in-

crease of my *materiel*, and to the numerous communications which I have received from my pupils in every quarter of the world.

In entering upon the business of my course, I have upon former occasions, like most other teachers, adverted to the origin, the progress, and the importance of my department, and have given a hasty sketch of the lives and writings of those distinguished individuals to whom we are indebted for the progressive improvement of military surgery, more particularly in France and in England. Amongst the writers of the former nation, I have noticed particularly Ambrose Paré, who, for more than thirty years, followed the fortunes of the French army, and the late Baron Larrey, the faithful follower of Napoleon in all his campaigns. These men were the companions of princes, the confidential advisers of generals, and the idols of the soldiery. As regards our own service, again, I have sketched the progress of military surgery from the time of Colnet and Morstede, the professional attendants of Henry the Fifth, down to that of Guthrie, of Hennen, and of Hutchison—men who have possessed the enviable distinction of giving their professional assistance to the wounded under a Nelson and a Wellington. Much of all this has, however, been already laid before the public in my “Introductory lectures” and “Outlines,” and instead of recapitulating a twice told tale, I propose, upon the present occasion, to give you a short notice of those numerous Hospitals and Schools which I have recently taken occasion to visit on the Continent and elsewhere, particularly those in the capital cities of Prussia, of Austria, of Belgium, of France, and of Egypt, where large bodies of troops are quartered, and in many of which schools for the special instruction of military surgeons are established.

This notice, brief as it must be—partly from the little time I could devote to my first visit, and partly from the loss of my notes on the second,—will, I trust, prove more interesting, and also more instructive to you, by directing such gentlemen as may have the opportunity of visiting the Continent to those localities where military hospitals are to be found, and where the instruction of army surgeons is more particularly an object of attention.

In the autumn of 1843, I visited, in company with my son, who is educating to the profession, the great hospital at Hamburgh, where I was sorry to find that the place of chief surgeon had been recently vacated by the death of Fricke. This hospital is said to have been built for one thousand patients, but, at the time of my visit contained fifteen hundred, and was consequently much overcrowded. Here were under treatment a great many accidents from the rebuilding of the city; numerous cases of fracture, some of them treated with peculiar pieces of apparatus, which I consider as well entitled to your attention, and to which I shall, in the progress of the course, have another opportunity of adverting.

At Berlin, as may be supposed, there is much to interest the

military surgeon. Here, after seeing the anatomical and pathological museum of the University, by the kindness of Müller, under whose charge it is placed, we visited the barracks and hospital of the Cadet corps. In this institution were about 320 pupils educating for the army, and it seemed, in many respects, a good school for young soldiers. Their fare was coarse, and not over abundant for young men whose appetites are sharpened by long drills. In the hospital were eight young gentlemen labouring under dysentery, one of them in a dangerous state; and this it appears, is sometimes a very formidable disease in the establishment.

Our next visit was to the barracks and hospital of the 2d Regiment of Lancers, then in garrison. These buildings were originally private houses, and not well adapted to their present purposes. Into this hospital were received the sick of detachments from other cavalry regiments sent here for instruction; but the number was altogether limited, and the cases afforded no room for remark. Into the garrison hospital are received soldiers employed as servants to the officers of the garrison, those employed on staff duties, and others who have no regimental hospital in the city. This hospital, although not a building of superior construction, was sufficiently clean, and apparently well regulated. Its inmates, none of whom presented any remarkable cases of disease, were about seventy or eighty; and from this limited number, it may be inferred, that the system of regimental treatment, so highly appreciated in our service, is carried farther in Prussia than in some of the other continental armies. The "Charité," or great civil hospital, contains about 600 patients, and an adjoining building, of which a large part is fitted for the reception of lunatics, contains about 400 more. In this hospital were many patients with fractures of the inferior extremities, treated in the extended posture, and numerous venereal patients, in whose treatment no mercury was used. Dr Grimm, the king's physician, proposed, on the morning of our visit, to have performed the operation of lithotrity, but was obliged to postpone it in consequence of his patient being attacked with diarrhœa.

The "Institution of Frederick William the Second," one of the royal establishments of this metropolis, is appropriated to the reception of the young gentlemen educating for the medical service of the Prussian army. Of their number, I find I have not taken any memorandum, but they are here lodged, boarded, educated, and, if I recollect, furnished with books, at the public expense; and, so far as I could judge from a cursory visit to some of their quarters, they seemed to be well accommodated. To this establishment, as well as to several of the barracks and hospitals of Berlin, I was conducted by Dr Wald, surgeon of the Cadet corps, who speaks and writes English well, and to whom I am indebted for much valuable information relative to the medical department of the Prussian army.

At Dresden is to be found an anatomical collection in a curious old house, partly lined with tapestry, and containing some good pictures. I was surprised at the extent and value of this museum, as I had heard comparatively little of Dresden as a medical school. It contains many interesting pathological specimens, a large collection of skulls of different nations, casts of the heads of eminent individuals, and several remarkable monstrosities. Here we visited a barrack, and a small military hospital in the suburb, recently erected, capable of containing 160 patients. The wards were of an unusually small size, but neat and clean; the bedsteads of iron, with iron-wire net-work bottoms. And in this capital I was also struck with the clean, smart, soldier-like, and healthy appearance of a regiment of Saxon dragoons.

On entering the ancient city of Prague, we saw numerous bodies of troops at drill, dressed in blouses, or smock frocks, a fashion of which I greatly approved, as being well suited to the heat which then prevailed, in the month of August. The military hospital here was formerly a college of Jesuits, and contains about 400 patients. The wards were overcrowded, but not over clean, little corresponding with the spacious, cleanly, and imposing appearance of the lobbies, staircases, and corridors, one of which, says the guide-book, is 600 feet long. There is, I believe, a separate hospital for the Artillery, which I had not time to visit.

At Vienna, we find the "Josephinum," so called from its founder, the most splendid of all institutions for the instruction of military surgeons, originally founded and largely endowed for this special purpose, "*et omni suppellectile salutaris artis instructum.*" Here there is a valuable collection of anatomical and pathological preparations; it is particularly rich in specimens of diseased bones, and I remarked more instances of bony ankylosis of the joints than I had seen in any other collection—several of the hip and knee joints. Here is a collection of the famous wax-work preparations made at Florence. The figures are numerous, some of them indifferent, and others such perfect representations of nature, that I expressed an apprehension lest the young men should begin to consider it superfluous to dissect. I was particularly struck with a figure, of the natural size, representing the lymphatic system, and find it difficult to conceive how such a figure is executed. Attached to this institution, is a large military hospital, containing about 500 patients. It is occupied by the soldiers of the garrison, and affords an excellent clinical school for the instruction of the pupils. Immediately contiguous to it is a barrack, which I visited, capable of containing 10,000 men. At the Josephinum, we were received by a venerable old army surgeon, the Director of the institution, and were conducted over it by Hager, from whom I received much information, and who seems to have devoted much attention to surgical instruments, and to the construction of surgical machinery. To this gentleman I am indebted for the

Medical Regulations of the Austrian army, and for his valuable work on Bloody Tumours.

In the neighbourhood of the Josephinum, is the "Allgemeine Krankenhaus," or great civil hospital, consisting of ten or twelve squares or courts, and capable of containing upwards of 3000 patients, perhaps the largest hospital in the world,—much too large, in my opinion, for the advantageous treatment of the sick. Over this we were conducted by Rokitzky, the professor of anatomy, who very kindly showed us the anatomical and pathological collection attached to it, under his charge. This contains many rare and many valuable specimens. Amongst others, I remarked, what I had not seen before, a bony ankylosis of the lower jaw, but the history of the case was unknown. I observed particularly, in this hospital, the venereal wards, which were much too crowded, and the ophthalmic wards, which were under the charge of Professor Rosas. He took much pains to explain to us his practice, and to show us his collection of instruments, which is very complete, containing those of which he disapproves as well as those which he uses. He has also deposited in the hospital a very pretty collection of wax-work, illustrative of the diseases of the eye, and a collection of works on ophthalmic surgery. To the kind offices of Hager, Rokitzky, Rosas, and others, at Vienna, I was introduced by my old friend Dr Vivenot, whom I was glad to find in the enjoyment of an extensive practice, and in the possession of the respect and esteem of his professional brethren. For a more minute account of the hospitals and medical schools of this great empire, you will do well to refer to Wilde's "Austria, and its Institutions," a work, so far as my observation goes, remarkably accurate.

At Nuremberg, we saw a new hospital in the progress of erection; a plain neat building, well situated in the suburbs, with a good spacious airing ground. It was difficult to judge of the interior arrangements in its then unfinished state, but the wards seemed small and rather low in the roof.

At Wurtzburg, the Julius hospital was founded, and said to be richly endowed, by one of the bishops, and has a small botanic garden attached. The house contains about 200 patients, is clean, and apparently well regulated. A range of wooden presses runs along the corridor, in which the patients' clothes are deposited, each press marked with a number corresponding to the number on the patient's bed in the adjoining ward. I was much disappointed at finding that Dr Textor was absent from town on professional business. He is the professor of surgery at Wurtzburg, and from him I should probably have got information about the medical school which exists here.

At Frankfort, the hospital is a new building, capable of containing about 200 patients, and I observed the same arrangement as at Wurtzburg, of having the patients' clothes deposited in

presses in the lobbies. I was sorry to find that Dr Warrentrap, the chief surgeon, was sick, but we were very politely shown through the house by the hospital master.

At Wiesbaden, I visited the Military hospital, in company with my friend Dr Girgins, for whose acquaintance I am indebted to Sir James M'Grigor. Unfortunately, the surgeon was not to be found, and the hospital sergeant, like a good soldier, true to his instructions, would not permit us to enter the wards, but gave us, not without some difficulty, the privilege of looking into them through the doors and windows. The building is new, apparently well constructed, and said to be well regulated. The number of patients was very small, an index of the healthy state of the garrison.

At Antwerp, the Garrison hospital is an old building, occupying the sides of a quadrangular court, capable of containing about 400 patients. Many of the wards are narrow, low roofed, and inconveniently long, containing from 40 to 60 bedsteads. It appeared well regulated, and in good order, but does not show to advantage, in comparison with modern hospital buildings, and is situated in a crowded part of the town. Here were several cases of fever, some of them intermittent, which is a prevalent disease amongst the troops. We also saw many cases of ophthalmia, and of the venereal disease. The former had prevailed in the army to a great extent, and proved very obstinate. From what I observed, I should fear that it was hardly treated with sufficient activity in its early or acute stage,—in the chronic stage with a granular state of the palpebræ, of which I saw several instances, the nitrate of silver was used freely. In venereal cases, mercury was used to a limited extent. A patient who had undergone amputation of the forearm by the circular incision—the operation generally adopted—had an excellent stump, but, although six weeks had elapsed from the date of the operation, the ligature was not yet detached.

At Brussels, the Military hospital is, as in other continental cities, a garrison hospital. It is comparatively a modern building, with good, lofty, spacious wards, and airing grounds for the use of the patients. The prevalent diseases, venereal complaints and ophthalmia; gonorrhœal ophthalmia, of which I saw two instances, is said to be frequent, and believed to be produced by the patient conveying the matter from the urethra directly to the eye. I did not observe any peculiarity of treatment, but I may remark that here, as at Vienna, one of the wards is painted green for the reception of ophthalmic patients. In the civil hospital, we found Monsieur Suetin, who, I believe, in virtue of his office as chief surgeon of the Belgian army, acts also as consulting surgeon to the garrison hospital. This gentleman, to my great delight, was employed in dressing a fractured limb, in the peculiar method associated with his name. The patient, besides a concussion of the brain, had sustained two fractures of the lower jaw, one on either side, a compound fracture of the forearm, immediately above

the wrist, and a simple fracture of the thigh. In dressing the latter, the apparatus which had become slackened from the subsidence of the swelling was slit open, a portion of it removed by paring off one of the edges of the slit, so as to adapt it accurately to the diminished size of the limb, and was then replaced with the starched bandage over it. Here we were also fortunate in seeing a little patient, three or four years old, who had been admitted on the preceding evening, with a fracture of the thigh, and in this case the apparatus, which is put on immediately after the accident, having become too tight, was slit open with M. Suetin's scissors.

To this practice I must again advert fully in a subsequent part of the course. In the meantime, I would recommend to the particular attention of those who may have the opportunity of inspecting it, the "Hospital St Jean," a new building, not quite finished at the time of my visit. The day which I had devoted to this being a holiday in Brussels, in consequence of our Queen's visit, the public places were all shut, and it was with great difficulty we got admission to see this hospital. It is an elegant modern building, partly of granite and partly of brick work. It consists of two principal floors, with a great deal of sunk accommodation, and an attic story. The building occupies the four sides of a quadrangle, with spacious corridors or verandahs, running all round the interior. The principal wards are lofty and roomy, each containing twenty-four beds, and the whole capable of containing 600 patients. The bedsteads are of iron, larger, and more commodious than many of the foreign bedsteads. In the body of the building are two chapels, one for the use of the patients generally, and the other, a smaller one, for the use of the "sœurs de charité," who attend the establishment, and each of whom has an apartment in the upper floor, neatly and comfortably furnished. There is also an operating theatre, which would be found small for any considerable number of pupils, and it seemed to me insufficiently lighted,—a defect, however, which may appear less when the walls are plastered and painted. The apparatus for raising water, for cooking, for washing, dressing, and drying the linen, are all in the sunk story, and of the most complete and perfect description. It may give some idea of the scale of the building, when it is mentioned that a railroad was constructing for conveying stores and provisions from one part of it to another. This hospital is, in short, the most complete structure of the kind which I have ever seen in any of the three quarters of the world in which I have served. It was thought a sight for the Queen of England, but owing to fatigue, Her Majesty omitted to visit this, and some other institutions, where she was expected.

Of the hospitals in Holland, those at Rotterdam, the Hague, and at Leyden, I am unable to say any thing. My visits to these places were too transitory to admit of this. At the former, there

is a new and elegant-looking hospital, probably by this time completed and occupied. Its situation, considering the general character of the country, appeared to me good, and I should be glad were I able to promise myself another opportunity of investigating its interior arrangements and economy. At Leyden is to be seen a very extensive collection in natural history and comparative anatomy. Here, also, is the anatomical museum of the celebrated Sandifort, and the botanic garden of Boerhaave; but having been unfortunate in not finding the chief surgeon at home, I had no opportunity of seeing the hospital.

At Heidelberg, where I passed several weeks last autumn, there is, as many of you know, a school of celebrity. Here Tiedeman holds the professorship of anatomy in the university, and has taught his science for upwards of forty years. He possesses a museum rich in many respects, particularly so in preparations of the lymphatics, and in those exhibiting the varieties of the arteries, in which this venerable anatomist is so eminently skilled. In this school, the professorship of surgery is held by Chelius, who is well known in this country by South's translation of his system of surgery, and whose name, in Germany, and all over the Continent, is associated with every thing which is profound, accurate, and useful in surgical science. At the hospital, where my son was a daily attendant, and I an occasional visitor, I saw this gentleman conducting the surgical duties with admirable precision, operating with steadiness and dexterity, and giving to the students of clinical surgery lessons of experience, by which I regret that my ignorance of the language did not enable me to profit. At this hospital, a large proportion of the applicants are treated as out-patients, and only those admitted into the wards whose cases are urgent or calculated to afford instructive lessons to the pupils. Hence those wards are less crowded than almost any others I have seen upon the Continent, and the patients in consequence more advantageously treated. There is a large field for selection, particularly in ophthalmic cases, a large proportion of which fall to be operated on in the hospital. Some of the wards set apart for their reception, are here painted of a grey or light bluish colour, which Chelius prefers to the green adopted at Vienna and Brussels. There is here a room set apart for a very large and instructive assortment of surgical instruments and apparatus, ancient and modern, calculated to show the progress of the art; to point out to young men the many foolish or mischievous contrivances meant to supply defects in the heads or hands of the inventors; and well calculated to prevent surgeons from bringing forward as novelties things which have been already tried and found wanting.

In Switzerland, I am not aware that any separate military hospitals are to be found, and into the state of the civil hospitals, of which slight notices are given in Dr Carter's work, I had no opportunity of inquiring. I regretted that I could not visit the one

at Berne, of which he speaks favourably, but in this city I was much interested with the museum, where is to be seen a portrait, and some relics of the celebrated Haller, of whose extended reputation the Bernese seem to be justly proud.

Of the Parisian hospitals, I have, until now, been ill able to form, and slow to express, an opinion. When billeted with my regiment at Vaugirard, a suburb of Paris, in 1815, I had sufficient occupation in my own hospital, and little time to visit those of the metropolis; or to cultivate the acquaintance of the eminent men who then practised in them. A second visit in 1841, was of such short duration, that, although I contrived to look into most of them, it was merely to make my bow to the chief surgeon, and to express my regret that I was unable to see more of them. During the by-gone winter, I passed three months in Paris, and was almost a daily visitor at one or other of the principal hospitals. It is quite obvious that, with all the accommodation which these institutions afford, they are much too limited for the pauper population of Paris; that they are consequently overcrowded; and that the surgeons as well as the patients are placed at a great disadvantage in the treatment of disease; but nothing can exceed the attention to the cases, and the importance of the clinical instructions which are given at the Hotel Dieu by Roux, at La Pitié by Lisfranc, and at the Charité by Velpeau. Any peculiarities which I may have observed in their operations, modes of dressing, or treatment, will be noticed as opportunities offer in the progress of the course.

The "Hopital du Midi" is exclusively appropriated to the reception of venereal cases; the building is antiquated, apparently damp, and in some respects ill adapted to do justice to the able treatment which these cases receive under the direction of Ricord, particularly to cases requiring the use of mercury. The opinions of this gentleman I have elsewhere noticed, and I had a much valued opportunity of hearing an exposition of them from his own lips, in excellent English, at a meeting of the Parisian Medical Society. Upon some few points my personal observation does not enable me to confirm or to impugn his peculiar views, but upon many points of practical importance I have often had the pleasure to remark a coincidence between Ricord's opinions, and the doctrines which I have long taught in this place.

It was, however, to the "Val de Grace," the principal military hospital, that my visits were most frequent. Here the patients are most advantageously placed; the airing grounds ample and well kept; the wards spacious, clean, and not overcrowded; many of them, indeed, as the "Salles des Blessés," not at all occupied under ordinary circumstances. This is one of the four "Hopitaux d'instruction," for the education of the young army surgeons of France; and here is a complete school of physic, with a series of eleven medical and surgical professorships, for the most part filled by gentlemen who have previously served in the army. Here

also is a valuable anatomical and pathological museum, a chemical laboratory, as well as a medical one for the service of the hospital, a library, and a commodious dissecting-room.

