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MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

EDITED BY

ALEXANDER FLEMING, M.D., AND W. T. GAIRDNER, M.D.

FEBRUARY TO DECEMBER

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WITH TWO LITHOGRAPHIC PLATES AND SEVERAL WOODCUTS.

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VOL. I. FEBRUARY 1848. No. I.

I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

ARTICLE 1.—*On the Elasticity and Cohesion of the Principal Tissues of the Human Body.* By M. G. WERTHEIM.—M. Wertheim, who has already published numerous determinations of the elasticity of inorganic substances, has now extended his experiments to the animal tissues. These experiments were made by loading a strip of the substance to be examined, of known length and diameter of section, with increasing weights, and measuring the increase of length in its extended state, and that to which it returned when the weight was removed, and finally ascertaining the weight required to produce rupture. The results of his experiments are contained in an extensive series of tables, for which we must refer to the original paper. The general conclusions deducible from them are the following.

The specific gravity of the tendons, muscles, and veins, diminishes with age. But this change is not generally observed in the bones, nerves, and arteries. In the latter, owing to thickening and ossification of the coats, it is sensibly increased.

The increment in length of a bone is proportional to the weight by which it is extended, exactly as is the case with inorganic substances, and wood; but this does not hold good with the soft parts in their natural state of humidity, the law of their increment in length being represented by a curve approximating to a hyperbola.

Bones, tendons, and nerves, increase in elasticity with the age of the subject, but the reverse occurs in the muscles.

The elasticity and cohesion of bones is greatest, then come tendons, nerves, muscles, veins, and arteries.

The nervous trunks have, in proportion to their section, an amount of cohesion inferior to their immediate branches, and then again to the cutaneous nerves; so that, as the diameter of the nerve diminishes, its *proportional* cohesion increases.

By dessication, the elasticity and cohesion of all the tissues increases, and approximates more nearly to that of inorganic substances.—*Annales de Chimie et de Physique*, December 1847.

2.—Professor ROGERS *on the Absorption of Carbonic Acid by Sulphuric Acid.*—At the meeting of Association of American Geologists and Naturalists, held at Boston in September last, Professor W. B. Rogers gave an abstract of a series of researches lately made by himself and Professor R. D. Rogers, on the absorption of carbonic acid by different liquids. In these investigations the important fact was ascertained, that sulphuric acid at 60° Fahrenheit, absorbs carbonic acid gas in the large proportion of 94 per cent., and that Nordhausen acid absorbs 125 per cent. Professor Rogers pointed out how this fact must affect the accuracy of certain methods of determining the amount of carbonic acid in the free atmosphere, as in the experiments of Boussingault and others, and of that contained in the air of mines, and in the air expired in respiration. The use of the sulphuric acid as a drying agent in these processes, as well as in the apparatus of Fresenius for analyzing the carbonates, was thus shown to be attended with serious errors, in consequence of the absorption of the carbonic acid by the dessicating agent.

3.—Dr JOHN DAVY *on the Urinary Secretion of certain Animals considered in connexion with their Temperature, Food, &c.*—In birds, possessing of all animals the highest internal temperature, whether they be graminivorous or carnivorous, the urine consists chiefly of lithate of ammonia.

In insects, whose internal temperature is variable, whether living on vegetable or animal substances, or both, he found the urinary secretion, like that of birds, composed chiefly of lithate of ammonia, and lithic acid.

Spiders, animals of a low internal temperature, but of considerable activity, and living on insects, secrete a urine of a different kind, being composed of xanthic oxide.

In serpents, in many respects resembling the spiders in their physiological conditions, the urinary secretion is chiefly composed of lithate of ammonia. The urinary secretion in lizards appears to resemble that of serpents.

In frogs and toads, whose internal temperature is also low, and which resemble the animals last mentioned in living on animal food, and being capable of long-continued fasting, the urinary secretion does not consist, as in those, of granules of lithate of ammonia, mixed with a little watery fluid, becoming solid before, or shortly after being voided; but consists chiefly of water holding in solution urea and a little saline matter, and in its composition may be considered as an approach to the human urinary secretion.

"What are the bearings of these facts in their physiological relations? Do they not prove that neither the temperature of the animal, nor its activity, nor even its food (that is, the physiological conditions connected with respiration, muscular action, digestion, &c.), affect materially the nature, as to composition, of the urinary secretion? And does it not follow that the quality of this secretion, therefore, must depend chiefly on the intimate structure of the secerning organs?" Dr Davy states, that though he believes that the quality of the secretion from the kidneys depends chiefly on structure, yet it is affected in a minor degree by circumstances of diet, and of atmospheric temperature, especially in man. In a cold or cool climate, using a diet chiefly of animal food, lithic acid and lithate of ammonia are found commonly, in considerable proportion, in the human urine; but not so in a hot climate, not even when the diet is the same; and in consequence, within the tropics, where least oxygen is consumed in respiration, the ailments depending on the formation of gravel and calculi are almost unknown. —*Edinburgh New Philosophical Journal*, January 1848.

4.—Mr TURNER *on the Eighth and Ninth Vertebræ of the Three-toed Sloth.*—Mr H. N. Turner jun., discusses the point, whether the eighth and ninth vertebræ of the aï or three-toed sloth (Bradypus tridactylus) are to be regarded as belonging to the cervical or dorsal vertebræ, and he arrives at the conclusion that they belong to the cervical.

That those of our readers who may not have previously had their attention turned to this question, may be able to understand its bearing, we shall make a few remarks upon it. Daubenton announced that all the mammalia, whatever may be the length of the neck (in the giraffe as in the cetacea,) the number of cervical vertebræ is invariably seven, and this was universally assented to at the time. Cuvier, however, in the course of his dissections, ascertained that the aï, one of the sloths (all sloths do not present this peculiarity), had nine cervical vertebræ, and thus undermined the generalization of Daubenton. Professor Bell of London, in a paper in the Zoological Transactions, discovered that rudimentary ribs were attached to the eighth and ninth vertebræ in the aï, and he ingeniously attempted to prove that these were dorsal and not cervical vertebræ, and that Daubenton's generalization was not impaired by the structure of the aï. De Blainville, a few years ago, and Mr Turner, in the communication referred to above, have entered into various anatomical details, which appear to us to prove that the eighth and ninth vertebræ in the aï are cervical and not dorsal, and that they in fact resemble the seventh cervical vertebra in man. It is well known that the seventh cervical vertebra in the human species is occasionally provided with rudimentary ribs, and Mr Turner found rudimentary ribs attached to the same vertebra in a pole-cat. De Blainville has ingeniously arranged the cervical vertebræ into three groups: The first includes the atlas and axis: The second—the third, fourth, fifth, and sixth; the third includes only the seventh in the human species, and almost all the other mammalia; but in the aï includes three vertebræ, viz. the seventh, eighth, and ninth.—*Annals of Natural History*, December 1847.