Amongst those who hold professorships in this school, is Monsieur Baudens, the "Chirurgien en chef," who at one time held the same appointment to the French army in Algeria, and whose name you will find mentioned with respect, in my "Outlines," as being, I believe, the first of the continental surgeons to deprecate the indiscriminate practice of dilatation in gunshot wounds. This gentleman very kindly demonstrated to me and my son, upon the dead body, various peculiar modes of operating, which he recommends in the removal of limbs, and which will be brought to your notice at the proper period of the course. Here too I was delighted to find my friend Baron Larrey, the distinguished son of a distinguished sire, holding the appointment of professor of surgical pathology, and one of the surgeons of the hospital. To him I have frequently occasion to refer as the author of the "Histoire Chirurgicale du siege de la Citadelle d'Anvers," at which he served in 1832; and it is not, I think, any overweening partiality to this gentleman, nor to his late venerable father, which induces me to say that he discharges his hospital duties with a masterly hand, and that he is one of the best lecturers I heard in Paris.

At the "Val de Grace," I was invited to be present at the distribution of the prizes to the pupils at the termination of their course, after an inaugural address by Lustreman, the professor of operative surgery. This took place in the principal theatre or lecture-room of the hospital, adorned with the busts of eminent surgeons of former days,—hung with drapery and with flags,—a guard of honour, and a military band stationed in the adjoining court,—the area of the theatre crowded with general and field officers, wearing on their breasts the badges of successful campaigns. Every thing, in short, which betokened a becoming respect from the military to the medical department of the army—every thing which was calculated to make an army surgeon proud of his position, and to encourage him in the faithful discharge of his duties,—and much to remind me, individually, of what I look upon as wanting in our own service.

Since I formerly visited this hospital in 1841, the statue of Broussais, which was then erecting in one of the courts, has been completed, and a place is marked out for an admirable statue of Baron Larrey, the model of which I saw in the hands of the sculptor David. A conspicuous place is assigned to it in front of the church of the Val de Grace, corresponding with the prominent position which the Baron so long held in the armies of France. In this hospital, which at the time of my visits, contained nearly six hundred patients, and in the "Gros Caillou" which contained upwards of three hundred, nearly all the sick of the im-

mense garrison of Paris fall to be treated. At the latter institution, the duties of chief surgeon are successfully discharged by Monsieur Soudan, who served for sometime in the army of Algeria. Here, as well as at the Val de Grace, we saw several officers under treatment in the hospital,—a practice common in the French army.

On the Quai d'Orsay, not far from the Gros Caillou, stands the “Magazin Central,” a large depôt of military stores, and containing also those for the medical department—patterns of all the instruments furnished to the army surgeons, approved and sealed by the minister of war, with large quantities of linen for dressings and bandages. The “linge fenêtré,” is cut by a machine, and the bandages are cut and rolled, in numbers at a time, by an ingenious contrivance, the invention of one of the officers of the institution. Here also we were shown one of the “ambulances,” charged with its equipment of field stores, dressings, and apparatus. This I find has undergone great modifications since first described and figured by Baron Larrey in the first volume of his memoirs. These modifications I shall be able to explain to you in the proper part of the course; and by that time I may possibly be in possession of a plan and description of the ambulance, which was in the course of being printed when my son left Paris a few weeks ago; and of which I have been kindly promised a copy by Monsieur Bazan, the Director of the establishment, an old officer who had served in the Russian campaign.

Although not perhaps equally interesting to others as to me, I cannot leave the medico-military institutions of Paris, without noticing the celebrated Veterinary school at Alfort, about two leagues off, under the able direction of Monsieur Renaud. Here are nearly three hundred pupils under tuition, and about sixty horses, besides other animals under treatment. The pupils were to be seen assembled in groups, performing operations, or holding consultations on the cases of their patients. Numerous apartments are allotted for their lodgement, and others for their studies. Here is an extensive botanic garden, and an admirable museum, containing many beautiful and interesting pathological specimens, some of them the results of gunshot wounds in the horse.

At Orleans, at Lyons, and at Marseilles, the hospitals are all civil establishments, with particular wards allotted to the military. The hospital at Orleans is a modern and well constructed building. The theatre, the laundry or linen store, the cooking-house, and the baths are excellent. The wards spacious and not overcrowded, those for the soldiers differing in no respect from the others, except in the beds being destitute of curtains, an appendage to most of the hospital bedsteads in France, of very questionable utility. At Lyons, the old and original part of the hospital, the “Hotel Dieu,” consists of a series of small ill ventilated quadrangular courts; a likely *habitat* for the hospital gangrene, which

Pouteau had to contend with in his own person, as well as in those of his patients. A more modern part of the building contains a chapel in the centre, with a large and lofty dome, wards of enormous size radiating off it. At Marseilles, the hospital is venerable only for its antiquity; it possesses no redeeming quality whatever except its elevated position, and is in all respects unworthy of a town of the extent, the wealth, and the commercial importance of Marseilles. A new military hospital is here in the progress of erection, with a view to the reception of the sick from Algeria, and this it may be expected will present in every respect a contrast to the old.

Of the hospitals and medical schools of Italy, I am at present altogether unprepared to speak, although I will not forego the hope that at some future period I may be able to compare what provision is made for the sick or wounded soldier in modern Italy, with the little that appears to have been made for the Roman soldier of old.

At Malta, I had the pleasure of visiting the military hospital in company with my old friend Dr Mahony, the Inspector General, and found it in that state of cleanliness, order, and regularity, which might naturally be expected under the superintendance of a gentleman of his extended experience. At the naval hospital here, I was recognised as an old preceptor by Dr Watt, the Deputy Inspector of naval hospitals and fleets. This is a recent building, of a very superior description, and in the most perfect order, under Dr Watt's superintendance. In the chapel, I observed a tablet to the memory of a former surgeon, Dr Martin of the navy, who was wantonly shot, a few years ago, by a reckless soldier, careless of his own life, and determined without any obvious motive to take that of another. By a letter recently received from my old apprentice, Dr Dods of the 88th regiment, now stationed at Malta, I have reason to know, that, through the kindness of Dr Watt, a plan of the naval hospital is in preparation for me, to be added to the collection of such plans which I have begun to form, and to which I shall take occasion to call your attention in a subsequent part of the course.

At Alexandria, the hospital occupies the four sides of a quadrangular court; it was formerly a barrack, and is not particularly well adapted to its present purpose, the roofs being low and the ventilation indifferent. The most, however, has been made of the building; and, considering the part of the world in which it is situated, and the habits of the natives, was in a state of cleanliness and order creditable to the medical officers. As a remarkable instance of the progress of surgery, I saw here a patient who had, a few days before, undergone the operation of excision of the elbow-joint, by the chief surgeon, with the assistance of my friend Dr Farquhar. This last-mentioned gentleman, who was formerly one of our House-surgeons in the Royal Infirmary here, is in

charge of the ophthalmic department of the hospital, in which he performs many interesting and successful operations, and I was delighted to find that he enjoys the confidence of the Pasha, as well as the respect and esteem of the European inhabitants of Alexandria.

At Grand Cairo, there is much that is interesting and instructive to the medical observer; and here I had the advantage of visiting the military hospital and the medical school under the auspices of Clot Bey, to whose energy and enterprise it owes its foundation, and to whose kindness and courtesy, as well as to that of his excellent colleague, M. Chedufau, I am deeply indebted. The hospital is capable of containing, if I recollect, fifteen hundred patients; but at the time of my visit, some of the wards were unoccupied, and none of them crowded—a proof of the healthy state of the troops. The prevalent diseases, as often happens in military hospitals nearer home, were itch, venereal diseases, and ophthalmia. Attached to the hospital, is an extensive laboratory, with stores, ambulances, and medical equipments for the army. Here also, as appendages of the medical school, are a theatre, a dissecting-room, museums of pathology and of natural history, a library, and a botanic garden. In the anatomical rooms were to be seen a number of young Egyptians hanging over two dead bodies, and with their books in their hands, (translations of some of our manuals) dissecting with all the ardour of the most enthusiastic pupils—an extraordinary conquest over national prejudices,—and one amongst many proofs of the energetic character of that remarkable man, Mehmet Ali, who never fails to enforce what he wills.

In several of the adjoining rooms, were assembled groups of young men, classed according to their several degrees of progress, and repeating, under the direction of the assistants, or more advanced pupils, the instructions of their respective professors. Many of these young men wore upon their breasts badges of honour bestowed by the government. The design was a combination of the crescent, emblematic of the Turkish empire, with the insignia of their profession, the serpent and rod of Esculapius, and this neatly executed in gold, or in silver, to mark the rank or merit of the wearer. The number of pupils in this school, I am not prepared to state, but I think I was told that upwards of six hundred had been already educated, had passed their examinations, and were attached to the army and navy, or distributed over the provinces.

Over another institution which exists in the city of Cairo, I was conducted by M. Chedufau. This is an extraordinary combination of a general hospital, with a receptacle for lunatics, a lying-in hospital, and a school of midwifery, all under the same roof. I am pleased to be able to state, from personal observation, that the insane in this establishment are now happily relieved, chiefly,

I believe, through the successful representation of Clot Bey, from that cruelty and restraint, that combination of stripes and chains, with which patients of this description were formerly treated; and which in this hospital were practised, I understand, up to a late period, with unrelenting severity. In the school of midwifery, girls are brought up from the most tender years, employed first in nursing the children born in the institution, and subsequently initiated into the mysteries of their profession. As auxiliaries to their education, I observed a female skeleton, and some wax figures displaying the peculiar conformation of woman.

Allied to the medical institutions at Cairo, is the Veterinary school, which I visited, beyond Shoubra, six or seven miles off. Here were about fifty pupils under instruction; and the native Director, who seemed much pleased with my visit, insisted upon having them assembled in the theatre, and upon my putting some questions to them. Through the medium of the French language, which he spoke fluently, which I never speak but from necessity, and at all times imperfectly, I contrived to ask a few questions on the structure of the skeleton, the contents and diseases of the thorax, the contents of the abdominal cavity, and the difference between the stomach of the horse and that of ruminating animals, to which I got, in general, very satisfactory answers. In my visit to the hospital at Cairo, I was accompanied by my old pupil, Dr Barker of the Madras army, whom I accidentally met here on his return from India. Nothing indeed has given me more pleasure during the few by-gone months than the opportunity of meeting with so many of my old pupils. Whether in France, in Italy, at Malta, or in Egypt, whether at sea or on shore, I have met with old pupils of this class, studying their profession with assiduity, or practising its duties with success.

To counterbalance this pleasure, I have deeply to regret that, in consequence of the shipwreck of the "Great Liverpool," in which I was cast ashore on the coast of Spain, I have been deprived of numerous books, papers, and manuscripts. Amongst these were several works and monographs, with which I was kindly loaded by Clot Bey, partly for myself, and partly for the University. Amongst the latter was one on the Guinea worm, of which he also favoured me with a specimen, and although this was of no great intrinsic value, as I possess numerous specimens of this animal from other quarters, which will be shown in the proper period of the course, yet I am deprived of the pleasure of enrolling the name of this eminent surgeon amongst the contributors to the museum of this class. Of his life, I had furnished myself with a memoir, extracted from a French publication, entitled, "Les Hommes du jour." The most irremediable, however, of all my losses, is that of my notes on the French hospitals, which I had occupied myself in writing during the winter, and which would have enabled

me to make this sketch more accurate, more complete, and in every way more worthy of your acceptance.

I would now, Gentlemen, advert more particularly to our own position in this great school of medicine, to notice the arrangement which I think it expedient to follow, and to enumerate the topics which it is incumbent on me to discuss. The course consists of three great divisions; in the first of which falls to be considered the selection and examination of recruits for the army; the diet, clothing, and exercise of troops; their accommodation in the field and in quarters; the position of camps; the site and construction of barracks; the diseases to which they are more particularly subject in these respective situations, and the means of prevention. Next, the situation, construction, and economy, of military hospitals; and, lastly, the means of transporting the sick and wounded. These are topics of which it will be difficult for young men inexperienced in the service duly to appreciate the importance; but the numerous authors to whom I shall have occasion to refer, in illustration of my views, will afford the best possible proof of the value in which they have always been held by the most able and experienced of our military and naval surgeons.

In entering upon the second or surgical division of the course, I introduce it with a few remarks on inflammation, which are followed by the consideration of burns, ulcers, and hospital gangrene. Next follows the subject of wounds, with their numerous complications, and the several operations required in their treatment; and, lastly, the treatment of ophthalmia and the venereal disease, with the subject of military punishments, coercive and corporal.

In the third and concluding division of the course, fall to be considered the geographical distribution of diseases; the diseases incident to soldiers and seaman in long voyages, on foreign stations, and particularly in tropical climates.

Those who are conversant with the spirited memoir of Mr John Bell, on military and naval surgery, lately reprinted in the *Medico-Chirurgical Review*, will observe that the above outline coincides in all its essential features with the plan sketched out, nearly fifty years ago, by that talented writer, who was the first to suggest a course of this kind, and the most strenuous advocate for its establishment. The experience of a quarter of a century, and the unreserved intercourse which I have enjoyed during that time with my professional brethren of all ranks in the public service, does not suggest to me any material change in the general plan and arrangement of the course; but it is otherwise with regard to the time allotted to the several departments. I have elsewhere given my reasons for extending the surgical division of this course, and when I remarked, that, "in a period of long protracted peace there is some risk of the medical officers of the army overlooking the importance of the surgical department of

their profession," it was only a delicate way of stating a fact, which I have too frequently observed, that when men are long withdrawn from the contemplation of surgical cases, they become indecisive and inexpert in their treatment. It is not then any abridgment of this, but an extension of the other two divisions of the course which I would desire; the first, as embracing subjects of paramount importance to the health and efficiency of the soldier; and the last, as being the department of the course in which I am least of all satisfied with my own exertions. Here I am free to confess, that, from the want of time which I have generally experienced towards the conclusion of my course, I have been unable to do justice to the later observations of others, and have been too apt to satisfy myself with having, nearly thirty years ago, laid before the public all that my personal experience had taught me of the diseases of the European troops in India.

In adverting to the means of illustrating my views in the introductory department of the course, I cannot omit this opportunity of offering my acknowledgments to several officers, both of the Queen's and East India Company's service, who have furnished me with plans of hospitals, and with plans and models of contrivances for the conveyance of sick and wounded. In looking to the surgical department of the course, I would notice, with feelings of gratitude, the obligation under which I and my class have recently been laid by the *Senatus Academicus*, in procuring for the instruction of the students of military surgery, and of the medical students generally, the valuable collection of preparations made by Mr Rutherford Alcock, during the campaigns of the British Legion in Spain. This is a collection chiefly illustrative of the injuries done by firearms—a collection to which I have frequent occasion to refer, and of which I may give you some idea by the few specimens I now lay before you, and by the printed catalogue which I shall put into your hands. Here also I would notice a valuable present which has lately been made to me by my distinguished predecessor, Dr Thomson—a collection of nearly two hundred sketches of the most remarkable wounds received at Waterloo. The object for which I would turn your attention, at the present moment, to these sketches, is to impress upon you the advantages of cultivating a taste for drawing, which I omit no opportunity to recommend. To show you how much may be done in this way by the simplest possible means, and almost without instruction, here are sketches made with a common writing-pen on slips of letter-paper, each of which forms a more useful and convenient memorandum to a military surgeon than a volume of descriptive writing. To those of you who wish to prosecute this elegant and useful accomplishment, I would hold up the example of my late distinguished colleague, Sir Charles Bell, whose pencil was a treasure to himself and to his pupils. Were our brethern in attendance upon the armies of India skilled

in the use of the pencil, what interesting sketches might we not expect from the banks of the Indus and the Sutlej?

The collection of which I have been able to possess myself in this locality, comparatively unfavourable from the limited military establishment in Scotland, will show,—I admit indeed but faintly,—what might ultimately be accomplished by the co-operation of professors in the two other metropolitan cities of the empire. While I would make the possession of such a collection a matter of congratulation to you, I must allow, that it brings to me two very painful reflections,—the feeling that, in the earlier years of my occupation of this Chair, I discharged my duties to my pupils under many disadvantages,—and that now, when placed in a position to discharge those duties more to my own satisfaction, I find that the advance of years, and the encroachments of ill health, prevent my looking to a long tenure of office. This leads me to say, that, be my retirement sooner or later, I shall quit my post with feelings akin to those which dictated the following sentiment of the late Dr Trotter:—“From that service,” says he, “I am now about to retire, where I have spent all the best of my days, and to which my studies have been faithfully devoted. It must now think of me as a man who can have no share in its future operations, but who will be proud of its remembrance as long as he lives. God forbid! that I should carry to the grave a single idea that could benefit the naval service of the country.”

Although, Gentlemen, we have too long stood alone in this University, as the only class of military surgery in these kingdoms, I must not lead you to suppose that this is the only source of instruction open to young men entering the medical departments of the army and navy. At the General Hospitals at Chatham, at Haslar, and at Plymouth, there are opportunities of receiving the occasional instructions of men of experience in the service, and there are opportunities of pathological research of the most valuable kind. I have elsewhere given my opinion of the advantages which these establishments hold out, and of those of which they are necessarily destitute. Upon this subject, however favourable the opportunity, I will not to be tempted to enter again, lest I should appear to depreciate the importance of Institutions so eminently creditable to the present Directors of the Medical Departments of the army and navy as their patrons, and to the junior officers of these departments as their most liberal supporters. The state of the museums attached to these institutions must, indeed, be matter of surprise and admiration to those who know, as I do, with what scanty assistance from the public they have been brought to their present state of perfection. I know not whether of late years the Government has been more liberal, but, with reference to Chatham, more particularly, I believe I am correct in stating, that at one time the money necessary to procure glass and spirits for the preparations, was given with a grudging hand.

Without disparagement to any of his predecessors, I may be permitted to say, with reference to an old friend, Dr French, that the superintendance of the young gentlemen at Chatham, was never in more eligible hands than at the present moment—in the hands of a man who has been thirty years out of England on professional duty, and who, while he possesses much of the energy of youth, has had the experience of a campaigner in the Peninsula, in India, and in China. But I am much mistaken if he, as well as others, will not see the superior advantages of a metropolitan establishment for the objects which I have in view. The Director General, in a communication which I had from him many years ago, was pleased to express his regret that my lectures were not delivered at Chatham; but I believe he does not dissent from the opinion I have elsewhere expressed that, “lectures of this kind will be most advantageously given where there are most to benefit by them—in the metropolitan schools.” A General Hospital offers no peculiar facilities for the collection and diffusion of information on the subjects embraced in the introductory part of my course, in what relates to the selection, to the clothing, equipment, dieting, and lodgement of soldiers; in short, to the all-important subject of preventing disease. The advantages of such an establishment as Chatham, are necessarily confined to young men who are already commissioned, or who are sent there for a limited period, preparatory to getting commissions in the public service. The doors of such an establishment are virtually closed against a class of gentlemen who for many years constituted the most numerous, and who have always constituted the most attentive part of my audience—gentlemen returning after a long absence, on foreign service. These gentlemen find, that in their absence surgery has made gigantic strides, and that chemistry has become a new science; and are they to forego all the advantages of a metropolitan residence, with the facilities of access to all departments of study, and to resort to a provincial town, where pathology and natural history are the only subjects they can study to any peculiar advantage? I am not seeking the extinction of the clinical school at Chatham, I am advocating the transference of its valuable museum and library to the metropolis. *Ille evodis vitæ*

We are now in some measure prepared to compare what is done in other countries for the instruction of their army surgeons, with what is done in our own. In taking a retrospect of the foreign hospitals, I must say that, with the exception of those at Brussels, and at Orleans, I have seen little to admire in regard to their construction, nothing to be compared with some of our own structures, particularly those of the navy,—the great hospital at Haslar,—the marine hospital at Chatham,—and the naval hospital at Malta. But into the advantages of these, or the defects of others, I must not enter at present; a very early opportunity will present itself of giving you my sentiments fully upon this sub-

ject, when I come to treat of the structure, economy, and administration of military and naval hospitals. Looking again to the medical schools connected with the great military establishments of Prussia, of Austria, and of France, one cannot help being struck with the liberal expenditure of these foreign powers in their support, and the vigilant attention to the health of the soldier, which this expenditure implies. One is at the same time naturally led to inquire into the necessity of such separate establishments in countries where the army surgeons have only to become conversant with the diseases of their own climate. In answer to some remarks which I formerly made upon this point, it has been said that the scanty pay of the surgeons in the continental armies holds out no inducement to men of education to enter them, does not enable young men to educate themselves for the service, nor to prosecute their studies in the intervals of active duty. I can understand the application of all this at Grand Cairo, where there is no medical school in the country, except that which is established by the government at the military hospital. But I should be glad to know how it applies to those continental cities, where the professors in the universities, and the surgeons in the great civil hospitals, are all paid by the state? and where admission to the lecture-room, and to the wards of the hospital, is as free to the pupils as the air they breathe? I was unable to obtain any accurate account of the expenses of the "Val de Grace" at Paris, but I question whether one half of the expenditure of this splendid institution would not board all its pupils in the city; and if necessary, fee over and again, all the professors they might have occasion to attend. I question whether the five thousand pounds said to be expended annually on the Josephinum at Vienna, would not double the pay of all the surgeons in the Austrian army. Is it not possible, however, that the foreign governments see advantages to the young men educating in these institutions from the subordination and surveillance there established? from the opportunities they have of becoming acquainted with the habits, constitutions, and diseases of the soldiery? and, above all, from the opportunities of hearing the lessons of professional experience from men whose views are modified by military contingencies? Is it not possible that they may be actuated by those views which dictated to Frederick William the Second, the foundation of his Institution at Berlin, "TO PRESERVE TO THE NATION THE EXPERIENCE ACQUIRED BY THE ARMY SURGEONS DURING THE WAR?" The liberal expenditure, for this purpose, of foreign states, which I have noticed as a contrast to our own, is probably in some measure due to the absence, in the monarchical governments on the Continent, of that constitutional jealousy of a standing army which in England is carried to excess. But I cannot permit myself to

suppose that this will be seriously argued as a question of economy, when the health of the army and navy is at stake.

It is not, Gentlemen, for the institution of such schools as those which I have noticed on the Continent, that I am contending, it is for a much more limited object,—the establishment of a single lectureship in each of the other metropolitan cities of the empire. I do not contend for special schools of instruction for the general education of our army and navy surgeons, but for special courses of instruction which the peculiarity of our service demands. I am well aware of the liberality with which numerous educational establishments and private lecturers have opened their doors to our army and navy surgeons, and for which I believe they are abundantly grateful. But this does not obviate the defect at which I point, and while that defect continues, the necessity for a remedy increases every hour. At this moment the country is ringing with the peals of victory, and the shouts of triumph from a distant quarter of the world, where thousands of our countrymen, and of their brave native comrades, have perished in hard fought fields,—and where thousands more are contending with an adverse climate in addition to their wounds. Possessed of colonies in every corner of the globe, savage and civilized, these colonies presenting to the soldier and the seamen every thing which can possibly affect his health,—every variety in climate, in lodging, in food, and in duty,—it surely behoves us to afford to those who undertake the professional charge of our fleets, and our armies, the means of informing themselves of all that has been done,—of all that may be done,—towards saving the lives, and preserving the health of our gallant defenders.

To say that these opportunities are afforded in the schools as at present constituted, is, in my opinion, to betray an utter ignorance of the subject. Let me ask any honest and unprejudiced teacher to look at the lists of professional writings of military and naval surgeons, which I have laid before the public, in my “Introductory Lectures,” and “Outlines,” and let him say whether he has had the inclination or the inducement to scrutinize these volumes, and if so, whether there is time and opportunity to introduce into the common courses of physic and surgery all that is of importance to the health of the soldier. Is this country, which affords opportunities for the improvement of military and naval medicine, beyond any other, aye! beyond all others put together, to be the country where least of all is done for the advantageous study, and the useful diffusion of its vast stores of experience? Is the accumulated experience of our army and navy surgeons, to go to the grave with its possessors, or to be buried in the archives of a public office? In saying this, I am well aware of the facilities of access which are given to the records of the medical departments, and I appreciate most highly the digest of these records which has recently been given to the

world in the statistical reports; but I am equally aware, from personal experience, that much tangible and available information is elicited by incidental observations in the course of lecturing, and that numerous important communications, both verbal and written, are voluntarily given to a professor, which would never be called forth by authority. It is in this way that the experience of the existing generation of army and navy surgeons will be most advantageously handed down to their successors in office; and it is the loss annually sustained by the profession and the public, from the want of additional establishments for this purpose, which I deeply deplore.

But as the opportunities for prosecuting studies of this kind are wanting, so also is the time. It is no new nor peculiar opinion of mine, that the courses of study prescribed by some of our licensing bodies have become overloaded with compulsory attendance. Let it not be supposed that I deprecate the cultivation of those accessory branches of learning and of science which have been, I think unwisely, mixed too much with the courses of professional study. I do not undervalue those desirable, those necessary accomplishments, which are creditable to the individual and honourable to the profession. All I desire is to see the period generally allotted to professional study more judiciously adapted to the objects of the student. There are certain fundamental branches indispensable to all, but I must think that in many instances the nature and extent of compulsory study is ill proportioned to the probable wants of the individual, and what is necessary for the temporary purpose of an examination, takes the place of what would be permanently useful. Is it right that every medical student should be forced, whether by a compulsory law or by the terror of an examination, to consume his limited time in pursuits to him, it may be, of little importance, to the exclusion of those which are to constitute the business of his life? I have always advocated a high standard of literary and scientific attainment in gentlemen aspiring to a Doctor's Degree, but is it necessary that the studies requisite for this purpose should be so mixed with his professional course, as to preclude a candidate for the army from giving his attention to military hygiene? or the expectant of a naval appointment from studying the causes and prevention of disease in the fleet?

I do not desire that a course of Military Surgery should be added to the list of imperative classes, nor that attendance upon it should be indirectly enforced by examination preparatory to the obtaining of a surgeon's diploma, or a doctor's degree. Let the time and opportunity be given, and the professors of military surgery may promise themselves numerous auditors, neither inattentive nor unwilling. "I know," says Mr Bell, "that your minds go willingly along with me when I dwell upon those duties which agree so well with the ardent and generous temper of youth."

The correctness of this sentiment I have fully experienced; and I have also learned, by experience, that courses of military surgery are prized by many who have no view to the public service of the state; by gentlemen educating with a view to the charge of large civil hospitals; to practise in the manufacturing and mining districts of the country; to serve in the large ships of our commercial marine; and, above all, by those educating for colonial practice.

Why, then, is the government so slow to adopt this reasonable suggestion? The utility of this course has been officially recognised by the highest authorities, in a way, to me, peculiarly gratifying, and in our own College of Surgeons here, the late Dr Kellie, himself an old naval surgeon, moved, that candidates for the diploma of the College should have the option of attending this class, instead of a second course of surgery; and this, said he, I propose as a boon to the student, not to the professor. But the utility of such courses ought not, in my opinion, to rest upon any thing which has hitherto been done here or elsewhere, but upon what may hereafter be done by the combined efforts of several professors.

Did I now come forward, for the first time, to propose the establishment of rival schools, when growing years and failing health render me unable to enjoy my monopoly, I should come in a very questionable shape; but upon this subject my language has been uniformly the same, *talis ab initio*; and of this, fortunately for me, there is abundant evidence in my Introductory Lectures, published many years ago, in my letter addressed to Mr Warburton in 1834, and in the successive editions of my "Outlines."

From the moment I was placed in this Chair, I have never ceased to feel how much my efforts must be cramped, so long as I stood alone. The distinction of being the only Professor of Military Surgery in these kingdoms, is one which I have always been ready to share with others. In season and out of season, within the walls of this class-room, and in the circle of my friends, I have never ceased to advocate the establishment of similar lectureships in the other metropolitan schools; but it was only after my visit to the Continent, in 1843, that I felt myself called upon, or placed in a position to make a public representation upon this subject, in a letter addressed to Sir Robert Peel. To those who have given any attention to the questions with which the government of this country has been occupied for years; to the way in which it has been importuned and bewildered with conflicting opinions on the subject of medical reform, it can scarcely be matter of surprise that the government should be slow to undertake, or the medical departments slow to suggest, the endowment of Chairs for the instruction of any particular class of practitioners. But while the authorities withhold their official representations, it is possible that men, without experience in this

matter, and who have no personal sympathy with the sufferings of the soldier, may pour into the ears of the government opinions in consonance with that economical policy, which, in spite of its better judgment, it is sometimes forced to adopt. As to the propriety of instituting such Chairs, and the extent of the field which they ought to embrace, I have not found one dissentient voice amongst those who have spent the best of their days in the service of Her Majesty, or of the Honourable East India Company—a body very deeply interested in this grave question. Were such men as Jackson and Trotter, M'Grigor and Burnett, Guthrie and Copland, Hutchison, opposed to my views, I should be very diffident of my own judgment. With all these gentlemen, both the living and the dead, I have had the pleasure of a personal acquaintance, more or less intimate. The two former I have had the honour to address from this Chair, and the last was a regular attendant in this class-room during one of my earlier courses. To these I may add the respected names of Annesley and of Martin, the former also an occasional visitor here; and both, from their long experience in the service of the East India Company, eminently qualified to judge of all that concerns the health of troops in tropical climates. By the opinion of a jury of such men, I should be willing to abide, and let me add, with all possible respect for the attainments of others, that it is only to such men I can defer. Upon a matter of this vital importance, the government will do well to listen to the opinions of men who add a little military experience to their medical enthusiasm, and a little soldiership to their science.

From the moment I was placed in this Chair, I have never ceased to feel how much my efforts must be cramped, so long as

Remarks on Monomania. By C. LOCKHART ROBERTSON, M.D., Resident Physician in the Cumberland Provisional Lunatic Asylum at Dunstan Lodge, Gateshead-on-Tyne.

By the term monomania (the *partial insanity* of English jurists) is generally understood a state of mind impressed with one particular delusion, reasoning from which, as from false premises, the individual so affected, converses and conducts himself insanely on points connected with his delusion, but on every other subject he talks rationally, and is capable of managing his affairs, provided his delusion does not bear upon them. Following out this view, authors² and lawyers have been led to question the propriety of

¹ The definitions of insanity laid down by Locke, Cullen, &c., are evidently based on this opinion.

² Dr Conolly. *An Inquiry concerning the Indications of Insanity*, p. 431. London, 1830. Sir W. C. Ellis. *A Treatise on Insanity*, p. 36. London, 1838, &c. &c.

depriving of their civil rights persons labouring under some harmless delusion. "All these doubts," as Dr Prichard truly observes,¹ "have been raised without reason or necessity. They depend upon a very erroneous notion as to the real nature of monomania."

I have never met with a monomaniac whose whole disorder was centred in *one* erroneous impression. On the contrary, I believe that a minute investigation of every case of monomania will prove that the delusion supervened on a state of moral insanity—that while, prior to its appearance, the intellectual powers of the mind were sound, the moral and active powers were diseased—that long ere any delusion was manifest, the kind parent had become a tyrant, the loving husband alienated from his wife, the benevolent deaf to the cry of distress, the man of honour given to deceit.

The only authors who have recognised this fact, are Drs Prichard and Jacobi. Esquirol did not fully appreciate it, although I shall presently cite a case related by him which illustrates the real nature of monomania.

The importance of the bearing these considerations have on legal medicine is evident. If the delusion constituted the whole disease, it would in many instances be both unjust and unnecessary to deprive a man of his liberty, and of the command of his property. But if the delusion be, as I have stated, merely a symptom of a perverted state of the moral and active powers of the mind, the individual, whatever may be his delusion, is always unfit for society, and often most dangerous.

The origin and progress of monomania is well illustrated by the following case, at present under my charge:—

Mr ———, æt. 41, was admitted into the Dunstan Lodge Asylum in December 1845.

Ten years since, he met with a disappointment with regard to a testamentary document. From that period symptoms of moral insanity have manifested themselves. He has been wayward and capricious in his conduct, reckless in his expenditure, and frequently unkind to a most affectionate wife. He has also squandered large sums of money in purchasing property, and selling it at a loss, &c. &c.

In December 1844, there supervened on this morbid state of the moral and active powers, a delusion that his life had been attempted by poison, and that his servant had been bribed to administer it to him in his food. He kept firearms about his person, and threatened the life of any one who should attempt to enter his house, stating that an Englishman's house was his castle.

This same delusion still persists, he will listen to no arguments

¹ On the Different Forms of Insanity in relation to Jurisprudence, &c., p. 68. London, 1842.

against it. He threatens, with the extreme penalty of the law, those who have placed him in confinement. On all other subjects he converses rationally, and is a very agreeable companion.

Similar is the course of monomania in the case of Mr ———¹, who, in consequence of a reverse of fortune, underwent a change of character, became quarrelsome, despotic, restless, discontented, upbraiding his relatives for neglect, in spite of all their attentions. Two years afterwards, he imagined that attempts had been made to poison him. This delusion yielded; but shortly afterwards, in consequence of reading a newspaper paragraph regarding the pretended dauphin, he imagined himself the son of Louis XVI., which delusion never left him.

Such also were the symptoms exhibited by Mr ———², a gentleman of great intellectual capacity, and strong powers of reasoning, who, from a fear that his wife should exercise an undue influence over his judgment, became for years morally insane—then monomaniacal, with great distress of mind, and at last he destroyed himself.

The progress of monomania in the case of Mr ——— was similar; for several years he laboured under symptoms of moral insanity, was dejected in spirits, morose in temper, dissatisfied with himself, and suspicious of all that surrounded him. He then became a monomaniac, believing that he heard whispers in distant apartments of the house, indicative of malevolence and abhorrence.

Similar was the progress of the disease in the case of Miss ———, æt. 41, who was admitted in October 1843. Three years prior, she had, from too great anxiety in business, become low spirited, unsettled, and unable to attend to her affairs; her moral feelings became gradually more and more perverted, she took a groundless dislike to many of her nearest relatives, was capricious, wayward, and ungovernable, while her language became abusive in the extreme.

There was no lesion of the intellectual powers, her general health was good, the catamenia regular. She continued in this state without any improvement until about October 1845, when the delusion that her bed, body clothing, and the like, were damp, manifested itself. She sits constantly before the fire, but never is she dry. At night she takes great precautions to keep out the damp, the curtains are carefully pinned, and surrounded by the counterpane. Her mind is in other respects as sound as ever, her moral affections as perverted. Her natural disposition was good, her habits very temperate.

Monomania is that form of mental disorder which of all others presents the greatest variety. “Elle empreinte son caractère et

¹ Esquirol, Des Maladies Mentales, &c., tom. ii. p. 12. —Paris, 1838.

² Dr Prichard. A Treatise on Insanity, &c. p. 35.

³ Esquirol, op. cit. tom. i. p. 400.

retrouve les causes qui la produisent dans les differens âges des sociétés ; elle est superstitieuse et érotique dans l'enfance sociale, tandis que dans les sociétés avancées, elle a pour cause et pour caractère, l'orgueil, l'abnégation de toute croyance, l'ambition, le jeu, le désespoir, le suicide. Il n'est pas d'époque sociale qui n'ait été remarquable par quelques monomanies empreintes du caractère intellectuel et moral de chaque époque."

A striking set of cases of monomania are those supervening on that variety of moral insanity commonly termed melancholia, and in which the imaginings are of the same sombre tint. Such patients, after being for some time in a low desponding state, imagine that they are doomed to death, nay, that against them even the gates of eternal mercy are closed, and that everlasting punishment must be their lot, &c. &c. I have several such cases at present under my charge. One can almost recognise them at first sight, by the thin, pale, yellow face, and the fixed, immoveable expression of woe. I have one patient who is constantly tearing his flesh, crying "Lord have mercy upon me." They are utterly beyond possibility of conviction. "N'ayant¹ la raison lésée que sur un point il semble qu'ils mettent en action toute leur puissance intellectuelle pour se fortifier dans leur délire . . . rarement parvient on à les convaincre, jamais on ne les persuade."

Hallucinations and illusions are another remarkable variety of monomania. Patients in a state of *hallucination*, believe, from the evidence of their diseased senses, in the presence of persons and things, which for them at least can have no existence. Thus Margaret —, a patient in this asylum, sees and converses with her former friends, who she states are standing beside her. She has often long disputes with them, and nothing can convince her of their non-presence. Before the supervention of these hallucinations, she was morally insane. Some hear music²—others threatening voices, while all around is still. Some see the heavens opened; others behold flames and serpents ready to devour them, &c. &c.