5.—*On the Jalap Plant which has lately flowered in the Edinburgh Botanical Garden.* By Professor BALFOUR.—Although jalap has been used in European medicine for nearly two centuries and a half, it is only within a few years that its botanical source has been correctly ascertained. The plant long cultivated as the true jalap plant in the stoves of Europe, and among the rest in the Botanic Garden of Edinburgh, is the *Convolvu-*

lus Jalapa of Linnæus and Wildenow, or *Ipomœa macrorhiza* of Michaux, a native of Vera Cruz. But between the years 1827 and 1830, it was proved by no fewer than three independent authorities, that the root of commerce is obtained, not from the hot plains around Vera Cruz, but from the cooler hill country near Jalapa, about 6000 feet above the level of the sea, where it was exposed to frost in the winter time; and that the plant which yields it, is an entirely new species of the Convolvulaceæ. In this country it was probably first cultivated in the Botanic Garden of Edinburgh, from a tuber sent by Dr Coxe of Philadelphia to Dr Christison, in 1838. Dr Graham could not describe it at that time, because, owing to unacquaintance with the habits of the plant, it was forced in the stove, and died the same year, after forming numerous flower-buds, of which one only became partially developed. In 1844, a plant from the Chelsea Botanic Garden, cultivated in a cold frame in the Edinburgh garden during the winter and spring, survived in the summer and autumn, and flowered luxuriantly in September. But the crown of the tuber was injured by frost in the subsequent winter, and the tuber was thus killed. Ultimately, Mr M'Nab resolved to try whether the plant could be reared from slips; and the experiment has proved successful. A tuber, of the size of a hazel nut, formed in the course of three months. The stem made little progress next summer; but when transferred to the cold frame in the spring of 1846, formed the plant which flowered in October.—*Edinburgh New Philosophical Journal*, January 1848.

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

6.—*On the Nucleus of the Animal and Vegetable Cell.* By Dr Martin Barry.—Schleiden ascribed to the nucleus of the vegetable elementary cell the power of forming around it a membrane which became the cell-membrane or cell-wall; hence he gave to the nucleus the name of cytoblast. But with the formation of the cell-wall he conceived the function of the nucleus to cease; and thought that, being no longer required, it became inert in the cell-wall, or in some instances was absorbed. The nucleus itself was, in the first instance, produced by a similar mode of development, being deposited around a smaller body, which sometimes remained as a permanent nucleolus. The same view of the formation of cells was advocated in relation to the animal tissues by Schwann, Müller, Henle, and Valentin, the last of whom thus describes the process:—"In a fluid there are precipitated granules, which are nucleoli; around the nucleolus there is deposited a finely granular substance, by which there is formed the nucleus (cytoblast); and around the nucleus there is formed the membrane of the cell. The principle of formation of the nucleus around the nucleolus, is essentially the same as that of the cell around the nucleus."

To borrow the language of the botanist, the preceding physiologists consider the vegetable animal cell to have an "exogenous" development; the primitive nucleolus remaining *central*, and the subsequent formations being deposited layer by layer *around* the nucleolus, which, so long as it remains at all, retains the same relative position. This view Dr Barry conceives to be incorrect, and propounds a theory of cell-development which corresponds much more closely with the type of structure called in botany "endogenous." Dr Barry describes the development of the cell as being analogous to that of the mammiferous ovum. According to him the original granule or nucleolus gradually enlarges, and in time develops *within it* a second body, which, appearing at first as a pellucid point, comes to occupy the position and assume the form of the original nucleolus, which has now expanded into a nucleus (the cytoblast of Schleiden). Thus the primitive formation becomes peripheral, while the secondary nucleolus occupies the central position. The same law is pursued in the further development. The nucleus or cytoblast becomes a cell, and the secondary nucleolus becomes in its turn a nucleus by the development *within it* of a tertiary formation, which assumes the position and functions of the nucleolus. In the complete cell thus formed there are three parts—1st, the cell-membrane, or cell-wall of Schleiden, which is the original or *primary* nucleolus; 2d, the nucleus (cytoblast of Schleiden), which is the *secondary* nucleolus; 3d, the true nucleolus of Schleiden, which is the *tertiary* or last developed nucleolus of Dr Barry.

According to this theory, therefore, cells are developed *endogenously*; the first formed parts being always found at

the periphery, and the last or most recent at the centre. The central parts by renewed developments are expanded and pushed outwards ; and thus the nucleolus becomes a cytoblast, and the cytoblast becomes a cell.

The development may, however, proceed according to the same law, beyond the stage which corresponds to the complete cell of Schleiden ; its further stages becoming complicated by the subdivision of the nucleus. According to Dr Barry, this body sends out processes into the surrounding substance, assuming in this way a stellated form. As development proceeds, each of these projecting portions of the nucleus becomes a separate centre, from which new cytoblasts are generated as already described ; the central original nucleolus undergoing also a similar development. In this way the original cell may become a body of the utmost complexity of structure ; the nuclei being subdivided into new centres or nucleoli, and these undergoing endogenous development into nuclei and cells.

The mode of fissiparous multiplication thus ascribed to the nucleus, was first seen by Dr Barry in the germinal spot of the ovum, which he considers to be the type of all cell-development. He has, however, traced the same process in many elementary cell-formations, including blood-corpuscles, pus and mucus globules, and epithelium cells.

Dr Barry gives to the pellucid point, which is the first stage of Schleiden's nucleolus, the name of hyaline. This hyaline is at first quite structureless, and even after it has enlarged considerably, presents no distinct membranous envelope. Before the formation of the secondary nucleolus, however, it becomes surrounded by a number of extremely minute granules, which appear to enter into the formation of its envelope. In like manner the secondary nucleolus is at first formed without a membrane, but afterwards acquires one by the coalescence of a layer of superimposed granules. The minute granules which thus enter into the formation of the cell-wall, are considered by Dr Barry to arise from the hyaline, and to be themselves the result of an exceedingly minute process of cell-development. This structure he has described and figured in the ovisac.

It only remains to say that Dr Barry conceives this mode of cell-formation to be universal ; and that, in particular, he believes the blood-corpuscles to arise in the ovum, and at all subsequent periods in this manner. Futhermore, he refers to his former memoir (Philosophical Transactions, 1841), in which he stated, that all the tissues were formed from corpuscles, having the same appearance as the corpuscles of the blood, and which he believes to be actually blood-corpuscles which had been in the circulation. Into the proof of this theory, and the other illustrations which he gives of his views of cell-formation, we have not space to enter at present.—*Edinburgh New Philosophical Journal*, October 1847.