Illusions, on the contrary, depend on the false perception of some really existing bodily condition. Thus the illusion that a worm³ is gnawing at the brain may depend on headache—that the brain is liquified, on the throbbing of the arteries—that an animal is in the stomach on the presence of any form of dyspepsia. Although both illusions and hallucinations do, by being engrafted on a state of moral insanity, constitute monomania, they may also present themselves as symptoms of mania;—or they may coexist with a state of perfect mental sanity, and many such cases are on record.

Monomania as frequently presents itself in a series of delusions bearing on one subject, as in a single one. In either case, the de-

¹ Esquirol, op. cit. tom. i. p. 419.

² Esquirol, op. cit.

³ Esquirol.

lusion invariably has reference *to the patient himself*. I have never met with a single exception to this law.

“The illusions,¹ or false impressions of the monomaniac, have always reference to himself. They relate sometimes to his fortune, rank, personal identity; at others, to his health of body and his sensations. In the former class of cases, the patient, feeling himself unhappy, fancies himself in debt, ruined, betrayed; or being disposed to an opposite state of feelings, possessed of great wealth and affluence, and superior to all mankind. The difference of these impressions seems to depend upon the different state of spirits. The persons affected by the former kind of impressions are those whose minds are predisposed to gloom and forebodings of ill; the latter kind affect the sanguine and excitable. Many fancy themselves king or emperors, prophets or the pope. I have seen a French lunatic who exclaimed with great appearance of dignity, “*Je suis le Pape, le saint-père de l’Eglise.*” A monomaniac fancied himself possessed of great riches, once asked me if he should give me a sum of money. He sat down and wrote a cheque, pay Dr Prichard £1000, and charge on God’s bankers. Another, a pauper in this asylum, told me, while thanking me for some medicine, that if I sent my bill in at Christmas, he would with great pleasure pay it.

The *prognosis* in moral insanity is generally doubtful. How much more so must it be when in that state of mind a delusion has been engrafted? The *treatment* of monomania demands, more than any other form of insanity, a perfect knowledge of the character of the patient; whether hope or fear, kindness or severity, sympathy or ridicule, will exert the greatest influence on his mind. This is the principle of the treatment. The carrying out of it will vary in every instance—in but few will our endeavours be successful.

Dunstan Lodge, March 1846.

On the Rules applicable to the employment of Venesection and of Opium in Obstetric Practice. By JOHN BREMNER, Surgeon, Marnoch. Communicated by DR THATCHER.

(Continued from p. 269.)

The period at which Venesection may be had recourse to in order to derive from it the most eminent services, &c.

IN entering upon the investigation of the third consideration proposed, it will, as in the former, be necessary to refer briefly to the opinions advanced by the authorities originally quoted.

Notwithstanding the general directions given (as being appli-

¹ Dr Prichard, *op. cit.* p. 70.

cable to tedious or difficult labour) concerning the case of several days' duration, in which it (V.S.) was employed with success, it will be found, upon consulting the one immediately succeeding, and also the history of another at p. 159, col. xiv., intended to point out the phenomena attendant upon labour in its natural form, where it was performed to relieve an excited state of the system, to have been Dr Smellie's uniform practice in all cases in which the operation was indicated, to have recourse to it as early as his attendance upon the patient and other circumstances would permit, although no express statement be made.

An attentive survey of the chapter, of which the extract selected from the work of Dr Denman forms a part, will clearly show his opinions on this point to have coincided pretty closely with those of Dr Smellie.

From a comparison of pp. 180 and 185, it will be observed that the opinion of Dr Gooch on this subject differed widely from the preceding writers, and that the aid of venesection was only considered necessary by him when other remedies had exerted their influence in vain.

The manner in which Dr Campbell has expressed himself regarding this question is such as to render it difficult to comprehend his true meaning. "In such cases," says he, "the sufferings of the patients 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." It being a duty incumbent upon every author to render his opinions and injunctions as intelligible as possible, it would have been desirable if Dr C. had stated more explicitly whether, when the symptoms are such as to lead us to suspect a difficult case of labour, and where, at the same time, the use of the lancet seems fully indicated, we are to await the expiry of from ten to sixteen hours as the most proper period for its employment; or to understand him as referring solely to those cases in which the practitioner's presence has only been requested when the symptoms of delay and difficulty began to manifest themselves, and consequently where he will seldom enjoy an earlier opportunity.

Although rather indefinitely expressed, the concluding part of the paragraph, selected from Dr Burns, p. 459, leaves little room to doubt but what he has uniformly inculcated the propriety of early blood-letting, whenever the symptoms are considered such as to demand it.

Notwithstanding the decisive manner in which the attention of the profession is directed to the effects of irregular distributions of blood upon the uterus, &c., by Professor Hamilton, from a comparison, however, of the preceding extract, in which a delay of from six to eight hours of strong uterine efforts is enjoined, as well as from the detail of a case, at p. 233, where well-nigh in-

efficient action was allowed to continue for the space of ten hours before having recourse to venesection, a shade of doubt seems to arise as to whether the early performance of the operation was the practice uniformly adopted and recommended in the more common description of cases or not.

The inferences deducible from the language of Dr Ramsbotham appear to support the opinion that, like Dr Gooch, he only has recourse to it (V.S.) in the event of the failure of other means; whereas the opinions of Drs Rigby and Blundell are so clearly expressed, as fully to justify their claim as advocates for early venesection. Thus, whilst by Drs Smellie and Denman, but more especially Drs Burns, Rigby, and Blundell, its performance is sanctioned and authorised at the commencement, if not prior to labour, by Drs Gooch and Ramsbotham an opposite practice seems to be countenanced and enforced—the opinions entertained by Drs Hamilton and Campbell being expressed so as to render their interpretation somewhat obscure.

As under the preceding heads certain questions here present themselves for our consideration,—will the progress of labour be found uniformly to advance in those cases in which venesection is strictly enjoined, in proportion to the period at which the operation is performed? In more expressive terms, can its salutary effects be calculated upon with the same certainty, or will they be exerted in equal measure, according as it may have been performed at the commencement, the conclusion of the first, or during the second stage of the delivery?

If, in directing our attention to the constitution of the human body, regarding its transition from a state of health and vigour to one of functional derangement and disease, the principle shall be found fully established, that, in a ratio with the degree of injury inflicted, but more particularly to the active or dilatory employment of the counteracting measures, so will the difficulty attendant upon its removal become, and the effect upon the system or particular organ be felt. If such be admitted as a law of universal application in the history of the animal economy, connected with disease generally, can it be supposed that a state of pregnancy, during which so important changes are wrought in the female structure, will be exempted in a less degree?

Without even adverting to the position here brought under notice, it might, by a little reflection, be expected that the benefits accruing from depletion of the arterial system, would vary materially in proportion as the same may be carried into effect at the beginning or subsequent periods of the labour. On the preceding grounds, however, there seems the fullest assurance for maintaining that, when the necessity for the same has been once correctly ascertained, it is not only the primary, but, in many cases, the sole remedy required in bringing about the state of relaxation lately spoken of.

In recommending attention to the above line of practice, no pretensions to novelty are claimed ; as, independent of its being that advocated by the best modern British writers, it was the same inculcated when a pupil, and exemplified in the first case I was then called upon to witness, in such a manner as has not yet been forgotten. Under whatever circumstances venesection may be considered necessary, no valid objection can, it is presumed, be urged against its early performance. Admitting the truth of these premises, the question will naturally suggest itself, to what extent, or, for how long a space of time can the said state of phlogistic action be allowed to remain unremedied without risk of interruption to the progress of labour, or the infliction of injury on perhaps mother and child ? It is one of the utmost importance, and demands very close consideration.

The results of experience on this subject are to the effect that, as long as the powers of the uterus are but slightly exerted, and where its orifice, if accessible, has undergone but small change from its original occluded state ; so long as matters continue in this way, and tranquillity prevails throughout the system, there is little to fear from delay in the abstraction of blood. As soon, however, as an alteration is discovered in the situation of the patient on account of the uterus making pretty frequent and severe, though ineffectual attempts to execute its peculiar function, every additional moment's dalliance serves only to increase the amount of suffering, and procrastinate the period of the delivery,—thus evidencing the state of engorgement and restrained action of the generative organs, so accurately described by Drs Burns, Hamilton, and Rigby.

The lengthening out of the parturient process, and consequently the augmentation of the patient's sufferings, are not, however, the only evils to be encountered from such a procedure, the salutary tendencies of the operation are in every instance liable to become, not only more or less impaired, but in not a few to be wholly overcome. The explanation of this is to be found in the fact, that a congestive condition of the arterial system, when unrelieved upon the accession of labour, is invariably roused to active operation with the increase and frequency of the uterine efforts—as the undeviating consequence of which, a degree of irritative fever is gendered ; which, from causes too apparent to require demonstration, never fails speedily to induce a state of disorganization and debility, both of a general and local kind, which venesection or any other means possess not the power again fully to remove.

Lest it should be imagined that the evacuation of blood is considered as useless or improper, unless had recourse to at the commencement of labour, it requires to be clearly explained, that no such opinion is entertained—what is wished particularly to be understood, is the circumstance that the benefits arising from it can only be calculated upon with any degree of certainty when

performed during the first stage: the earlier so much the greater will the chance of success become.

Notwithstanding, its salutary effects have been found for the most part to be greatly lessened, if not altogether destroyed, when had recourse to after the patient has lingered a considerable time, or the dilatation been pretty far advanced, instances have now and then been met with, under the superintendence of midwives, where an opposite effect has been witnessed.

The most distinctly marked of these have occurred in females of good constitution, wherein the degree of excitement was moderate—as evidenced by the readiness with which the pulse gave way under the use of the lancet, and the slightly crusted state of the blood; but, which (degree of excitement) was sufficient greatly to limit both the strength and frequency of uterine action, and consequently to prevent exhaustion from taking place. The three leading circumstances, therefore, in every case of difficulty, demanding the primary attention of the practitioner, provided he has not been in attendance from the commencement, are the strength or delicacy of the patient, the degree of excitement present, and the violence and frequency of the expulsive efforts.

In opposition to what has been above advanced, it may be argued, that many well authenticated cases are on record in which the action of the uterus has been both violent and long continued, and yet where by recourse to venesection, the resistance was happily overcome, and the labours terminated by the natural efforts.

Of this description may be reckoned the case of several days' duration, &c. originally quoted, and more lately referred to from Dr Smellie, in which the resisting cause was supposed to reside in a *rigid* state of the os internum. Upon more close investigation, however, it can easily be perceived that, like those lately under notice, it was at the outset, one of the very simplest kind, (*viz.*) where the system at large participated equally in the phlogistic state. It cannot well be conceived how a case of such protraction and severity, as to occasion the protrusion of the uterus half an inch, without the external parts, should experience such immediate relief from the abstraction of twelve ounces of blood, had rigidity or excitement to any considerable extent existed in the os or cervix.

Even as circumstances were placed, is there not the most abundant reason for believing that no such favourable termination would have been witnessed, had not the patient been “of a strong healthy constitution.” Had the venesection been performed at the commencement, the opinion formed respecting it, (*viz.*) that hours would have required to have been substituted instead of days, is considered by no means extravagant or astray from the truth.

A view in several respects similar is entertained of two cases of agglutination of the uterine aperture, occurring likewise in prima-

pera, related by Dr Campbell, p. 217, in the former of which, twelve hours elapsed before the os uteri could be distinguished, and in the second two nights and a day, during which “she had regular pains, and suffered so severely as to require three persons to keep her in bed. Both were largely bled, gave birth to living children, and had a good recovery.”

In the absence of a more extended detail of circumstances respecting these individuals, which is much to be regretted—the most obvious conclusions are, that they were females of sound and vigorous constitution, which enabled them, more especially the latter, to bear up under the oppressive weight of suffering to which she was subjected—that the degree of excitement was much greater than in Dr Smellie’s case; and although in both (Dr C’s) the determination to the os uteri was considerable, the effects were only such as to occasion union of its edges without impairing materially the vitality of the parts—a circumstance which can only be accounted for on the supposition that they had become the seat of the affection at no very distant period from labour, and instead of derogating from, seem well calculated to strengthen the position already advanced, (viz.) that had venesection been earlier performed, the ratio in the accomplishment of the delivery would have been at least corresponding. In all such cases it would be satisfactory to be made acquainted with, whether practitioners in attendance had witnessed them from the commencement, or were called in at a future period—the latter of which is considered the most probable in the several instances here alluded to; whether, in the event of the former, upon examination of their patients, they considered it (V.S.) absolutely necessary, or were compelled to fly to it as a final resource; with a correct history of their state of health previous to in-lying, age, and other circumstances, as well as the length of time required for their convalescence, &c.

Notwithstanding the favourable termination of such examples, as those above referred to, they are upon the whole to be regarded in the light of exceptions to the general rule; and although they have been selected for the purpose of exhibiting the benefit to be derived from the operation, after a period of severe and protracted suffering, it will require nevertheless to be borne in mind, that this will, for the most part, be looked for in vain—at all events not until the lives of both mother and child be placed in a very perilous situation, (witness, Dr Smellie’s patient) under circumstances of an opposite character; for instance, in proportion as she (the mother) may be delicate, or the os and cervix uteri have previously been the seat of rigidity or inflammatory action.

Should the propriety of early venesection be acquiesced in, and found of primary service, where the degree of excitement is generally diffused throughout the system, it is evident it must be equally indispensable in those cases in which it has “settled down

upon important organs," more especially those referred to in the preceding paragraph. In all such, whilst its effects must for the most part be inferior in degree, compared with the former, it is, especially in the less robust and enfeebled description of females, on that account the no less essential, as paving the way for the more effectual employment of other means.

Notwithstanding the attempt has been made to prove, that the salutary effects of venesection are chiefly confined to its performance at the commencement, or early in the course of the labour, still—as certain of the authorities quoted have rather keenly contended for its employment, on account of an unyielding state of the perineum and other parts forming the out-let, during the second stage—it is here deemed expedient to repeat that, in accordance with the views already submitted to consideration, its powers in removing the obstruction in question have been crowned in the majority of cases where so employed, for reasons formerly explained, with very partial and imperfect success—and, with the exception of those cases, where the assistance of the practitioner has been requested at a protracted period of the confinement, ought never to be delayed, according as the pulse may indicate a necessity for the same—it being extremely difficult, if not impossible, to predict correctly whether such actually does, or to what extent it may exist; and in the event of the affirmative, the chances are all in favour, from early recourse to venesection, whilst an opposite practice must frequently give rise to resistance in these parts, where otherwise there would have been an entire exemption.

Although, from causes already explained, "it does not," as has been correctly observed by Dr Ramsbotham, "certainly possess the same power in this as in the last case under consideration," still, whenever the pulse is decidedly of the incompressible and wiry kind, and the patient's strength not materially exhausted, it ought not in any case to be omitted on account that however small its effect may be in forwarding the progress of the delivery, it will unquestionably prove useful in stopping short, not only the untoward consequences attendant upon it, enumerated by Dr Ramsbotham, but also act as a *caveat* against those of a much more formidable character, which so frequently occur during the puerperal state.

Should it appear, however, that in consequence of the length of time which has elapsed, and the urgency and frequency of the labour throes, symptoms of exhaustion have taken place, it will be obvious that a period has arrived when it becomes the duty of the practitioner to exercise caution in the abstraction of blood, lest, by overstepping the mark, he may not only have to experience the mortification of witnessing, that in the majority of cases its effects are rather to retard than expedite the deliveries, but also to find that such a degree of debility has been induced as will require

much time and attention to remove, and of which the consequences, in many constitutions, cannot be calculated upon.

Let, however, the employment of venesection, as a remedy in lessening the difficulties and advancing the progress of parturition, be found ever so successful, whether performed at the commencement, and during the first, and even the second stages, the fact is believed to be placed beyond the reach of contradiction, that, in all cases where the phlogistic action originates in the usual way, by means of an occasional survey of the sanguiferous system, and judicious use of the lancet, in the manner formerly recommended, amongst every class and description of females to whom access is obtainable, during, at least, the two latter months of pregnancy, there would be but comparatively small necessity for recourse to the lancet when the critical period did approach.

Were this plan more universally adopted, not only would the process be shortened, and consequently the sufferings of parturient females undergo a diminution, to which the greater number of them, it is conjectured, are entire strangers; but, although, at first view he may feel inclined to treat it as an empty tale, such, it is believed, would be the saving of time and anxiety of mind to the attendant as to render his situation in many instances more of the nature of a work of relaxation and pleasure, than one of weariness and drudgery, which it too frequently becomes. By this means would not only the most formidable of the affections lately submitted to investigation, be either most effectually guarded against, or, where they had unfortunately obtained a footing, or existed as the results of former pregnancies, be most thoroughly divested of their resisting power; but equally certain, it is imagined, would be the prevention of the injurious tendencies proceeding directly from the state of excitement treated of, with which both the second stage of labour, and the puerperal condition in general, are so much embarrassed.

PART II.

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

No. II.—*Summary of the Remedies applicable to the cure of Chronic Eruptions.* By WILLIAM SELLER, M.D., one of the Physicians to the Royal Public Dispensary, Edinburgh, &c.

(Continued from p. 298.)

Plumbago Europæa; the Root.—The root of the plumbago Europæa pounded and mixed with boiling oil, so as to form an

ointment, has been pronounced to cure scabies more speedily than any other application. The third or fourth inunction, it is affirmed, generally proves successful.

Plumbi Praeparata; Litharge Plaster; Acetate of Lead; Ointment of Acetate of Lead; Solution of Diacetate of Lead, or Goulard's Lotion; Ointment of Carbonate of Lead.

Several preparations of lead are of established use in some cutaneous eruptions. Litharge plaster, softened with oil of almonds, is recommended in some kinds of irritation, as in lichen agrius. The following formula has the reputation of allaying heat and itching in such affections:—Litharge plaster two ounces, yellow wax half an ounce, oil of almonds an ounce and a half. Melt the plaster with the wax, add the oil, and stir till the mixture cools.

Lotions of the acetate of lead also allay heat and itching. For this purpose these are useful in strophulus, eczema, herpes, and the like. On the contrary, these seldom give relief in prurigo podicis, or prurigo pudendi, or in the herpes zoster. In the first stage of psoriasis, these and other preparations of lead are commonly hurtful. The ointment of acetate of lead is of benefit in such cases as the irritable state of porrigo scutulata. The same ointment diluted with an equal part of simple cerate, or with more or less of the latter, suited to the state of the inflammation, is a good application in porrigo favosa; and when the discharge is copious in the same disease, the saturnine ointment should be mixed with the red precipitate ointment or with the ointment of the oxide of zinc.

The solution of the diacetate or Goulard's lotion has much the same uses as that of the sugar of lead or acetate. The ointment of the carbonate, for which there is a formula in the Dublin and Edinburgh Pharmacopœias, also finds a place in the treatment of eruptions; for example, in papular eruptions with itching. In a French formula this carbonate is combined with lime for similar purposes; carbonate of lead two drachms, prepared lime half an ounce, Galen's cerate two ounces. Cold cream is often, though not always, a preparation of lead. The following is a formula to which the sugar of lead or Goulard may be added if required:—Spermaceti half an ounce, white wax and olive oil, of each a drachm and a half, to be melted gradually in a vessel placed in a basin of boiling water, then add at intervals two ounces of orange flower water, stirring constantly till the mixture cools.

Potassa; Alkaline preparations of Potassa; Potassæ Liquor; Carbonates of Potassa.

The internal use as well as the external application of the alkaline preparations of potassa and soda, has a well founded reputation in various eruptions. Many prefer the liquor potassæ for internal use to the combinations of this alkali with carbonic acid. It can hardly be understood why there should be any ground for this preference, since the pure alkali must at once pass into the

carbonate when it comes into contact with the membrane of the stomach. It would be rash, however, to determine this point merely on such a ground, for what seems to be the evidence of experience is not to be made to yield at once to a speculative principle. It is not impossible that the very act of passing from potassa to the carbonate may originate a beneficial change on living action. However this may be, the liquor potassæ taken internally has a reputation in lepra, psoriasis, eczema, acne, and the like; and is applied in the form of lotion to soften the crusts in lepra, also to remove the thicker crusts in porrigo lupinosa; in chronic eczema, to allay itching even when emollients fail; also in severe cases of herpes præputialis, and in herpes circinatus, in pityriasis capitis, also in acne simplex, acne rosacea, and in ephelides. One drachm of the liquor potassæ is combined with six ounces of spirit for a lotion to be used in acne simplex, after the previous use of diluted spirituous lotions. For use in ephelides the liquor potassæ is diluted with twenty parts of water. Against the thicker crusts in porrigo lupinosa, the following formula is recommended:—Liquor potassæ one drachm, olive oil two drachms, water one ounce.

The carbonates of potassa are recommended for internal use in the same diseases as the liquor potassæ. The use of alkaline baths was spoken of before. The following alkaline lotion is recommended in lichen and prurigo:—Carbonate of potassa, distilled water, of each two drachms, mucilage of bitter almonds eight ounces. In prurigo, when the itching is subsiding, this lotion is prescribed, viz., carbonate of potassa one drachm, sublimed sulphur two drachms, water a pint. An alkaline ointment against porrigo and pustular diseases in general is thus made:—Carbonate of potassa two drachms, lard two ounces; and a compound alkaline ointment, for some cases of prurigo, is made of carbonate of soda, extract of opium, slaked lime and lard, (see Carbonate of Soda). An ointment of carbonate of potassa is employed as a depilatory.

Potassæ Nitras; Nitre.—The use of nitre in some eruptions is an old practice; for example, combined with sulphur, in the early stage of some species of impetigo, as impetigo sparsa, and impetigo figurata.

Potassii Cyanidum.—The cyanide of potassium is a remedy of recent introduction for external use in cases of much irritation. In chronic eruptions attended with itching, a lotion consisting of twelve grains of the cyanide in six ounces of emulsion of bitter almonds, affords relief; and the following formula is given for an ointment of the same cyanide of use in lichen and prurigo, when the skin is very dry, and the itching excessive:—Oil of bitter almonds two drachms, cyanide of potassium twelve grains, Galen's cerate two ounces.

Potassii Sulphuretum; Sulphuret of Potassium, formerly Sulphuret of Potassa.—The sulphuret of potassium is beneficial in several eruptions in the form of lotion or of ointment. A lotion

of this substance removes the crusts in lepra, affords temporary relief in prurigo, is of service in porrigo favosa, and cures scabies. There are numerous formularies for lotions, liniments, and ointments of sulphuret of potassium. Sulphuret of potassium one drachm, white soap two drachms, distilled water eight ounces; for use in prurigo, scabies, porrigo. Dupuytren's lotion—Sulphuret of potassium four ounces, sulphuric acid half an ounce, water two pints; for use in scabies. Barlow's lotion—Sulphuret of potassium, white soap, of each two drachms, lime-water seven ounces, alcohol one drachm; for use in porrigo. Jadelot's liniment—Sulphuret of potassium six ounces, white soap two pounds, olive oil two pints, oil of thyme two drachms; for use in scabies and prurigo. A mixture of soft soap and sulphur, celebrated for the cure of scabies, is sometimes termed ointment of the sulphuret of potassium, since soft soap is made with potass. The unguentum sulphuris compositum of the London Pharmacopœia, as containing sulphur and soft soap, besides nitre, veratrum, oil of bergamot, and lard, may also be described as a compound ointment of the sulphuret of potassium; its chief use is for the cure of scabies. Helmerich's ointment, so celebrated for the cure of scabies, is essentially an ointment of the sulphuret of potassium. It consists of sublimed sulphur half an ounce, carbonate of potassa two drachms, lard two ounces; one-half of this quantity is to be used daily.

The internal use of sulphuret of potassium, and its employment to make sulphurous baths, have been already spoken of, (see Mineral Waters).

Poultices.—Poultices are of much service in many kinds of eruptions accompanied with severe irritation, as in eczema rubrum, eczema impetiginoides, in porrigo favosa, porrigo scutulata, in sycosis, in prurigo. In prurigo podicis cold poultices afford relief. The linseed meal poultice is, on the whole, the most useful. The bread and milk poultice, and the oatmeal poultice are hardly inferior to it. In some cases of heat and tingling, the sowins poultice gives great relief, (see Avena). The potato flour poultice is made of potato flour and infusion of marsh mallows, and is employed with much benefit in eczema, impetigo, mentagra, &c.

Purgatives.—Though the employment of purgatives in eruptive diseases depends very much on the rules applicable to their use in other diseases, yet it would be very desirable to have collected into one view the results over a large experience of the more or less sparing use of purgative medicines in particular eruptions. The materials for such a view hardly exist at present. A few observations on the effects of such remedies are scattered throughout our common works on cutaneous diseases. The saline purgatives have been held commonly to be most appropriate to this order of diseases. In lichen, and strophulus, gentle laxatives are plainly conducive to recovery—and in some forms of lichen, even mercurial laxatives are recommended, though mercury is on

the whole hurtful in that eruption. In prurigo, strong purgatives have been observed to be hurtful, and the too frequent use of purgatives in acne indurata is injurious. The saline purgatives are useful in chronic eczema, as sulphate of magnesia, sulphate of soda, sulphate of potassa, bitartrate of potassa. By some the sulphate of potassa is preferred to the other purgative sulphates; as being more slow in its operation. As the sulphate of potassa contains no water of crystallization, the dose should be considerably less than that of the sulphate of magnesia, or the sulphate of soda, the neglect of which limitation of the dose is probably the cause of the accidents sometimes resulting from its employment.

Pyrus Cydonia, or Cydonia Vulgaris; the Quince; Quince Seeds.—Owing to the great abundance of mucilage contained in quince seeds, a decoction of them, for which there is a formula in the London Pharmacopœia, is a useful emollient; for example in some species of acne.

Rosmarini Oleum; Oil of Rosemary.—The oil of rosemary is one of the applications resorted to in porrigo decalvans. Equal parts of oil of rosemary, and olive oil, form a combination long celebrated for preserving, nourishing, and restoring the hair.

Ruta graveolens; the leaves and oil.—Preparations of rue are among the applications recommended in the inert states of porrigo scutulata.

Sarsaparilla.—Sarsaparilla has a reputation, not only in syphilitic eruptions, but in many cutaneous diseases. The limited plan of this summary is incompatible with the discussion of controverted points, such as those relating to the efficacy of sarsaparilla, (see Guaiacum). Sarsaparilla has been especially recommended alone or combined with serpentaria in prurigo formicans, in eczema rubrum, in eczema solare, in impetigo erysipelatoides, in elephantiasis, frambœsia, and the like. In many of the cases in which sarsaparilla is prescribed, it is combined with guaiacum, sassafras, mezereon, as in the compound decoction—and it has been also a frequent practice to unite it with serpentaria, which, besides its tonic properties, is distinctly a diaphoretic.

Sassafras Officinale.—For the use of sassafras in eruptions, see Guaiacum and Sarsaparilla.

Scrophularia Nodosa; Fig-wort, the leaves.—Figwort leaves were formerly in repute as an external application in some eruptions, as in porrigo and impetigo; but the use of these is now nearly obsolete.

Silk, oiled.—The application of oiled silk is frequently of benefit in eruptions, as after the removal of the scabs in impetigo scabida, and in the form of a cap in porrigo furfurans, so as to preserve the parts warm and moist, and retain ointment. It is hurtful, however, in porrigo favosa.

Soap ; Soft Soap, Castile Soap, White Soap.—The utility of soap in chronic eruptions is not without exception, as in some cases it increases irritation ; for example in the irritable states of impetigo, and in lichen agrius. Soap is useful for removing the scabs in porrigo lupinosa, and porrigo scutulata, also in porrigo furfurans, and in pityriasis capitis. In other cases, soft soap is serviceable ; thus, soft soap and water are used when the scalp becomes dry and unirritable in porrigo furfurans, or even a lather made by mixing equal parts of soft soap and sulphur ointment in warm water.

Soda ; Alkaline preparations of Soda.—The carbonates of soda are much employed in the internal treatment of cutaneous diseases, and in some cases they enter into external applications. In prurigo mitis, carbonate of soda combined with sulphur is useful—and the same combination is proper in prurigo formicans. In acne indurata the carbonate or bicarbonate is beneficial. In lichen, as well as in prurigo and other chronic eruptions attended with itching, the internal use of carbonate of soda is serviceable. The following formula for a compound alkaline ointment is an example of the external use of the carbonate of soda:—Carbonate of soda two drachms ; extract of opium ten grains ; slaked lime one drachm ; lard two ounces. This ointment is designed for use in prurigo. For a depilatory ointment in porrigo, two drachms of carbonate of soda are combined with one drachm of lime, and one ounce of lard.

Sodae Boras ; Borax.—The use of borax in aphthous affections of the mouth and throat is well established. The honey of borax is one of the best forms. One drachm of borax, dissolved in five ounces of water, with the addition of a small portion of sugar or honey, makes an excellent gargle when the throat is affected. Lotions of borax are serviceable in the squamous eruptions, in porrigo and pityriasis. A drachm of borax dissolved in two ounces of distilled vinegar is an excellent application in porrigo scutulata, and in pityriasis versicolor.

Sodii Chloridum ; Common Salt.—A warm solution of salt gives temporary relief in itching.

Spiritus Rectificatus ; Spiritus Tenuior ; Rectified Spirit ; Proof Spirit.—Spirituous lotions of greater or less strength are of service in various eruptions. In several species of prurigo, as in prurigo formicans, and prurigo senilis. This is in accordance with an axiom laid down by Heberden, “ that when pain is present, emollients are requisite, when itching, stimulants.” Spirituous lotions serve to remove the crusts in lepra. In pityriasis versicolor a strong spirituous lotion is useful, in pityriasis capitis a weak lotion answers. In acne simplex a weaker spirituous lotion, and then a stronger is to be employed—as at first equal parts of proof spirit and elder flower, or rose water, and afterwards pure

spirit. In ephelides strong spirit is used; to be diluted however when requisite.

Steam.—Steam is often successful in removing crusts or scabs, as in lepra and impetigo scabida.

Sulphur.—Though of extensive utility in cutaneous diseases, sulphur is not to be employed indiscriminately, either internally or by external application. As a general rule, it is not to be used in lichen; yet small doses are recommended in what Bateman terms the lichen urticatus. In prurigo formicans, sulphur ointments are commonly useless. The internal use, however, of sulphur is directed in several species of prurigo, as with carbonate of soda or nitre in prurigo mitis, and either alone or with carbonate of soda in prurigo formicans. The internal use of sulphur with carbonate of potass, or carbonate of soda, is of service in psoriasis, after the constitutional disturbance has subsided. In the first stages of impetigo figurata, and impetigo sparsa, sulphur exhibited so as to exert little action on the bowels, is serviceable, and if there be much irritability or inflammation of the surface, it should be combined with nitre or crystals of tartar. In chronic eczema, sulphur is advantageously used along with some demulcent fluid, as milk or barley water. It is also combined with magnesia for use in chronic eczema, and in scaly diseases.

Of late years, the sulphur vapour bath has come into frequent use in cutaneous diseases. In this mode of employing sulphur it is converted into sulphurous acid before it comes into contact with the affected parts of the skin. When applied by means of a proper apparatus, the sulphur vapour bath is of much benefit in chronic lichen, prurigo, scabies, and scaly diseases.

The use of sulphur ointment in scabies is unexceptionable, but for its want of cleanliness. Several combinations of sulphur ointment, with other substances, for various uses, have been already stated. (See Potassa and Soda, Ammoniaë Hydrochloras, Hydrargyri Sulphureta). Sulphur is also combined, in the form of ointment or liniment, with white soap,—sublimed sulphur and white soap, of each half an ounce, lard two ounces; or sublimed sulphur and white soap, of each two ounces; dissolve the soap in a sufficient quantity of water, and add the sulphur gradually. Both these preparations are for use in scabies. The formula for Willan's sulphur ointment is as follows:—Carbonate of potass half an ounce, red sulphuret of mercury one ounce, rose water one ounce, oil of bergamot half an ounce, sublimed sulphur and lard, of each nine ounces. Sulphur ointment, combined with unguentum picis, is of use in the unirritable states of porrigo scutulata.

The infusion of sulphur hardly retains its reputation. It is a remedy recommended by Celsus. The modern formula is a quart of water to an ounce of broken sulphur, for use in acne simplex.

Tar.—See Pix.

Tabacum; *Leaves of Nicotiana Tabacum*.—Tobacco is sometimes used in the form of ointment or of lotion in the irritable state of porrigo scutulata.

Terebinthinae Oleum.—The oil of turpentine, diluted with oil of almonds, is used to destroy pediculi in prurigo senilis, and the the turpentine liniment is of benefit in porrigo decalvans.

Veratrum Album; and *Veratrum Sabadilla*.—The root of veratrum album has a reputation for the cure of scabies. It is contained in the compound sulphur ointment of the London Pharmacopœia. A decoction of this root has also been used in scabies. The ointment of veratrum has been used without effect in prurigo formicans. The tincture has been employed internally in the irritable state of lepra, and in pityriasis rubra. The veratrum sabadilla has recently become officinal, and most probably possesses all the virtues of the veratrum album in an equal if not a greater degree.

Zinci Præparata.—The ointment of the white oxide of zinc has been a principal application in many eruptions. As in the case of sulphur, its indiscriminate use is sometimes hurtful. It is useless in prurigo formicans, as also in prurigo faciei, and prurigo pudendi. Yet Alibert recommends the following antipruriginous ointment:—Laudanum and sublimed sulphur, of each half a drachm, oxide of zinc one drachm, oil of almonds one ounce, lard three ounces. In the first stage of psoriasis this ointment is commonly detrimental. The same ointment alone, or with ointment of the acetate of lead, or the white precipitate ointment, is beneficial in impetigo sparsa, and impetigo figurata, and diluted with simple cerate in impetigo scabida; in the commencement of porrigo furfurans, when the surface is somewhat inflamed, the zinc-ointment is advantageously employed, and with or without a saturnine cerate in porrigo larvalis, and also in porrigo favosa; and in the latter affection it is also usefully joined with the red precipitate ointment. Lotions of sulphate of zinc are commonly useless or hurtful in the same cases as the zinc-ointment. A solution of sulphate of zinc is prescribed with benefit in the inert state of porrigo scutulata, and is of much service in herpes labialis when there is acrid heat, and painful tension of the skin; and also in herpes circinatus, and in aphthæ. The unguentum ad scabiem of Jasser consists of equal parts of sulphate of zinc, sublimed sulphur, and laurel berries, made into liniment with oil. In what has been termed ichthyosis sebacea, the following ointment is recommended:—Elder-flower ointment one ounce, sulphate of zinc one scruple—to be used twice or thrice a day—instead of sulphate of zinc, the same quantity of sulphate of copper may be substituted. For some cases of eczema and impetigo of the face the following formula is prescribed:—Sulphate of

zinc, acetate of lead, of each one scruple, rose-water five ounces, mucilage of cydonia one ounce. Here the salt of zinc retained in the solution is the acetate, the sulphate of lead being precipitated.

Pastes of chloride of zinc are used of different degrees of strength, as caustics in lepra—thus, two, three, or four parts of wheat-flour, are added to one part of chloride of zinc—mix the chloride with the flour, adding as little water as possible; then expose the paste to the air, until it absorbs enough of moisture to be fit for use. For the same purpose the chloride of zinc is made into a paste by means of flour, with chloride of antimony, the proportions being one part chloride of antimony, two parts chloride of zinc.

ADDENDA.

[A few articles are here subjoined, chiefly substances less used in the practice of this country, or of more recent introduction.]

Antimonii Chloridum—*Butter of Antimony*.—The sesquichloride of antimony, the old butter of antimony, is a caustic sometimes employed in lupus in the form of paste, either with or without chloride of zinc. It is also combined for the same purpose with the animal oil of Dippel.

Arctium Lappa—*Burdock*—*the root, leaves and seeds*.—The infusion or decoction chiefly of the root of the burdock, is one of the medicines proposed as a substitute for sarsaparilla. In hospital and dispensary practice, it deserves a trial in most chronic diseases of the skin. Infuse an ounce of the dried root in a pint of boiling water for six hours—strain and sweeten.

Artemisia Absinthium—*Worm-wood, the tops*.—The infusion of worm-wood is recommended as a tonic in rupia—(Wilson.)

Caoutchouc-Cap—The caoutchouc cap is used, like the silk cap for example, in porrigo favosa, instead of poultices—a piece of folded linen is dipped in a solution of carbonate of potass, or carbonate of soda, and placed on the head, and then the caoutchouc cap is drawn over the entire scalp—the surface is thus entirely freed from crusts in twelve hours.