7.—*Experiments on the Effects of Reagents on the Sentient Extremities of the Nerves.* By ERNST HEINRICH WEBER.—On dipping the tongue into water cooled to the freezing point, or heated to 90 degrees Fahrenheit, the author found, that after a short time both the common and special sensation of the organ became very much impaired. Sweet tastes were not appreciated, and the application of varying amounts of pressure, or different degrees of temperature, produced no corresponding sensations. In an extremity, the action of cold or heat upon the ultimate ramifications of the nerves, is to produce a benumbed condition, similar to that caused by pressure on the trunk of a nerve. Weber also discovered, that when the nares are filled with fluid, of whatever temperature, the sense of smell is destroyed. He found that the mechanism of the soft palate enables it to close the posterior nares, and thus admits of the above experiment being tried.—*Müller's Archiv.*, No. 4, 1847.

8.—*Effects of Galvanism on the Contractility of Arteries.* By EDWARD and E. H. WEBER.—The authors, in pursuance of the experiments on muscular contractility, formerly noticed in *The Monthly Journal*, May 1847, in which the rotating electro-galvanic apparatus was employed, have applied the same agency to the arteries, with the following results. Arteries of $\frac{1}{7}$ to $\frac{1}{17}$ of a line in diameter, were reduced, a short time after the application of the galvanic stimulus, to about a third of their original diameter ; and further contraction, sometimes nearly to complete occlusion, was produced by a longer application of the stimulus. The contraction did not extend beyond the part affected by the galvanic current, and on the cessation of stimulation the artery again relaxed. In the larger arterial trunks, the MM. Weber did not succeed in producing contraction. In the capillaries no change of size was observed ; a strong current produced coagulation of the blood in the vessels ; a weaker one produced retardation of the blood ; and

finally, stoppage, with accumulation of the corpuscles, behind the obstruction. On the galvanic stimulus being removed, the circulation gradually returned to its natural condition.—*Müller's Archiv.*, 1847, No. 2.

9.—*The Functions of the Spleen, and Constitution of Venous Blood in different Parts of the System.* By M. Beclard.—It is, from many circumstances, probable that the spleen is an organ intended, in some way or other, to operate upon the blood which passes through it; and in order to ascertain whether any, or what changes, are produced by it, M. Beclard has performed a series of analyses of venous blood, the results of which he has here detailed, and which lead to conclusions of a very remarkable character. His experiments entirely disprove the opinion of Donné, that the spleen is the organ by which the blood-globules are formed; as he has found that the blood of the splenic vein (previous to its junction with the vena portæ and veins of the stomach) contains a quantity of globules, inferior not merely to arterial, but even to the average of that contained in venous blood generally. On the other hand, the proportion of albumen is increased.

The examination of the blood of the vena portæ shows a very large proportion of globules, and a corresponding diminution of the albumen, as is clearly shown by the following table :—

	Venous Blood from Jugular Vein.	Arterial Blood.	Blood of the Splenic Vein.	Blood of the Vena Portæ.
Water, ...	778·9	750·6	746·3	702·3
Albumen, ...	79·4	89·5	124·8	70·6
Globules and Fibrine, .	141·72	159·9	128·9	227·1

The author has established the fact, that though the constitution of venous blood varies, that of the arterial blood is constant in every part of the arterial system.

M. Beclard is still engaged in the prosecution of these experiments; and his present communication appears to be merely the announcement of an extended investigation, which, should the first results be borne out, is likely to throw an important light on the functions of the abdominal organs.—*Annales de Chemie et de Physique*, December 1847.

10.—*Influence of Common Salt on the composition of the Blood.* By M. Plouviez.—M. Plouviez considers common salt to be a tonic, and to possess the power of modifying the constitution of the blood; and states, that he has employed it with great advantage in scrofula, anemia, and chlorosis. In order to establish the effect which it produces, he analysed his own blood at two different periods, during the first of which he took daily ten grammes of salt more than usual, and the second, after he had ceased for two months to take this unusual quantity, and with the following results :—

	First Period.	Second Period.
Water, ...	767·60	779 92
Globules, ...	143·00	130·08
Fibrine, ...	2·25	2·10
Albumen, ...	74·00	77·44
Fatty Matters, ...	1·31	1·13
Salts and Extractive Matters,	11·84	9·33
	1000·00	1000·00

Substances soluble in water.

Chloride of Sodium, ...	6·10	4·40
———— Potassium, ...	0·30	0·27
Phosphate of Soda, ...	1·68	1·37
Sulphate of Soda, ...	0·42	0·44
Alkaline Carbonates, ...	0·56	0·48
Loss, ...	0·18	0·10

Substances insoluble in water.

Phosphate of Lime, ...	0·72	0·67
Carbonate and Sulphate of Lime,	0·38	0·34
Oxide of Iron, ...	1·50	1·26

It is obvious from these analyses, that when common salt was taken in large quantities, it was present in increased amount in the blood, and that the globules and oxide of iron were increased, while the water and albumen were slightly diminished; but repeated analyses would be necessary, in order fully to establish its influence on the blood.—*Journal de Pharmacie*, Vol. XII. p. 206.

11.—*On the Digestion of Alcoholic Drinks, and their Function in Nutrition.* By MM. Bouchardat and Sandras.—The authors have performed a series of experiments, with the view of ascertaining the mode in which alcohol is absorbed, and the changes which it undergoes in the system. Their first experiments were made upon dogs, which were killed two hours after the administration of a quantity of alcohol. The chyle and blood were separately examined for that fluid, which was found totally absent in the former, but present in minute quantity in the latter. Acetic acid was also detected

in the blood by distillation with sulphuric acid, after the separation of the alcohol which it contained.

Owing to the difficulty in getting dogs to take spirituous fluids, they afterwards made use of fowls and ducks ; and it was was found that, in most cases, where the blood was taken sufficiently soon after the administration of the alcohol, both that substance and acetic acid could be detected in it in minute quantity. Very rapid absorption also takes place, and in one experiment, the authors found that three-fourths of the spirit administered was absorbed in less than twenty minutes.

It was then ascertained that the quantity of alcohol which escapes by the lungs is quite inconsiderable. This was determined by directing the gases and vapours evolved during respiration, by a man who had taken a considerable dose of alcohol, through a Woulff's bottle, surrounded by a freezing mixture. After the operation had been conducted for two hours, only a minute quantity of alcohol was found in the condensed fluid. None escaped by the urine or other secretions.