Carex Arenaria—*the root*—*German Sarsaparilla*.—A decoction of the root of this abundant carex is worthy of new trials in the treatment of such eruptions, as are thought to be benefited by sarsaparilla.

Cheledonium Majus—*Celadine*.—The juice of this plant serves to destroy warts.

Cichorium Intybus—*Succory, or Chicory*.—The root of the common succory, cut into small pieces, dried, and roasted, is a substitute for coffee, and answers better than coffee in some cutaneous diseases, as in acne and most chronic eruptions.

Cologne, Eau de.—Eau de Cologne is used as a menstruum for corrosive sublimate for a lotion in acne, the proportion being half a grain in each ounce. In the following formula it is a menstruum for several stimulants, useful in the treatment of porrigo decalvans, or alopecia:—Eau de Cologne two ounces, tincture of cantharides two drachms, oil of rosemary and oil of lavender, of each ten minims.

Fumaria Officinalis—*Fumitory, the herb.*—Fumitory has an old reputation in cutaneous diseases, which seems to be revived by some modern authorities. The infusion is employed in chronic diseases of the skin.

Humulus Lupulus—*Hops.*—The infusion is tonic and calmant in chronic eruptions, as in rupia.

Marrow—Beef-Marrow.—Dupuytren's pomatum for porrigo decalvans (alopecia), consists of purified beef-marrow eight drachms, acetate of lead one drachm, Peruvian balsam three drachms, alcohol one ounce, tinctures of cantharides, cloves, and canella, of each fifteen minims. For the same purpose Gibert recommends purified beef-marrow six drachms, oil of sweet almonds two drachms, powder of red bark one drachm.

Naphthaline, Concrete.—As preferable to tar, and less unpleasant, M. Lemery recommends concrete naphthaline in leprous affections, and gives the following formula:—Naphthaline two to four parts, lard thirty parts. This ointment is to be applied on folds of linen to the diseased skin, night and morning. This ointment is highly stimulating.

Sambucua Nigra, the Elder.—Under several heads the elder flower ointment has been already referred to as a constituent of applications to cutaneous diseases.

Saponaria Officinalia—*Soap-wort—the root and herb.*—The root of the saponaria has been held to rival the effects of sarsaparilla. An infusion of the leaves is recommended as an alterative in most chronic diseases of the skin—leaves of saponaria half an ounce, boiling water one pint; infuse for half an hour, strain and sweeten.

Scabiosa Arvensis—*Scabious.*—An infusion of this herb, prepared like the infusion of saponaria is prescribed in chronic eruptions. The reputation of scabiosa in eruptions is of old date, and indeed, is manifestly the origin of its name.

Smilax China.—The root of the smilax china has had a high credit in cutaneous diseases, as in lepra.

Ulmus Campestris, Urtica Dioica and Viola Tricolor, though by most regarded as inert, still retain, with some, the reputation of efficiency in chronic eruptions.

PART III.—REVIEWS.

Animal Chemistry, with reference to the Physiology and Pathology of Man. By Dr J. F. SIMON, translated and edited by GEORGE E. DAY, M.D., Cantab. Vol. i. 1845, Vol. ii. 1846. Printed for the Sydenham Society.

WE have waited till the second volume of the English translation should appear, before noticing this important work, which we are the more anxious to recommend to our readers, as it may escape the attention of those who are not members of the Sydenham Society

The original work, at the time of its appearance, was the most complete publication extant on physiological chemistry, and though the time that has elapsed since it issued from the press, in 1842, has antiquated some of its opinions already, yet the English reader is guarded against misdirection in his studies in this particular, by the labours of the editor. Dr Day has supplemented his clear and faithful translation by additions from Simon's later papers, and as the latter's untimely death, in 1843, necessitated additions from other quarters, he has incorporated the results of the researches carried on by other chemists in every part of Europe during the last three years. The commentary on Simon's text thus furnished, adds greatly to the value of the English work.

The first volume is devoted almost entirely to the chemistry of the blood, in health and disease. This chapter is preceded in the original by a paper of some length on the proximate analysis of compound animal substances. Dr Day has retained this in the translation, but has placed before it an introduction drawn up by himself, "with the view of facilitating the perusal of the work, to those who have not paid much attention to the recent progress of organic chemistry."

The second volume discusses *seriatim*—Digestion; Milk; Secretions of the Mucous Membrane and Skin; Urine; Secretions of the Eye and Ear; of the Generative Organs; and of the Intestines; Component parts of the Animal Body; Solid and Fluid Products of Disease; besides containing several valuable appendices.

It is impossible to make any abstract of a book of the kind we are considering, and it would be useless to make citations from it. The chapters on the Blood, Milk, and Urine, are perhaps the best, as they certainly are the most interesting. To the section on urine, Dr Day has made many important original additions, and in it, as throughout the work, has stated the opinions of our rival

schools of organic chemistry with great clearness, and the utmost impartiality. The book, as a whole, is a credit alike to its author, its translator, and to the Sydenham Society, who have enabled English readers to peruse it.

On the Recruiting of the Army, in relation to the National and Provincial Character of Recruits—the Proper Standard of Height—most Eligible Age for Enlistment—and the Disqualifications for Military Service. Being the Prize Essay in the Class of Military Surgery in the University of Edinburgh, 1844–5. By CHARLES HOLLAND MACPHERSON, Esq.

THE annual prize awarded by Sir George Ballingall, in the Military Surgery Class, has elicited several valuable contributions to that department of our medical literature. Of these we may mention the excellent essay of Dr Gavin, on Feigned Diseases,—since republished in a more extended form; that of Dr Irving, on the Bibliography of Military Surgery, now in course of publication in the Edinburgh Medical and Surgical Journal, and the one now before us.

Mr Macpherson's essay first appeared in successive numbers of the United Service Journal, in a somewhat abbreviated form. Besides an interesting historical sketch of recruiting in this country, from an early period, and an account of the mode in which it is conducted at present, both in our own army and in those of other European states, the essay contains many instructive and valuable facts regarding the characteristics of recruits from the different parts of the empire, and the comparative and respective value of soldiers from the rural and manufacturing districts. This part of the essay is illustrated by numerous statistical tables, and tends to the general conclusion, that, excepting in reference to a few unimportant duties, the peasant is fitted to make a more efficient soldier than the artisan. The national characteristics of our recruits are also examined, and the respective merits of the English, Scottish, and Irish soldier are fully and freely discussed. Although the author founds his conclusions partly on historical evidence, and partly upon data derived from ethnographic researches, and is, on the whole, impartial, we fancy that we can see a slight leaning, if not to the "Macs," at least to their northern neighbours, the Lowlanders of Scotland. One fact in the mode of approving of recruits, animadverted upon in strong terms by the author, strikes us as a singular anomaly, viz., that a recruit who is enlisted, examined, and approved of by a staff surgeon, (usually an officer of many years' experience), may be, and frequently is, rejected by the surgeon or assistant-surgeon of the regiment, for which the man is enlisted. This certainly appears to us a mon-

strous anomaly,—it is an outrage on common sense,—it must be a frequent source of annoyance to old and experienced medical officers, and of unnecessary expense to the public. A man may be enlisted at Cromarty, and approved of by a civil practitioner there; forwarded to Edinburgh, and intermediately approved of by the staff surgeon, a man, it may be, of 30 years' experience; sent forward to join his regiment at Cork or Plymouth, and there rejected by an assistant surgeon of three months' standing, and then sent back to his native place at the expense of government.

The most valuable, and, to us, the most interesting sections of the essay are those devoted to the height and age which should be fixed for recruits. To these topics, fully discussed in the essay, our limits permit us only briefly to allude. It is shown that the regulations of the service, in regard to the standard height, are often habitually disregarded in consequence of the fancy of particular officers for tall men, and that even the regulations themselves fix the standard too high. The standard height varies from 5 feet 6 inches to 5 feet 10 inches, the limits varying in different departments of the service. But this standard, as Mr Macpherson points out, is made applicable in recruiting to growing lads who have not nearly attained their full height, and who, in consequence, very frequently turn out overgrown, lathy, and consumptive subjects. Mr Macpherson also shows, by several curious statistical returns, partly original and partly derived from the measurements of Mr Macdonald of Edinburgh,¹ that the average height of the nation does not exceed 5 feet 7½ inches; that the average height of the lower classes is considerably less than that of the higher; and that the average height of the army, which is 5 feet 7½, is therefore considerably above that of the class of society from which the army is recruited. The conclusions deducible from these facts are well summed up in the following remarks:—

“ The regulations should be so framed as to include a certain range both above and below the average,—such a range that the average height of the army will correspond with that of the part of the nation from which it draws its sources of power. The present regulations of the army as to height, and the range they allow, appear to me to be somewhat above the standard which a due consideration of the average height of the nation, and of the relation of physical energy to stature, would justify as the best. Were I entitled to venture an opinion on this subject, I should say, after a careful revision of the various statistical and physiological data, and of the medical opinions of the most experienced officers, that a standard, limiting the height of recruits to the range between 5 feet 4 inches and 5 feet 10 inches, would be in every respect superior to the present one, both by increasing the facili-

¹ Mr Macdonald's calculations by the andrometer, extracted from the Ethnographical Map of Europe, by Dr Gustcif Kombs, F.R.M.S.C., &c.

ties for recruiting the army, and rendering the recruit more effective.

“The present regulations, defective as they undoubtedly are in making the standard too high, are rendered much more objectionable by the practice of our different corps, sanctioned by long usage, and kept up by ignorance and a false estimate of the true source of an army's efficiency. The heavy cavalry are limited to the range from 5 feet 7 inches to 5 feet 10 inches, but it is well known to every one that a large proportion of the men are much above that height. Mr Marshall says their mean height is from 5 feet 9 inches to 5 feet 10 inches, and the minimum 5 feet 8 inches. The light cavalry are restricted to 5 feet 9 inches; the same observation is applicable to them. The minimum for the infantry is 5 feet 6½ inches, except under special circumstances. In this branch of the service, the same predilection in certain corps exists for men of tall stature. In short, the standard, as fixed by the regulations, is habitually evaded, from a deference to this partiality on the part of commanding officers.”—P. 35.

We are glad to observe, that since this essay was written, the regulations of the service, in respect to the height of recruits, have been altered, so as to come nearly within the range recommended in these pages.

The remarks on the age of recruits are equally important. From the statistics of M. Quetelet, it is shown that the growth of man is not, in general, completed even at 25 years of age, and our author very properly points out, that when the standard of height is applied to lads of 18 years of age, it is peculiarly objectionable, many of the recruits being unhealthy subjects who have shot up prematurely above the height proper to their years. The practice in our army, in regard to the duration of service is also pointed out, as making the regulations as to age objectionable, inasmuch as they deprive the country of the services of many of its most efficient soldiers, men of 35 and 37 years of age, “still in the pride of life, and full vigour of manhood.”

The essay concludes with a very judicious survey of the defects and disqualifications for military service, which our limits preclude us from noticing more fully.

Liebig's Physiology applied in the Treatment of Functional Derangement and Organic Disease, with Observations upon Hahnemann's Practice. Part I. the Heart, Lungs, Stomach, Glands, &c. &c. By JOHN LEESON, Practitioner of Medicine, M.R.C.S. Engl. &c.

WE opened this book in the sanguine expectation of finding some really useful hints as to the adaptation of Liebig's views to prac-

tice. In this we were sadly disappointed. The author must certainly be possessed of a more than common share of self-esteem, as he is bold enough to conclude his preface with the following words:—"Trusting to the fair and liberal sentiments which now (more than formerly) prevail among the gentlemen of my profession, *I have great confidence* (the italics are our own) in submitting this work to their consideration."

This work, then, is a professional production, intended for professional men. Scientific knowledge would be at a very low ebb indeed, if, after the publication of Liebig's chemical theory of medicine, as developed in his two works—"Chemistry applied to Agriculture and Physiology," and "Organic Chemistry applied to Pathology and Physiology," which now have been for several years before the public, it required a compilation like Mr Leeson's to make the medical profession of this country acquainted with these views.

At the risk of being suspected of "illiberal sentiments" by our author, we must say, that the popular exposition of these views, as found in Chambers's Journal, has far more merit than the incomplete statements contained in the first fifty pages of the book before us. We will at once concede to the author, that we have hailed Liebig's views with delight, as they undoubtedly will lead to a more correct appreciation of the nature of many diseases, and facilitate and simplify their cure. We further grant to him, that Hygienic treatment is perhaps too much neglected by the profession at large, and too implicit reliance placed in the efficacy and salutariness of medicaments. But there we must stop, to ask him, how he has applied the principles, which he advocates in the first part of the book, and whether he has really exhibited himself in the shape of an artist, who reduces to successful practice notions and views so much vaunted? If Mr Leeson's book is to give us the answer, it is a very sorry one. Besides a few dietetic rules, there is nothing the least new in his treatment of the diseases, enumerated on the title page, and these rules are only new to the novice, or to the less reflecting portion of our brethren. In short, we cannot help considering the whole production as a claptrap, which is shamefully made to bear the name of one of the most illustrious men in modern science. Liebig's works have sold amazingly well in this country. What conclusion could be more natural, than that a work, which professes to teach the treatment of diseases, according to Liebig's views, would likewise sell well. That we are not too severe in throwing out this supposition as to the motives which led to the production of the book in question, we may refer to the fact, that "Hahnemann's Practice," observations on which are announced on the title page, is only ramblingly mentioned in pages 9, 10, 11, and 12. But homœopathy has of late excited not only a great deal of attention, but also called forth lengthened discussion

in several of the most widely circulated Medical Journals of this country. Here, then, is a book which professes to make Liebig practical, and to set Hahnemann right. Purchasers and readers cannot of course be wanting.

We should condescend too far, were we at all to enter upon a criticism of the author's "scientific" exposition of his views of diseases and their treatment. The jumble of chemical terms, and of would-be physiological remarks, shows that he has not mastered either science, or at least is not enabled to state facts and expound theories in a clear, correct, and useful manner. To show with what carelessness this work has been got up, we will only quote a few passages, which, we have no doubt, will sufficiently absolve us with our readers of any suspicion of partiality. P. 56, "fish and *other vegetables*."—P. 57, "from the above *table* of simple dietetic materials *the moral and physical powers* of the child are developed in the highest perfection. *From these* are taken all the elements which go to the formation of bone," &c. P. 60, "The excretions of children are derived from the gluten, starch, and sugar of bread—from the starch and sugar of potato, and from the caseine of animal milk." Of course, if they are fed upon bread, potatoes, and milk exclusively. As the author speaks so much of the nutritive qualities of different kinds of food, we would recommend to him to make himself acquainted with Schössberger's and Kemp's inquiries as to the "proportion of nitrogen contained in alimentary substances taken from both the organic kingdoms," &c. &c. which would soon convince him, that the nutritive power of the different kinds of animal substances used as food differs pretty considerably.

As a second part of Mr Leeson's performances, under the title of "On the Diseases of the Urinary Organs," is in the press, a subject on which we, by the way, possess already a valuable treatise by Mr Jones, according to Liebig's views, we consider it our duty to warn the medical profession to be on its guard against such fabrications as Mr Leeson's.

PART IV.—PERISCOPE.

CHEMISTRY.

Abstract of Paper on the Solubility of Fluoride of Calcium in Water, and its relation to the occurrence of Fluorine in Minerals, and in recent and fossil plants and animals. By GEORGE WILSON, M.D., F.R.S.E.

(Read before the Royal Society, Edinburgh, April 6th, 1846.)

After a preliminary reference to the existence of fluorine in recent and fossil bones, Dr Wilson stated that he had made a series of experiments with a view to discover what solvent carried fluoride of calcium into the tissues of plants and animals. His first trials were made with carbonic acid, which was passed in a current through water, containing pure fluorspar in fine powder, suspended in it. The fluorspar was by this treatment dissolved, yielding a solution which precipitated oxalate of ammonia, and when evaporated left a residue, which, on being heated with sulphuric acid, gave off hydrofluoric acid. The author was inclined, in consequence, to suppose that carbonic acid conferred upon water the power of dissolving fluoride of calcium. But on observing that long after the whole of that gas had been expelled by warming the liquid, the latter remained untroubled, he became satisfied that water alone can dissolve fluoride of calcium, contrary to the universal statement of writers on chemistry.

On prosecuting the inquiry, he found that water at 212 deg. dissolved more of the fluoride than water at 60 deg., but he has not yet ascertained the proportion taken up by that liquid at either temperature.

The aqueous solution of fluoride of calcium was found to give, with salts of baryta, a precipitate which required a large addition of hydrochloric or nitric acid to dissolve it. The author pointed out the difficulty which must, in consequence, occur, in distinguishing between dissolved fluorides and sulphates, and suggested that fluorides may have been mistaken for sulphates in the analysis of mineral waters. He referred also to the objection which must now lie against the present method of determining the quantity of fluorine present in bodies, consisting as it does in converting that element into fluoride of calcium, which, in the course of the necessary analytical operations, is washed freely, and must be seriously diminished in quantity; a fact which has of necessity been hitherto overlooked.

Dr Wilson stated, that he was not yet able to suggest an unexceptionable quantitative process; but that at all events the fluoride of barium being much less soluble than the fluoride of calcium, might in the meanwhile be substituted for it in the examination of fluorine.

The author proceeded to state that, in consequence of the observation he had made as to the solubility of fluoride of calcium in water, he had been led to look for that body in natural waters, and had found it in one of the wells of Edinburgh, viz. in that supplying the brewery of Mr Campbell in the Cowgate, behind Minto House. At the same time, he stated that preceding observers had already found it in other waters. He believed, however, that he was the first to detect it in sea water, where, by using the bittern or mother liquor of the salt pans, in which water from the Firth of Forth is evaporated, he had found it present in most notable quantity.

The author referred to the presence of fluorine in sea water, as adding another link to the chain of observed analysis, between that body, and chlorine, iodine, and bromine.

Dr Wilson further stated, that he had confirmed the observations of Will as to the presence of fluorine in plants, and Berzelius' discovery that fluorine exists in the secre-

tion from the kidneys, and had in addition detected fluorine in blood and milk, in neither of which has it hitherto been suspected to occur. The paper concluded by some observations on the presence of fluorine in fossils, and its relation to animal life.

MIDWIFERY.

On Placenta Prævia.

(A paper read before the Medical Society of University College, London, on Friday, January 30th, 1846.)

By JOHN ELLIOT WOOD.

(Continued from p. 316.)

Dr Rigby says, that "in a few rare cases the placenta has been entirely separated and expelled before the child, but these have usually been attended with a most alarming loss of blood."¹ We can easily conceive this to have been the case, if the task of separating an adherent placenta from the uterine neck were left to the uterus itself. It would have been well if Dr Rigby had stated when this alarming hemorrhage, of which he speaks, had taken place, whether before or after the expulsion of the placenta. Dr Lee records a number of cases of this description. "On the 8th of February," he says, "I was called to a woman residing in Falconberg Court, who had been attacked with profuse uterine hemorrhage at the end of the seventh month of pregnancy. The placenta was protruding through the orifice of the vagina; I immediately extracted it, and a dead child followed. A great hemorrhage succeeded, and she remained for a considerable time insensible, but gradually recovered."² Dr Ramsbotham, sen., gives three cases of the same kind.³ Merriman mentions one:—"I was once consulted by a very careful and judicious practitioner respecting a woman, who, when I first saw her, was rapidly sinking under puerperal fever. In this case the placenta was expelled many hours before the child was born, and no extraordinary means were used to expedite the delivery of the child."⁴ Various other practitioners, as Baudeloque, Perfect, Barlow, Collins, and Dr F. H. Ramsbotham, record cases of a like character.

Reflecting upon these circumstances, Mr Kinder Wood, of Manchester, was induced to consider whether, in very urgent cases, we might not be justified in so far imitating nature as to extract the placenta before the foetus, and by this means arrest the flow of blood. Writing in 1821, he says, "If we find so much exhaustion as to make us fear the effect of further hemorrhage, the first step would be to detach the placenta; by this means the hemorrhage will be completely suppressed. The time required to separate the placenta is very short, and the loss of blood during the attempt exceedingly trifling. I have no hesitation in recommending that the placenta be separated completely, and the membranes ruptured, and that the hand be withdrawn immediately upon this being effected, leaving the child and placenta behind." Mr Bryden, pupil of, and afterwards co-lecturer with, Dr Radford, says that he has always been taught, and has himself insisted on, this practice in extreme cases. Mr Wilson and Mr Low confirm the fact that Mr Wood taught and practised this method in 1822.⁵ Dr Radford, of Manchester, had a case in 1819, in which he removed the placenta, because it was hanging so low in the vagina, that no other plan could be pursued. He now recommends, in cer-

¹ Rigby's Midwifery, p. 256.

² Med. Gazette, July 13, 1839.

³ Practical Observations, case 154, et seq.

⁴ Ib. p. 126. Note.

⁵ Provincial Medical and Surgical Journal, Feb. 26, 1845.

tain urgent cases, detachment of the placenta, as a preparatory means for the employment of galvanism in unavoidable uterine hemorrhage; “for although,” he says, “the practice of detaching the placenta may be a means of suppressing the bleeding, yet it will not restore the depressed powers of the woman, and on that account we still require an agent to induce such a degree of uterine contraction as will secure her from all chances of further hemorrhage, while we have recourse to such measures as will tend to support her strength.”¹ But it is to Dr Simpson, of Edinburgh, that we are chiefly indebted for bringing the question of adopting or rejecting this practice most prominently before the profession; and it must be admitted that he has supported the practice he has espoused by sound reasoning and logical arguments. Thus much we may safely say, without compromising ourselves by giving an opinion as to the correctness of the premises from which Dr Simpson’s conclusions have been deduced.

It has always been admitted by the profession generally, that the operation of turning in placenta prævia is one of extreme danger both to the mother and child, especially perhaps to the former. Dr Lee, in his lectures on this subject, in 1844, remarks, “*At the best it is a dangerous operation,* and you can never tell with certainty whether or not the patient will recover after its performance, however easily it may have been effected.”² And although this same gentleman now denies that any great mortality exists in the usual method of treating placental presentation, we may fairly doubt whether this remarkable change of opinion is the effect of more extended observation and further reflection on the subject.

Dr Simpson has collected one hundred and forty-one cases, in which the placenta was extracted before the child; and in these cases a remarkable fact is, that nearly one out of every three children survived, or thirty-one per cent, were saved, and sixty-nine lost. After the complete detachment of the placenta, the hemorrhage was totally arrested in a large majority of cases; it was not alarming in its extent in a great proportion of the remaining instances; and in five only out of the one hundred and forty-one labours, did it continue so profuse under the circumstances as to be considered alarming by the attendant. Out of the five mothers one only died; the other four all recovered. On the other hand, out of three hundred and ninety-nine cases, collected by Dr Simpson from various authors, in which the usual practice was adopted, in one hundred and fifteen the result was fatal to the mother—a mortality as great as that of malignant cholera in 1832-33, and twice as great as the average in cases of lithotomy. Or, to put the matter in another light, in order to convince Dr Lee, who was still sceptical, Dr Simpson remarks, that Dr Churchill collected with much care the histories of three hundred and seventy-one cases of Cæsarean section; out of these three hundred and seventy-one cases, two hundred and seventeen mothers recovered, and one hundred and fifty-four, or nearly one in every two and four-tenths, died. This is exactly, and to a fraction, the degree of maternal mortality accompanying turning in placental presentation in the cases recorded by Dr Lee in his *Clinical Midwifery*. “When we see,” continues Dr Simpson, “the results of turning the child in placental presentation in the hands of such distinguished accoucheurs as Dr Ramsbotham and Dr Lee, what degree of success can we expect to follow it in the hands of the general mass of practitioners?”

He recommends, therefore, the artificial detachment of the placenta, when rupturing the membranes is insufficient, and turning is either inapplicable or unusually dangerous. As, for instance, when the os uteri is so undilated and undilatable as not to allow with safety of turning; in most primiperæ; in many of the cases in which placental presentations are connected with premature labour, and imperfect development of the cervix

¹ Provincial Medical and Surgical Journal, Dec. 24, 1844.

² Lectures, p 373.

and os uteri; in labours supervening earlier than the seventh month; when the uterus is too contracted to allow of turning; when the pelvis or passages of the mother are organically contracted; in cases of such extreme exhaustion of the mother as forbid immediate turning or forced delivery; when the child is dead, and when it is premature and not visible." He continues, "I believe that in the above and similar cases, by the introduction of a finger, or of a common sound or bougie, the placenta might be readily and completely detached, the attendant bleeding in this way arrested, and the labour subsequently be allowed to proceed to a natural and safe termination, if it were a head or pelvic presentation; and if the child were placed transversely, a more safe and proper period could be waited for, and selected for the safe version of it."

From these facts and reasonings, he gives the following *summary of results*:—1. The complete separation and expulsion of the placenta in cases of unavoidable hemorrhage is not so rare an occurrence as accoucheurs appear generally to believe.

2. It is not by any means so serious and dangerous a complication as might, *a priori*, be expected.

3. In nineteen out of twenty cases in which it has happened, the attendant hemorrhage has either been at once arrested, or it has become so much diminished as not to be afterwards alarming.

4. The presence or absence of flooding after the complete separation of the placenta does not seem in any degree to be regulated by the duration of time intervening between the detachment of the placenta and the birth of the child.

5. In ten out of one hundred and forty-one cases, or in one out of fourteen, the mother died after the complete expulsion or extraction of the placenta before the child.

6. In seven or eight out of these ten casualties, the death of the mother seemed to have no connection with the complete detachment of the placenta, or with results arising directly from it; and if we do admit the remaining three cases, (which are doubtful,) as leading by this complication to a fatal termination, they would still only constitute a mortality from this complication of three in one hundred and forty, or one in forty-seven cases.

7. On the other hand, under the present established rules of practice, one hundred and thirty-four mothers died in three hundred and ninety-nine placental presentations, or about one in three."²

These statistics of Dr Simpson's are disputed, however, by no less authorities, than Dr Ramsbotham and Dr Lee. The former of these eminent practitioners states that, "Dr Simpson's views are founded upon the singular and obvious fallacy, that because in a certain number of cases, (and those the most favourable for the ordinary treatment,) in which the placenta came away spontaneously before the child, and the woman recovered, the same good result should take place after the still organically adhering placenta has been torn away. This clearing away of the placenta was performed two hundred years ago by an ignorant and audacious impostor, on a lady who died in Paris, whose case is related with denunciations of the practice by Guillemeau."³ Dr Ramsbotham has omitted to inform us at what period after the operation this patient died, or indeed, whether she died from the effects of the operation at all.

Dr Lee attacks these tables with still greater asperity. He says that, "there can now no longer be any difficulty in determining how much reliance ought to be placed on Dr Simpson's statistics, and whether he has been sufficiently impressed with the importance of observing the most rigid accuracy, the most scrupulous regard to truth in form-

¹ Medical Gazette, October 10, 1845.

² London and Edinburgh Monthly Journal of Medical Science, March 1845.

³ Medical Gazette, Sept. 19th, 1845.

ing statistical tables, from which it is proposed to adduce proofs in support of practice in the treatment of cases of such vital importance, and substitute another mode of treatment which is of the most dangerous character, fraught with inevitable destruction to the child, (?) and attended with no benefit to, if not actually increasing the danger to the mother."¹ He adds; that the cases of placental presentation he has met with are forty-five in number, and not forty-six, as stated by Dr Simpson; or if five cases of partial presentation be added, the whole number will be fifty. "Of this number, one woman died undelivered, and three others died, on whom the operation of turning *was never performed*. Of ten cases which terminated fatally after the operation of turning, three women died of uterine phlebitis long after delivery, a circumstance which could not justly be attributed to the operation. In a fourth case of turning, the uterus was lacerated, in consequence of a great distortion of the pelvis. In a fifth, the patient was in articulo mortis before the operation was commenced. It is impossible to attribute the fatal result to the operation of turning in more than six out of these ten cases; and if the circumstances of these six be examined, it will be obvious that death could not have been averted by any other mode of treatment, and that if turning had not been practised, they would all have died undelivered."²

In spite of the positive nature of Dr Lees' two last statements, we may be allowed to surmise that, if in his fourth and fifth cases, the placenta had been detached, the result might *possibly* not have proved fatal; and from the facts already before us, we are warranted in denying, *in toto*, the correctness of his concluding remark.

Proceeding to analyse these statements still further, he says, that "in these fifty cases turning was performed only twenty-seven times, by myself in nineteen cases. Out of these nineteen there were four deaths; but one woman was moribund before the operation was undertaken; in a second, before I was called into consultation, so much blood had been lost that she died soon after delivery; a third, to whom a large quantity of ergot of rye had been given, died ten days afterwards of phlebitis; while the fourth case proved fatal in consequence of the great rigidity of the os uteri, which rendered turning impossible until she was in a state of complete insensibility from the loss of blood. The mortality, therefore, instead of being one in two and four-tenths, (as stated by Dr Simpson,) is in reality less than one in nine. In the last sixteen cases of placental presentation which have come under my own immediate care, not one woman has died, though turning was performed in eight.

Judging simply from these tables of Dr Lee's and Dr Simpson's, without the opportunity of subjecting the former to that rigid scrutiny which the latter have undergone, it is evident that the mortality is much greater where the usual practice is pursued than where the placenta is detached, being in Dr Lee's cases one in nine, and in those collected by Dr Simpson one in forty-seven. Very many cases might be added to make this great difference still more remarkable.

Dr Ashwell, another high authority, after premising that the mortality of one in three is too high, comments on the practice of Dr Simpson, which he thinks has more of novelty than of safety for its recommendation, and is at a loss to understand how tearing away the placenta, through an aperture too small to admit the tip of the finger, for the purpose of gentle and gradual dilatation, can be either easy or free from danger. He asks, if there is no risk that the finger nail, the common sound, or the bougie, as recommended by Dr Simpson, may wound the developed and highly vascular cervix?³ Dr Ashwell's criticism would be more valuable if it had ever been recommended to pursue the practice he condemns, which is not the case.

Mr Newnham, of Farnham, attributes the success which has attended his practice in

¹ Medical Gazette, October 24, 1845.

² Ibid, Loc. cit.

³ Ibid, November 7, 1845.

placenta prævia principally to his turning as soon as practicable, and distrusts the new practice ; stating, however, that he can imagine cases, as in narrow pelves, or where the head is presenting, and it might ultimately be necessary to diminish the size of that head, in which the removal of the placenta might give room for the employment of the perforator. He concludes by saying that, “ in cases of necessary hemorrhage, the rule must still be to turn and deliver as soon as circumstances will admit ; but when circumstances render this rule impracticable, it is a comfort to be able to fall back upon another practice with the conviction that it may be hopefully employed.”¹ Mr Newnham and Dr Simpson, therefore, are agreed as to the value of the proposed treatment, and differ only, (if they do at all,) in the degree of importance each attaches to it.

At a meeting of the Medical Society of London, a discussion took place on the subject, Dr Golding Bird and Mr Crisp inclining to favour the new practice, while Mr Dendy, Mr Hadland, and Dr Chowne condemned it. The latter gentleman remarked, that “ though many cases were detailed in which separating the placenta and bringing it away had been followed by a cessation of the hemorrhage, and the safe delivery of the patient ; yet he did not think that the practice must be considered essentially proper and safe, merely because the dangers to which it was liable had not occurred. From the results of his own experience he was satisfied of the safety of the old practice, (!) and he did not consider that by separating the placenta we did any thing to stop hemorrhage, since this could only be averted by contraction of the uterus, over which we had comparatively no control.”² And Dr Lee, with his usual asperity, states that “ he is firmly convinced that none but the most rash and inexperienced would have recourse to a practice which offers no advantage to the mother, and must be followed by the certain destruction of the child.”³

In conclusion, on looking at this subject candidly and impartially, we cannot, I think, deny that very great praise is due to Dr Simpson, for the manner in which he has brought it before the profession. The practice advocated by him is supported by facts, by reasoning, and so far, by experience ; and if the statistical tables have not been compiled with that degree of exactness which we could have wished, but which from the very nature of the subject is unattainable, still, with every allowance for these inaccuracies, they go far to prove the value of the practice which they are brought forward to recommend. The reasoning appears to be sound and logical ; and whether the theoretical views, as regards the source of the hemorrhage, be admitted or not, the facts drawn from these views, whether depending on them or not is of little consequence practically, cannot be denied ; while, as far as our limited experience hitherto can bear any testimony, either one way or another, it speaks trumpet-tongued in favour of the safety and efficiency of Dr Simpson's practice. Out of the many cases recorded in the medical journals within the last four months, not one so far as I know, when treated on the recently advocated plan, has proved fatal. A few of the most interesting of these cases may be here subjoined.

In the Northern Journal of Medicine, August 1845, a case is related by Dr Maclean, where the os uteri was dilated to the size of half-a-crown, the placenta presenting, and hemorrhage taking place at every pain, which had produced very great faintness and collapse. The child was dead, as ascertained by the stethoscope ; the placenta was removed, all hemorrhage ceased, and the woman was out of bed in a few days.

Mr Wikinson, of Spalding, in the Provincial Medical and Surgical Journal, July 23d, 1845, relates the case of a patient between six and seven months advanced in pregnancy : the os uteri dilated to the size of half-a-crown ; the placenta presenting ; he-

¹ Medical Gazette, November 14, 1845.

² Ibid, Oct. 10, 1845.

³ Ibid, Sept. 19, 1845.

hemorrhage excessive. Stimulants were given, the placenta was removed, and all flooding ceased. The patient recovered.

In the Monthly Journal of Medical Science, June 1845, there is the report of a case attended by Mr Dix, in which the hemorrhage was excessive, but the placenta was expelled before the child; and on total separation taking place, all bleeding ceased. The child had been dead some days; the mother gradually recovered.

In the Lancet, September 27th, 1845, Mr Jones, of Llanfair, communicates another successful case. The os uteri was fully dilated; the hemorrhage persisted; the placenta was removed, and the child expelled by the unassisted efforts of the uterus; it was dead. The patient recovered as soon as females generally do after an ordinary labour.

In the same Journal, for June 7th, Mr French, of Nantwich, relates a case in which there was profuse flooding; the placenta, however, was expelled by the uterus, and hemorrhage at once ceased.

Dr Walker, of Chesterfield, in the Provincial Medical and Surgical Journal, September 3d, 1845, records a case where the flooding was alarming till the placenta was removed, when it entirely ceased. The child required turning afterwards, as it was an arm presentation, and was dead. The patient recovered perfectly.

In the same Journal, for September 10th, Mr Greenhow, of Newcastle, gives a case which was equally successful. The patient was in the eighth month of pregnancy; there was great hemorrhage, the placenta being separated to a considerable extent, and protruding at the os uteri. The placenta was removed, and bleeding ceased; the child was dead; the patient did well.

In the same Journal, for September 24th, a case is related by Mr Parker, surgeon to the Bridgewater Infirmary, in which the placenta was expelled before the child. There was no hemorrhage subsequently, and the patient did well. The child, it is presumed, was dead.

The last case to which I shall refer, is one which occurred in the practice of Mr Wood, of Rochdale, and has not yet been reported. The os uteri was dilated to the size of half-a-crown, and easily dilatable; the hemorrhage very great, and the patient becoming blanched and restless. The placenta was already separated for at least one third of its circumference, and the ordinary practice might readily have been adopted if it had been thought expedient. It was easily detached, and the flooding totally ceased; on a renewal of the examination, a foot was found presenting in the vagina, and the child was at once delivered. The patient suffered severely from headache for some days, but this was relieved by opiates; there was no untoward symptom; the child was dead.

It should, however, never be forgotten, that Dr Simpson recommends the extraction of the placenta before the child in a limited number of cases only, and not as we might suppose, from a perusal of certain strictures on the practice, in every possible instance; and these are just the cases which have hitherto proved the most formidable in practice, and the most fatal in their results. Any plan, therefore, which proposes to diminish the risk and mortality in these most serious complications is worthy an extended trial.

The only disagreeable part of the subject, I have purposely reserved for the last. It must be very painful to those whose object is the elucidation of truth, to observe the very intemperate tone in which this subject has been treated of by some writers, especially by Dr Lee. If the practice advocated by Dr Simpson implied a direct censure on Dr Lee, the latter gentleman could not have levelled more abuse at it. Instead of regarding it as a plan of treatment put forth for the improvement of medical art, and as such, patiently testing its merits or demerits, the words, "unjustifiable," "rash," "tearing away the placenta," &c., are constantly recurring. From a teacher to a pupil these expressions could scarcely be justified; from one professor of midwifery to another they are simply absurd; and this method of dealing with the subject cannot fail to have

the opposite effect to that intended by Dr Lee. People will think that there must be a strong principle of vitality in doctrines which require so powerful an acid to destroy them. Dr Lee ought to know that bad arguments are not rendered more convincing by harsh words, while good reasons are spoiled by them; and should be told that the profession will never sanction the conduct of any who would sacrifice truth before an altar—however fairly adorned, or richly decorated—raised to the false Gods, jealousy and spleen.