In the case of a man who, after a three days' debauch upon strong punch, was seized with a succession of epileptic fits, they found that blood drawn immediately from the jugular vein contained both alcohol and acetic acid in small quantity, while that taken an hour later contained none. They found, however, by Frommherz's test, distinct indications of the sugar which had been present in the punch, from which the authors draw the conclusion that alcohol is more rapidly digested than sugar.

From these experiments the authors conclude that alcohol is absorbed by the veins, and not by the lacteals, and that, with the exception of the small quantity which escapes by the lungs, it is entirely oxidized into carbonic acid and water, either directly, or by passing through the intermediate stage of acetic acid.—*Annales de Chimie et de Physique*, December 1847.

III.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

12.—*Upon the Origin of the Granular Cell* (*Exudation Corpuscle*, Henle ; *Inflammation Globule*, Gluge). By M. REINHARDT.—The author, in some former researches on the granular cell, came to the conclusion that all nucleated cells having albuminous contents, were capable, under certain circumstances, of becoming granular cells, whether they were originally normal constituents of the organism, or productions peculiar to the pathological condition. Having shown that this is the case in the products of inflammation, he now proceeds to demonstrate the same fact with regard to other cell formations, particularly in the *membrana granulosa* of the Graafian vesicles of the mammalia. The Graafian follicles, as is well known, are found in the ovary in great numbers, the great proportion of them being abortive, and, after a certain period of growth, diminishing and being absorbed. While the growth of the vesicles is proceeding, they are quite transparent and globular ; the fluid which distends them is transparent, of a yellow colour, free of granules, and frequently coagulable. The membrana granulosa, at this stage, presents the appearance of a soft pellicle ; microscopically examined, it consists of nucleated cells placed close together, and having a diameter, in most animals, of from 0·004 to 0·007‴ ; their nucleus, which is from 0·003 to 0·005‴, appears decidedly granular. The cell membrane is transparent and structureless. The contents of the cells are sometimes a little turbid, from the presence of molecules, but are rendered clear by acetic acid, and also by caustic alkalies. Along with these cells are found other bodies, which are evidently a prior stage of their development. First, there appear small molecules soluble in caustic alkalies, sometimes very pale, sometimes more distinct and shining ; then small granules varying from 0·0005 to 002‴, which have the same reactions as free cell-nuclei ; they are sound, smooth, and shining, without nucleoli. When treated with acetic acid, they become flattened, and acquire a central depression like the nuclei of pus corpuscles. Next to these appear small cells, from 0·001 to 0·003‴, which have one or sometimes two nuclei of the same appearance as the free nuclei above described. The contents of these cells are mostly transparent, but sometimes they appear to contain small molecules of proteine. The cell membrane is delicate and transparent. Between these cells and the above described granulated cells, every grade can be traced. Thus, there appear somewhat larger cells, whose nuclei are no longer round and homogeneous, but somewhat flattened and granular, and also further

developed cells with oval and very granular nuclei. As the cell also increases in size it loses in transparency, till it comes to present the finely granulated appearance of the ordinary cells of the membrana granulosa.

When the Graafian follicle has begun to take a retrograde course, changes in colour and consistence take place in the contained fluid, which becomes more or less turbid; and as the diminution of the vesicle goes on, more viscid, till it resembles pus both in colour and consistence Afterwards it becomes cheesy and viscid, and finally changes into a dry crumbling mass. Along with these changes, the microscope shows the alteration of the cells above described, to go on by the accumulation of more and more granular matter in the nucleus, and also within the cell wall, obscuring the nucleus, until they become true granular corpuscles. When the matters in the Graafian follicles has dried in considerably, there are associated with these granular cells, granular masses (exudation masses, *Bennett*) in considerable numbers, which, on pressure, break down into smaller masses, and free granules, which are also present in great numbers. The cells are here manifestly in a state of disintegration, and many of them are found pressed together into coherent masses.

Thus, it plainly appears that the granular cells, or so-called inflammation globules of Gluge, are by no means characteristic of inflammation, or peculiar to it. Further, it would appear that the true explanation of these bodies is, that they are retrograde nucleated cells. The alteration of an ordinary cell, with albuminous contents, into a granular cell, is indicative of the commencement of a retrogressive metamorphosis, whose final result is the destruction of the cell, by its resolution into a mass of agglomerated fatty and proteine granules. As regards the conditions of this change, we know little; it seems, however, to be necessary that changes should take place in the fluid, which forms the nourishment of the cells, rendering it impossible for these latter to retain their contents in the former state of combination. They continue to live for a while, absorbing more and more of the surrounding fluid medium; at last their vitality is extinguished, and they become granular masses, which finally fall asunder. Where the fluid surrounding the granular cells is entirely or nearly reabsorbed during their metamorphosis, the cell wall appears to become undistinguishable from the contents of the cell, and the whole is disintegrated *en masse*. Where the medium remains fluid, on the contrary, the cell wall disappears first, and then the nuclei are often seen filled with granules, which in time become also broken up and scattered.

A similar transformation of cells with albuminous contents into granular cells has been observed by the author in the corpus luteum, and also the epithelia of various serous and mucous membranes: thus, he has observed it as a pathological process in the epithelial cells of the pleura and peritoneum, in the ciliated epithelium of the bronchi, and the permanent epithelium of the air-cells of the lungs; in the cylinder epithelium of the intestinal mucous membrane in slight diarrhœa; in the uterus in the formation of the decidual membrane. He has observed the same change in the epithelium of the external skin, in cells taken from the deeper lying parts of the epidermis, in a case of Panaritium subcutaneum.

An accumulation of fat-molecules sometimes takes place also in the cells which cover the mucous membrane of the glands. The granular bodies of the colostrum afford an example of this transformation in the epithelium of the mammary ducts. These bodies have been long known to physiologists, and present a structure precisely similar to the granular cells described by pathologists. The author describes carefully their origin and progress, which is substantially the same as in the cells of the membrana granulosa, as above described. In consequence of the increased attraction of blood to the gland during pregnancy, and its increased activity, the epithelium cells are thrown off in greater numbers than usual, and the milk ducts become distended. This superfluous epithelium, therefore, is converted into granular cells, or colostrum corpuscles, and thence into masses of agglomerated fatty granules, which are then broken up and absorbed. During the first few days after delivery, these bodies continue to be developed, and are washed out with the first formations of milk, which constitute the colostrum. The author has found in the mammary gland of a female who died in the fourth month of pregnancy, the milk-ducts considerably enlarged and filled with epithelium cells, many of which had already begun to undergo the metamorphosis in question. He has likewise found a similar development of granular cells in some pathological conditions of the breast, as in cancer and in simple hypertrophy.

The transformation of glandular epithelium cells into granular cells, is also observed in the kidney in many cases of

Bright's disease. In the cylinder epithelium of the seminiferous ducts of old men, there may frequently be observed an accumulation of fatty granules. The same transformation of the hepatic glandular cells is an appearance characteristic of the commencement of fatty liver. In the lymphatic glands, there are frequently found, both in the normal and pathological conditions, a few larger cells than ordinary filled with fatty molecules. In the colourless corpuscles of the blood of various animals, Virchow has demonstrated an accumulation of fatty molecules. The author has made the same observation in pregnant dogs, in horses affected with glanders, and on one occasion in the blood of a pneumonic patient. In cataract he has found the cells of the liquor Morgagni full of fatty granules, which he also found among the fibres of the lens. Finally, in pathological tissues, it is very common to find granular cells, or so called inflammation-globules, developed from cells having albuminous contents. — *Schmidt's Jahrbücher, Oct.* 1847, *from Virchow and Reinhart's Archiv.* I. 1, 1847.

[This is a very valuable paper, and shows conclusively that epithelial are transformed into granular cells. That such, however, is not the only origin of these bodies, is proved by their great frequency in cerebral softenings, where no such explanation can apply to their formation. In such cases, numerous observations have convinced us that transparent exudation cells are first formed, which afterwards become granular.]

13.—*Chemical Researches on the Blood in the General Paralysis of the Insane.* By M. MICHÉA.—In these cases the analysis of the blood has given results of a very variable character. In general, the globules are increased; and it is only in a small minority that they exist in their normal quantity, and, in a still smaller, that they are diminished. In the majority of cases, the fibrine is natural; it diminishes in a certain number; and is seldom increased. The solid constituents of the serum are, in the majority of cases, in their normal quantity; are increased in very few cases, and notably diminished—especially as regards the albumen—in about a third of the cases examined. The water is generally increased, but often diminished in amount.

From these investigations, M. Michéa draws the conclusion, that the augmentation of the globules, and decrease of the fibrine, occurring together or separately, are the cause of the cerebral congestion so frequent in the paralysis of the insane. The diminution of the globules is occasionally connected with convulsive and cataleptic attacks; while the increase of the fibrine occurs along with epilepsy, and other symptoms of acute inflammation of the brain and its membranes.

The investigations of M. Michéa, according to their author, indicate bleeding and low diet as the rational treatment of the diseased, except in those cases where we have reason to suspect pressure on the brain from the accumulation of serum, or where the analysis of the blood displays a tendency to diminution of the globules, in which cases purgatives should be employed in place of bleeding.—*Comptes Rendus,* 29th November 1847.

14.—*Cataract composed of Phosphate of Lime.* By M. MAGNE.—The patient, aged forty-seven, had, twenty-five years previously, got some sparks of melted silver in his eye, which occasioned the cataract in question. One morning on getting up, the cataract had fallen forward into the anterior chamber of the eye, apparently in consequence of a violent fit of rage into which he had fallen the night before. Violent pain and inflammation supervened, and M. Magne performed the operation of extraction, which was performed with difficulty, owing to the restlessness of the patient. It was a perfectly hard capsular cataract, and an analysis by M. Lesueur showed that it consisted entirely of phosphate of lime, with a very small quantity of animal matter.—*Comptes Rendus,* 29th November 1847.

IV.—PRACTICE OF MEDICINE.

15.—*Hebra's System of Skin Diseases.* By Dr FÜRSTENBERG of Berlin.—[During a short visit that we paid Vienna in the autumn of 1846, we were much gratified in examining the division for skin diseases conducted by Dr Hebra, at the great hospital in that city. His arrangement and method of treatment are, not only in many respects novel, but highly valuable; and in introducing a sketch of them, lately drawn up by Dr Fürstenberg of Berlin, to the English reader, we hope to advance in some degree this much neglected branch of prac-

tical medicine. Dr Hebra has earned for himself a well-deserved reputation, by cultivating diseases of the skin on a scientific basis, and his treatment is decidedly the most successful of any practitioner we have come in contact with].

Hebra divides skin diseases into twelve classes.

I. Class.—Hyperæmic Diseases, characterised by slight swelling of the skin, with a bright or bluish-red coloration of it; the redness disappears on pressure. They may be active and idiopathic, as the *Erythema traumaticum*, as it occurs after baths, inunction, &c.; or active and symptomatic, as *Roseola variolosa*, *Vaccinia infantilis*, *Urticaria ephemera*, *rubra*; or they may be passive, *i. e.* caused by obstruction to the flow of venous blood. The colour is in such cases more of a bluish-red, as in the *Livor cutis*, as a consequence of exposure to cold, or of poisoning and *post-mortem* sugillation. Cyanosis is an example of passive and symptomatic hyperæmia.

II. Class—Anæmic Diseases occur after loss of blood, or relative deficiency of blood, as in cases of obstructed circulation, or in cachexia, and are characterised by paleness of the skin.

III. Class includes Anomalous Secretions, and Anomalies of the Secreting Organs. The two secretions of the skin are perspirations and unctuous matter (*sebum*). Hebra, therefore, subdivides this class into anomalies of the perspiratory and unctuous secretions, both as respects quantity and quality. *Hyperidrosis*, *Aniarosis*, and *Oligidrosis*, exemplify the perspiratory secretion diseased as to quantity; while *Bromidrosis*, *Chromidrosis*, &c., to which he adds the *odor specificus exanthematum*, are examples of its being diseased in quality.

Seborrhœa arises from increased secretion of the sebum. When not congestive, it is easily removed by ablutions with soap; if it, however, be congestive, it forms Bateman's *Ichthyosis faciei*. It is most frequent on the face, particularly about the region of the nose. Where the follicles are most numerous, it appears as a red basis, on which are seen the scales, with their peculiar fatty lustre, and the follicles like white granules; this latter symptom serving to diagnose it from the commencement of *Lupus* and *Pityriasis rubra*. Three to five washings (one twice a-week) with a solution of one part of caustic potass in two of warm water, are generally sufficient for the cure, cold fomentations being applied on the intermediate days in the most acute cases.

From increase of the sebum, along with closure of the follicular duct, arise *Comedones*, or *Lichen albus*, or tumours of considerable size may be found. *Molluscum contagiosum* is only a *Tumor folliculorum*. In time, the secretion may be so altered as to become of a stony hardness, forming *Cryptolithes*. The treatment is mechanical, the application of dry cupping-glasses, particularly where comedones of large size occur, as upon the back—or chemical, the use of potass solutions, much weaker, however, than in seborrhœa.