PART V.—MEDICAL MEMORANDA.

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY.

SEVENTH MEETING.—*Wednesday, 1st April 1846.*—Dr GAIRDNER, President, in the Chair.

Case of Insanity Cured by the Application of the Trephine. By Dr CHARLES L. ROBERTSON. (Communicated by Dr J. A. Robertson.)—This paper appeared in our last number.

Case of an Infant Poisoned by Laudanum—Application of Electro-Galvanic Shocks—Recovery. By Dr MARTIN BARRY.—The case was that of an infant nine months old, whose mother had given it laudanum, “to put it to sleep,” while she went out. The laudanum was part of a pennyworth bought for this purpose at a neighbouring shop. The case was first under the care of Mr Colahan, a pupil at the Edinburgh Maternity Hospital, who, however, was not called in, until seven hours after the laudanum had been swallowed, and even then he was kept in ignorance of the fact, that the poison had been given two hours later. The infant presented the usual symptoms of poisoning with opium, and emetics of *Antim. Tart.* and *Ipecac.* were given. Vomiting was produced and kept up by warm water, but of course, after so long an interval, not with the expectation of bringing back any of the laudanum. The infant at length sunk into a state, from which it seemed impossible to rouse it, and was then brought to the Maternity. The breathing of the child was very noisy, and the pupils were contracted to almost obliteration. Dr Barry applied electro-galvanism, using for this purpose the apparatus made by Abraham and Danser of Manchester. At first the mixture in the trough contained 1-32d part of strong sulphuric acid, the quantity of which was afterwards increased to 1-16th, and the pointer in the index was gradually brought round to the very strongest power. The wires were applied in turn to every part of the body, and the child was roused by their application, and kept awake, or at least kept moving an arm or a leg, so long as they continued in contact with it. When the wires were removed, even for a few seconds only, it sank sound asleep, the respiration continuing unchanged. At the end of about three hours, a little more susceptible, and perhaps somewhat more energetic in the movement of its limbs, but with this exception, the infant exhibited nothing like a satisfactory revival, until the tremendous current had been made to pass through its body for $4\frac{3}{4}$ hours. Then, however, it really did revive, the respiration becoming more quiet, and the pupils undergoing some dilatation. From this time it recovered, required no further treatment, and in a few days was quite well.

In order to arrive at something like an estimate of the quantity of laudanum swal-

lowed, Dr Barry caused a pennyworth to be bought at the same shop. This was measured, and the quantity, ʒiiss. , compared with what was found remaining of the other pennyworth above referred to, allowance being made for about the same quantity of water said to have been added. Say, therefore laudanum $\text{ʒiiss.} + \text{water, ʒiiss.} = \text{ʒiiij.}$, of which a teaspoonful is said to have been swallowed. There was found remaining less than two teaspoonfuls, the same spoon being used as that with which the child had been dosed. Thus ʒj. of the mixture had disappeared, half of which was laudanum, or say a few minims less than ʒss. , say 25 minims.

Dr Christison remarked, that if the infant had really taken 25 minims, it was very surprising that it had recovered. He recommended Dr Barry to ascertain whether the laudanum was of the average strength, as from numerous experiments he had made, he had found the quantity of opium to vary greatly in various specimens of the tincture.

The Secretary has since obtained the following additional particulars from Dr Barry :—The laudanum given to the infant was procured at Anderson's, druggist, No. 147 Canongate. That about ʒss. was the quantity swallowed is rendered additionally probable by the fact, that at this shop the quantity always sold as a pennyworth, is stated to be ʒiiss. , it being in every instance *measured*. At this shop they keep laudanum of only one quality, and never have two kinds. They have made no addition to their stock of laudanum for four months. A specimen which Dr Christison had the kindness to examine, procured on the 2d April 1846, was taken from that stock, the same which supplied the pennyworth, some of which was swallowed by the infant two months before. Dr Christison found that it contained a due proportion of opium. Dr Barry also caused four separate pennyworths of laudanum to be procured at the same shop, at different times, and by different messengers, and in each instance the quantity received was ʒiiss. , or rather more, leaving no doubt of its having been measured. Some of the laudanum thus obtained Dr Christison has also been so obliging as to examine, and he found it to be quite identical with the other. The woman who held the cup out of which the infant was dosed by its mother, declares that the teaspoon was quite full,—that none of the mixture was left on the spoon—and that none of it was rejected by the child.

Dr Gairdner laid before the Society a hearing tube, said to be of French invention, and to have been of great service to Miss Martineau, the authoress, and many others labouring under deafness.

Dothinteritis in Edinburgh.—Dr Christison begged to inquire, whether any member of the Society, engaged in the treatment of fever throughout the city, had lately met with any instances of the dothinteritis, or typhoid affection of French authors. A characteristic case of this kind having just occurred under his care in the Royal Infirmary, he thought it desirable to ascertain whether this form of fever, generally very rare in Edinburgh, had presented itself in any other instances. He observed that the disease was not uncommon in this city during the autumn of 1829, at which period a bad form of dysentery was also unusually frequent in Edinburgh, but that since then he had not himself met with a single case of it, until the present occasion.

Dr Bennett confirmed Dr Christison's statement as to the great rarity of such appearances in Edinburgh. During the three years he had superintended the inspections after death, as pathologist to the Infirmary, the present is only the second case of dothinteritis he had witnessed.

EIGHTH MEETING.—*Wednesday, 6th May 1846.*—DR GAIRDNER, P., in the Chair.

On the Non-Mercurial Treatment of Syphilis. By DR SCOTT.—Dr Scott made some observations on the importance which attaches to the history of syphilis. No subject could be more full of interest, or prove more clearly the necessity of strict investigation into what are considered the most established doctrines in medicine. Thirty years since there was no doctrine in the profession which was considered to be so well founded as the treatment of syphilis by mercury. In England none presumed to differ from the opinion of John Hunter, that the disease was incurable without mercury, and not only that the medicine was required to remove the disease itself, but that to cure the disposition to it, and to secure the constitution from its ravages, an extended course of mercury was required. Sir Benjamin Brodie still retains this opinion; and Dr S. observed that he would not have probably called the attention of the Society to this subject, had he not observed in the lately published Essays by Sir Benjamin, some remarks, which, from so high an authority, appeared calculated to lead to what appeared to him an injurious line of practice. Every now and then a dissenting voice had been raised against the mercurial doctrine, but the profession in general adhered to the opinion of John Hunter.

Heberden considered it as one of the four specifics discovered in medicine. Allusion was made to the remarkable paper of Dr Fergusson in the *Med. Chir. Trans.* of 1813, and the observations made by him on the disease, as it appeared in Portugal, and the opinion of the German physicians.

Sir Benjamin Brodie, in mentioning the work of Mr Abernethy on Pseudo Syphilis, considers that the illogical conclusions and extraordinary assumptions contained in it have much diminished the value of this part of his writings. This work of Mr Abernethy, Dr S. considered a most useful one, as having led the way to the investigation from which such important results have been derived. Dr S. then related his personal experience. In 1813, he was placed for a short time in Colombo, in charge of the venereal wards in which the cases were all treated with mercury. Many of them he found were well in a few days, others in five or six, others in three weeks, periods too short to warrant the conclusion that they were venereal; they were therefore set down as cases of pseudo-syphilis. The number of these cases increased with the field of experience, and in a few years the use of mercury was gradually resigned in almost every case of local disease. The secondary symptoms were few and slight, and never required an extended course of mercury. The same plan of treatment was also adopted with them, and in a few years Dr Scott, then garrison surgeon at Point de Galle, entirely abandoned the use of mercury. The inference which he drew, however, was, not that the venereal disease was curable without mercury, but that the real disease did not exist in Ceylon. Dr S. then described the miserable victims who were constantly found in military hospitals at that time, affected by extensive ulcerations, nodes, &c., who furnished a considerable number of the invalided and many deaths. Since mercury was abandoned, such cases have disappeared from the hospitals. In 1818 and 1819, Dr Scott became acquainted with the results of the investigation which had been carried on in England, and since that time had entirely abandoned the use of mercury as a specific. He had found many cases in which it was required as an alterative. After some remarks on laryngeal ulceration, diseases of the bones, &c., which are still met with in practice, Dr S. stated that he considered every case of local disease to be curable without mercury, and that under such treatment the secondary symptoms, when they did occur, were slight and easily managed. In fact, the disease ran a certain course, modified by peculiarities of constitution, and required only the treatment adapted to such modifications. Dr S. drew a contrast between two cases of secondary symp-

toms which had been under his care at the same time, of young men of the same age, and of irritable and unhealthy constitutions. Both were severe cases, but in one the patient recovered in two months, while the other, after many narrow escapes, could only be pronounced cured after the lapse of a year from the first attack.

Inspection of the Meatus Auditorius Externus and Membrana Tympani; an important aid in the Diagnosis of Head Affections. By ADAM WARDEN, M.D.—(This communication is published in the June Number of the Monthly Journal of Medical Science.)

Notes of Surgical Practice amongst the Chinese. By DR PARKER of Canton.—(This communication is also given in the June Number of the Monthly Journal of Medical Science.)

The following Memoirs were presented to the Society by M. Hipp. Larrey, Professeur de Pathologie Chirurgicale au Val-de-Grâce:—

“Mémoire sur les Plaies Pénetrantes de l'Abdomen compliquées d'issue de l'Épiploon.”

“Sur un kyste pileux de l'ovaire qui s'est ouvert à la fois dans l'intérieur de la vessie, et à l'intérieur de l'abdomen.”

M. LARREY was proposed as an extraordinary member by Sir George Ballingall.

NOTICE TO SUBSCRIBERS.

Dr Seller begs leave to intimate to Subscribers that, in consequence of a recent change in the arrangements of the Monthly Journal of Medical Science, he has been invited to join with Dr J. H. Bennett in the Editorship of a United Monthly Periodical, representing at once, in a new series, the just-mentioned Journal and the Northern Journal of Medicine. Dr Seller did not hesitate to accept this invitation, and he has had the gratification to find that the proposed junction gives entire satisfaction to all the friends and supporters of the Northern Journal whom he has had an opportunity of consulting.

Dr Bennett's high qualifications, especially his extensive acquaintance with recent foreign medical literature, are too well known to make it necessary for Dr Seller to assure the readers of the Northern Journal of his conviction that the new series will meet with their fullest approbation.

As the present number completes the fourth volume of the Northern Journal, the new series will commence with July, under the name of the “Monthly Journal of Medical Science, being also a continuation of the Northern Journal of Medicine.” (See Prospectus on the Cover.)

INDEX.

A

- ABDOMEN, remarkable pain in, 50.
Ammoniacal ointment a substitute for blistering plaster, 181.
Aneurism, femoral, after fracture of the thigh, cured, by Brainard, 45.
Aneurism, femoral, spontaneous cure of, by Tuke, 46.
Antimony, tartrate, absorption of, and elimination of, by the urine, 109.
Arsenic in the soils of burying-grounds, 53.

B

- Balfour, Dr G. W., on necrosis of the jaw-bones from the fumes of phosphorus, 284.
Ballingall, Sir George, lecture introductory to a course of military surgery, 321.
Bell, Joseph, on valerianate of zinc in hemicrania and neuralgia, 87.
Bennett, Dr J. H., on the nature and treatment of scrofulous and tubercular diseases, 211, 273.
Blood, spots of, 119.
Blood, on state of, in intermittent fever and dysentery, by Leonard and Foley, 12.
Black matter, deposits of, in respiratory organs, 116.
Bones, superior maxillary, extirpation of, 106.
Bread, influence of price on disease, 51.
Bremner, John, on venesection and opium in obstetric practice, 65, 136, 262, 347.
Brotherston, Peter, on fracture and dislocation of cervical vertebræ, &c., 287.
Brown, Dr J., on scarlatina, reviewed, 30.
Budd, Dr G., on diseases of liver, reviewed, 14.

C

- Caesarian section at Vienna, 320.
Calomel and common salt, injurious effects

- of the simultaneous administration of, 180.
Campbell, Dr, on the obstetric practice of royal dispensary, 257.
Carotids, ligature of both, for the cure of gunshot wound, 107.
Caustic, a new, by Velpeau, 179.
Cerebral and cardiac disease, combination of, 112.
Cervical vertebræ, on fracture and dislocation of, by P. Brotherston, 287.
Charcoal vapours, poisoning with, 183.
Children, illegitimate, mortality of, 52.
Copper, workers in, health among, 119.

D

- Drowning, death by, 119.
Detonating powder, health of manufacturers of, 118.

E

- Eruptions, chronic, summary of the remedies applicable to the cure of, by Dr Seller, 151, 290, 354.

F

- Femur, excision of head of, 41.
Fergusson, Mr, his mode of operating in cleft palate, 42.
Foetus, fractures in, during labour, 117.
Food, effects of, on blood, by Dr Buchanan, 105.

G

- Gastrotomy, 61.
Glycerine, as proposed by Mr Startin in some cutaneous diseases, on, by Dr Seller, 148.
Goitre, substernal, on, 177.

H

- Hare-lip, operation for, 305.

- Hemorrhage, post-partum, Professor Simpson on, 1.
 Homœopathist, confessions of a, reviewed, 94.
 Homœopathy, 55.
 Hysterical paralysis, 48.
- Iliac artery, external, ligature of, by Boling, 45.
 Imlach, Dr H., on extraction of a foreign body from the uterus, 145.
 Infanticide, on the uncertainty of the manner of death in, 182.
 Insanity, moral, on, by Dr C. L. Robertson, 271.
 Insanity from injury of the head, on, by Dr C. L. Robertson, 269.
 Insanity, medical certificates on, 63.
 Interment, recovery of a child after, 117.
 Intus-susception, with discharge of intestine, 63.
 Iodide of potassium, large dose of, without injury, 183.
 Iron in the chlorosis of phthisical patients, 180.

L

- Leonard and Foley on the blood in intermittent fever and dysentery, 12.
 Liebig's Physiology applied by Leeson, reviewed, 367.
 Lime, hydrate of, in diarrhœa, 179.
 Lithotrity, by Cazenave, 178.
 Lithotrity, Sir P. Crampton on, 305.

M

- Mackenzie, Dr R. J., on ligature of subclavian in hemorrhage, from the axillary artery, 129.
 Macpherson's prize essay on recruiting of the army reviewed, 365.
 Mental Faculties, on the action of different drugs on, by Otto, 179.
 Midwifery, clinical lectures on, by Professor Simpson, 216.
 Military Surgery, introductory lecture to a course of, by Sir George Ballingall, 321.
 Miller's practice of surgery reviewed, 239.
 Morphia, muriate of, new mode of applying, in neuralgia and toothache, 180.

N

- Necrosis from the fumes of phosphorus, on, by Dr Balfour, 284.
 Nutritive capabilities, comparative, of different substances, 46.

O

- Obstetric practice of royal dispensary, report on, by Dr Wm. Campbell, 257.
 Obstetric practice, on venesection and opium in, by John Bremner, 65, 136, 262, 347.
 Opium, hill, Dr Sutherland on, 8.
 Oxalic acid in rhubarb, 62.
- Parturition, Murphy's lectures on, reviewed, 97.
 Phlegmasia dolens, by Bouchart, 50.
 Placenta prævia, 117. Mr Wood on, 308, 371.
 Police, Edinburgh, report of sickness among, by Dr W. Tait, 193.
 Potatoes, substitutes for, as food, 110.
 Pregnancy, with closure of vagina, 182.
 Pregnancy, ignorance of, 53.
 Pregnancy, medico-legal questions connected therewith, 181.
 Prunus laurocerasus in amenorrhœa, &c., 49.
 Pubis, symphysis, laceration of, 118.
 Puerperal fever, on the connection between, and erysipelas, 82.

R

- Reichenbach on magnetism, &c., reviewed, 245.
 Ritchie, Dr C. and northern journal, 36.
 Robertson, Dr C. L., on insanity from injury of head, 269.
 Robertson, Dr C. L., on moral insanity, 271.
 Robertson, Dr C. L., on monomania, 343.
 Robertson, Dr Wm., on the attacks made on his appointment to the royal infirmary, 53.
 Rope, twisted, on the use of, in luxations, 251.

S

- Seller, Dr William, on glycerine in cutaneous diseases, as proposed by Mr Startin, 148.
 Seller, Dr, summary of the remedies applicable to the cure of chronic eruptions, 151, 290, 354.
 Simon's chemistry reviewed, 364.
 Simpson, Professor, on the anatomical source, and pathological nature of post-partum hemorrhage, 1.
 Simpson, Professor, clinical lectures on midwifery, 216.
 Society, medico-chirurgical, proceedings of, 55, 120, 184, 252, 316.

Splints, on a new construction of, by Wm. Kerr, 76.
 Spina bifida, new mode of treating, 178.
 Spinal marrow, division of, 61.
 Steenstrup on alternation of generations reviewed, 298.
 Storms, origin and progress of, in United States, 175.
 Subclavian, ligature of, by Mott, 44.
 Subclavian, ligature of, in hemorrhage from the axillary artery, by Dr R. J. Mackenzie, 129.
 Subscribers, notice to, 380.
 Sulphuric acid, an instrument of murder, 183.
 Sutherland, Dr J. S., on hill opium, 8.

T

Tait, Dr Wm., on sickness among the Edinburgh police, 193.
 Tubercle of the brain, on, by J. M. Adams, 249.
 Tuberculous diseases, on the nature and treatment of, by Dr J. H. Bennett, 211, 273.

Twins, seven days between the birth of, 117.
 Typhus, pathology and therapeutics of, by Richter, 47.

U

Uteri, prolapsus, pregnancy and delivery during complete, 118.
 Uterine ulcers, 50.
 Uterus, extraction of foreign body from, by Dr W. Imlach, 145.
 Uterus, rupture of, recovery from, 118.

V

Valerianate of zinc, on, by Joseph Bell, 87.

W

Wilson, Erasmus, his treatise on healthy skin reviewed, 167.
 Wilson, Dr G., on the solubility of fluoride of calcium, 370.

END OF VOL. IV.