Alterations in the secretion of *smegma* are also the cause of the *Asperitudo epidermidis* and *Pityriasis localis*, as it often occurs in washerwomen, and in which the want of unctuous matter is best remedied by frictions with oil or grease.

IV. Class is the most important division, comprising the *exudations*. These are either effused between the different layers of the skin, forming vesicles, bullæ, pustules, or we have a reddened portion of skin; the redness disappears on pressure, leaving, however, a yellow coloration. They form two great divisions, acute and chronic exudations, and the first becomes again subdivided into the contagious and non-contagious. The contagious are, *Morbilli*, *Scarlatina*, *Variola*, *Vaccinia*. Hebra recommends, in all these diseases, an entirely expectant treatment, and in all the daily washing of the body with cold water, which in nowise interrupts the progress of the exanthema.

The non-contagious acute exudative processes form two sub-groups, the fibro-albuminous and the serous. To the first belong various kinds of erythema—*Erythema papulatum*, *tuberculatum*, *nodosum*, *mammelatum*, *annulare*, *iris*, *gyratum*, *circumscriptum*, *marginatum*, *intertrigo*, *urticans*; also *Roseola* and *Dermatitis seu Erysipelas*, which latter he again subdivides into erythematous—where the papillæ and chorion alone are affected—and phlegmonous, where the entire cutis and subcutaneous tissue are affected; to the latter belong, besides, the idiopathic inflammations of the skin,—*Pseudo-erysipelas*, *Furunculus*, and *Anthrax*.

Acute serous exudations are, *Urticaria*, *Herpes*, *Miliaria*, *Sudamina*, and *Pemphigus*.—(*To be continued.*)

16.—*On Inflammation limited to the Ventricular Serous Membrane, and on its termination in Chronic Hydrocephalus.* By Dr Rilliet of Geneva.—According to Dr Rilliet, inflammation limited to the membrane which lines the ventricles of the brain, is so rare that he has been unable to find a recorded case of it.

He, therefore, describes one which terminated in chronic hydrocephalus. A young girl, ten years and a half old, intelligent and well developed, was seized suddenly with violent cephalalgia, accompanied by vomiting, fever, and intolerance of sound and light. On the fifth day there was a violent attack of general convulsions. On the seventh day dulness of hearing, and afterwards cephalalgia, vomitings, and especially convulsions. On the eighteenth day, retarded and irregular pulse; complete deafness on the twenty-first day. On the fifty-second day the intelligence commenced to diminish, and the convulsions became more rare. On the sixty-third day, there were involuntary stools; almost complete idiotism on the sixty-eighth day; disappearance of convulsions in three months. Eight days later there were vomitings, with intermitting convulsive cries, and in one of these attacks she died, four months after the commencement of the disease.

On examination, the cerebral convolutions were completely obliterated, and there was a little opacity of the membranes enveloping the nervous centres. Arachnoid slightly thickened and opaque, without any character of inflammation, acute or chronic. There were ten ounces of limpid and strongly albuminous serum in the ventricles, and their lining membrane had a gelatinous aspect, was half a millimetre in thickness, and of remarkable consistence.

M. Rilliet discusses successively the three opinions which may present themselves in connection with this case—whether it be one of essential hydrocephalus, of ventricular hemorrhage, or of inflammation. He pronounces for the last opinion, especially on account of the fever present at the commencement, and of the convulsions, which appeared only on the fourth day. He concludes, first, that the membrane which lines the ventricles may be inflamed without the arachnoid and piamater of the periphery participating in the inflammation; secondly, that this meningitis is characterised by cephalalgia, vomitings, constipation, a tolerably intense fever, and repeated convulsions without alteration of intelligence; third, that the inflammation may terminate by a chronic hydrocephalus, as distinguished by failure of the intelligence, and latterly idiotism; fourth, that in this form of hydrocephalus the liquid effused is strongly albuminous. —*Archiv. Génér. de Méd. Dec.* 1847; *and L'Union Méd. 1st Janvier* 1848.

[This is a very interesting case, but we are at a loss to understand how it can be maintained that no inflammation, acute or chronic, affected the meninges of the periphery, when it is recorded that they were somewhat thickened and opaque. We are of opinion that such cases are not uncommon, although they are rarely observed during life with the accuracy M. Rilliet has displayed. We have seen the same lesion in the dead subject several times. The writer of the memoir lays down with considerable confidence the diagnostic symptoms between meningitis of the ventricles, and meningitis of the hemispheres; but, considering that he has only observed one case of the former, his statements on this subject must be received with great caution.]

17.—*New Treatment of Œdema of the Glottis.* By Dr BUCK.—Dr Gordon Buck stated to the New York Medical and Surgical Society, June 5th last, that at had long ago occurred to him, that in cases of the œdema of glottis, when suffocation seemed imminent, the patient might be relieved by incising the edges of the glottis and epiglottis. An opportunity having recently occurred, he had had recourse to the practice with decided benefit. The patient suffering under inflammation of the fauces, became affected with dyspnœa, attended with paroxysms of impending suffocation. On passing the finger into the fauces, the epiglottis could be felt enormously swollen and tense. The swelling of the glottis could likewise be distinguished. In the operation, a pair of curved, sharp-pointed scissors was employed, and afterwards, a curved, sharp-pointed bistoury, guarded to within a quarter of an inch of the point. The patient expectorated two or three spoonfuls of blood, mixed with the secretions of the fauces, and expressed himself decidedly relieved. Besides the operation, the patient was bled, leeched, inhaled aqueous vapour, &c. He recovered.

Dr Clark said, that he thought the suggestion of Dr Buck a highly important one; the œdematous swelling, in such cases, being principally situated on the posterior surface of the epiglottis, and on the upper and posterior part of the glottis. In this last situation it had a valvular action, rising up during expiration, but closing, and thus impeding inspiration. Indeed, the fact that the difficulty occurred only during inspiration, was characteristic of the disease. Dr C. thought the parts could be safely and easily reached, and that the operation afforded every promise of relief.—*Amer. Jour. of Med. Sci., and Dub. Med. Press,* December 22d, 1847.

18.—*Case of Laryngitis, accompanied by*

the formation of False Membrane in the Trachea and Bronchi, in which Tracheotomy was successfully performed. By T. A. Barker, M.D., &c.—At a meeting of the Royal Medical and Chirurgical Society of London, Dr Barker read the following case :—

A woman, aged twenty-two, four months pregnant, after delicate health, and symptoms of commencing phthisis for nine months, and pain on deglutition for three months, was admitted into St Thomas's Hospital with chronic laryngitis, and signs of tubercles, in an early stage, at the commencement of January 1847. In a few days the symptoms became urgent, indicating the necessity of immediately opening the trachea. The operation was performed by Mr B. Travers, junior, and the woman was nearly asphyxiated before it was completed, in consequence of a false membrane formed in the trachea, where the opening was made, blocking up the tube below the opening, having, probably, been forced downwards by the scalpel. Five days after the operation there was extensive hemorrhage from the wound, and, together with the blood, a large quantity of fibrinous matter, evidently casts of bronchial tubes, was expectorated. The wound gradually closed, and there was no return of dyspnœa ; but as the tubercular disease in the lung advanced, there was incessant cough, and the stomach became very irritable. Six weeks after the operation the patient died exhausted. The mucous membrane of the larynx and upper part of the trachea was completely destroyed, and both lungs, especially the right, were thickly studded with tubercles in an early stage. As life was prolonged for six weeks, the death was not ultimately caused by obstruction in the larynx, the author considered this a successful operation, though performed under unfavourable circumstances. There was ulceration of the trachea at the part where the opening was made, which prevented the use of a trachea tube, on account of the irritation it excited ; there was false membrane both in the trachea and bronchi ; there were tubercles in the lungs ; the patient was exhausted by copious hemorrhage on two occasions, and was much depressed in mind ; nevertheless, she survived for six weeks.—*Medical Gazette*, January 6th, 1848.

[This case is valuable, as showing that the formation of lymph on the mucous surfaces of the trachea and bronchi is no contra-indication to the operation. In the discussion which followed, Mr Hilton stated, that the employment of the trocar and canula was preferable to the knife, as tending more effectually to prevent the escape of blood. He asked whether the moulds expectorated, might not be the blood which had escaped from the wound, coagulated. Dr Barker, in reply, stated, that a microscopic examination by Mr Grainger had enabled that gentleman to determine them to be fibrine stained with effused blood. We should like to have learned, a little more particularly, how Mr Grainger was enabled to separate coagulated exudation on a mucous surface from the coagulum of blood.]

19.—*Varieties of Colic.* By M. Andral.—Most intestinal pains bear the name of colic, to which is superadded an epithet—bilious, inflammatory, nervous, &c.—to designate its nature. Nervous colic, or enteralgia, may arise spontaneously, and is remarkable sometimes by its extreme intensity, and the faintness which it produces ; it is occasionally the result of rheumatism ; and in the disease called "colic of Madrid," it is due to the sudden changes of temperature frequently noticed in the climate of that city. In the neighbourhood of the Ganges, a similar form of colic is also observed, under the influence of the same causes. In colica pictonum, enteralgia is also present ; it is not always relieved by pressure, but pressure certainly diminishes the sufferings of the patient during their exacerbations. The form of the abdomen in this disease is not changed, nor its walls retracted, as it has been so often erroneously stated. Nervous colic has been known to assume an epidemic form, at sea for instance, after the prevalence of cold winds. In the colic caused by copper, the pain is also very great, but is accompanied by diarrhœa, and the disease certainly participates more of the nature of inflammation than of that of neurosis.—*Medical Times*, December 25, 1847.

20.—*Case of Convulsions depending on Tape-worm.* By Mr Hutching.—Mr Hutching relates the case of a girl, aged fourteen, who had suffered for three months from attacks of convulsions three times a-week. Tonic remedies were employed for a month, with some benefit to the general strength, and the convulsions disappeared ; in another month, however, they returned with abdominal pain and diarrhœa. Worm powders, and Ol. Terebinth. in doses of twenty drops, were prescribed without effect. She was now ordered, Ol. Tereb. ℥iij ; Ol. Ricini, ℥iv ; Gr. Opii et Tr. Card. comp. aa. gtt xij : Aqua-Menth. virid. ℥ ss. M. St. Haustus,

primo mane exhib. In the night she passed five or more yards of tape-worm, since which she has permanently recovered.

Mr Hutching remarks that this case shows the inutility of small doses of turpentine in tape-worm, and illustrates how much suffering and nervous irritation may depend upon the presence of the parasite in the bowel, which ceased on its removal. —*Dublin Medical Press*, Jauuary 5, 1848.

V.—PRACTICE OF SURGERY.

20.—*Operations for Femoral Aneurism.* By C. B. GIBSON, M.D. — Patrick M'Vastry, æt. forty-five, a prisoner in the Maryland Penitentiary, presented himself to me on the 25th of June, with a large tumour occupying the greater part of the inguinal triangle (Scarpa) on the inner and anterior part of the left thigh. Its true nature was immediately discovered, and the patient put in preparation for an operation. From the close approximation of the aneurism to the crural arch, it was deemed expedient to tie the external iliac artery, and after a week's preparatory treatment, consisting in the regulation of diet, and attention to general health, Dr G. performed the operation on the 2d of July, assisted by Dr Alfred Baker.

The patient being placed on a narrow table, with the shoulders elevated, an incision, three inches and a half long, was made about an inch above and parallel with Poupart's ligament, commencing opposite the anterior superior spinous process of the ilium, and ending a little above the external ring.

The first cut divided the skin and superficial fascia, and exposed the tendon of the external oblique muscle, which was next divided to the same extent on the director. The lower margins of the internal oblique and transversalis, were now found and divided to the extent of three quarters of an inch upwards, when the fascia transversalis was exposed and torn with the finger nail, and the artery then discovered on the inner border of the psoas muscle, covered by the sheath it receives from the fascia iliaca.

The director was here used to rupture the sheath, on the inner side of the artery, and detach it from the vein, and when the whole circumference of the artery was thus cleared, the aneurismal needle armed with the ligature was easily passed around it, from the inner side above the epigastric.

The ligature was now drawn firmly and tied, and the pulsation in the tumour instantly ceased. The divided internal oblique and transversalis muscles were carefully adjusted, the wound sponged clean, and the edges brought together by the interrupted suture and adhesive straps, leaving merely space for the passage of the ligature.

On the third day after the operation, the wound was examined, and union found to have taken place by the first intention, with the exception of about a quarter of an inch round the ligature. The sutures were cut out and the straps retained. A slight discharge had stained the compress. The wound was dressed daily. On the twenty-first day the ligature was drawn away with a very slight effort, and the opening left gradually contracted and healed.

About ten days after the operation, the patient drew Dr G.'s attention to another tumour about the middle of the femoral artery on the opposite thigh, also aneurismal, and the size of a large walnut. He tied the femoral artery on this side, in its upper third, in the presence of Dr Baker, Dr Brokenborough of Richmond county, Virginia, and Mr Crittenden, a student from Virginia. The pulsation ceased immediately on the application of the ligature. The wound also healed by the first intention, and the ligature was detached on the eighteenth day.

The patient is now entirely well, and almost strong enough to resume the usual labour of the convicts.—*American Journal of Medical Science.*

22.—*Case of Un-united Fracture, treated by Galvanism.* By Mr BURMAN.—A gentleman, aged thirty-five, of robust constitution and sober habits, was thrown from his gig in the summer of 1845, and sustained a transverse fracture of the tibia and fibula in the lower third of the leg. The limb seems to have been placed and steadily retained in good position; but on removing the splints, when union was expected to have taken place, the fractured ends of the bones were found still loose and moveable. Fourteen weeks after the accident he placed himself under the care of Mr James Burman, under whose treatment he subsequently remained. At that time there was no formation of callus, and the fractured ends of the bone were quite moveable, but could be readily

adapted to each other ; neither was there any inflammatory action about the parts, although, having been advised to rub the two ends of the bones together, he had very assiduously followed that advice.

The limb was now placed in a fixed apparatus consisting of *a sheet-iron boot*, which, when applied, embraced the whole leg, ankle, and foot, and, being well padded, the limb was immoveably fixed, part of the apparatus being made to fold back by a hinge, so that the seat of injury might be got at without disturbing the fracture. He was now directed to take daily exercise in the open air ; to partake freely of wine, porter, and animal food, and when sitting in the house or lying in bed, to have the fractured ends firmly pressed against each other by means of a broad band passed over the knee, and under the foot-board, capable of being tightened by a strap and buckle, the leg being at the same time bent at a right angle with the thigh.

At the same time an electro-magnetic current was made to pass through the seat of fracture, by means of two needles inserted under the skin, one on each side of the fracture, and the current was maintained for nearly half-an-hour daily.

This plan of treatment was commenced on the 9th of October, and by the 22d, sufficient inflammatory action had been set up to render the further application of galvanism unnecessary ; by the 30th, the deposit of callus was so copious, and the union of the fracture so firm, that, at the patient's earnest solicitation, he was allowed to return to his duties, with directions still to use his boot, and to continue the use of his crutches. These were very soon dispensed with, the leg having become as firm and sound as the other, the point of fracture being marked by a thick firm band of callus.—*Dublin Medical Press*, December 15th.

[Mr Burman appears to us to be perfectly justified in attributing in great part the altered action, which was set up in this case, to the influence of the galvanism.

The patient, who it seems was a strict disciple of Father Matthew, seems to have lacked the generous diet and moderate stimulation which is found so advantageous in the treatment of fractures ; and we have no doubt that the ultimately successful treatment was much assisted by the improved diet which was recommended. It will be observed, however, that in twelve days after the commencement of the galvanic treatment, such action had been excited between the fractured ends of the bones, as to leave no doubt of its consolidation taking place, and in eight days more the deposit of callus was copious, and the union of the fracture firm. A period of three weeks having been found sufficient to procure such union in a false joint of fourteen weeks standing, appears to us satisfactory proof of the excitement produced by the galvanism having played no trifling part in the successful treatment.]

23.—*Irritable Bladder, with Spasmodic Stricture of the Urethra, dependent on the presence of Tape-worm in the Intestine.* By Mr Tufnell.—A man of temperate habits, aged thirty-seven, came under the care of Mr Tufnell on the 10th of June, complaining of excessive irritability of the bladder, with difficult micturition. He had enjoyed good health till about three months previously, when he began to suffer from the usual symptoms of dyspepsia, with irritation of the rectum and hemorrhoids. These symptoms increased, and to them were added tenesmus and frequent calls to make water, which was voided in a twisted jet, and accompanied by severe straining, but no pain. He received temporary relief from taking opium ; but he became emaciated, and his health had suffered severely before he applied for medical assistance. A small bougie when introduced was arrested, and grasped tightly by a stricture at the membranous portion of the urethra, the probable result of an attack of gonorrhœa, from which he had suffered some years before. The urine was highly acid, and loaded with lithate of ammonia. The prostate was of natural size, but very sensitive to the touch.

The patient was ordered to rest in the recumbent position, to have a pint of tepid water injected up the rectum night and morning to relieve local irritation, and to take infusion of columba with tincture of hyoscyamus, and liquor potassæ. The bowels at the same time to be evacuated by castor oil.

Under this treatment he improved so rapidly, that he resumed his usual habits at the expiration of a week. His symptoms, however, immediately recurred, and were as immediately relieved by his resuming his former treatment, with the horizontal posture. A second speedy recovery was effected, but he returned in a few days suffering severely, and anxiously desiring an operation for his relief, being convinced that he suffered from urinary calculus.

The irritation about the anus had now greatly increased, and he was observed at the same time to be frequently rubbing

his nose, which suggested the idea of the possible presence of worms in the intestines. A purgative of turpentine and castor oil was accordingly administered, and the following morning a tape-worm measuring thirty feet was evacuated. All the former symptoms immediately subsided, the urine became clear and healthy, and the patient was soon restored to permanent health.—*Dublin Medical Press*, December 15, 1847.

24.—*Foreign Body in the Bladder—Fatal attempt at Extraction.* By M. ROBERT.—The following case is reported by M. Robert to the Surgical Society of Paris:—

A young man, three days previously to his applying for M. Robert's assistance, had introduced an ivory ear-pick into his urethra, which very soon after its introduction became the cause of extreme suffering. On a careful examination of the urethra no foreign body could be detected, but it was discovered, by means of a sound, to have entered the bladder. It was there repeatedly seized with the three-branched forceps, but the attempts at extraction were fruitless, as the body lay across the neck of the bladder.

It was agreed, on consultation with M. Heurteloup, that it should be broken, and if possible extracted piecemeal, and with this view a *brise-pierre tranchant* was introduced, and the ear-pick cut across. The following day the patient, with much satisfaction, showed to M. Robert a fragment of the ivory which he had voided with his urine, the appearance of which induced the belief that two fragments still remained within the cavity of the bladder. On the following day the patient had a shivering, which was speedily succeeded by a second rigor. M. Heurteloup now made a second attempt to reduce the ear-pick into smaller fragments, but failed in bringing the instrument in contact with any foreign body. During the night following this second operation, all the symptoms of acute peritonitis supervened, from which the patient rapidly sunk.

On dissection the peritoneum was found highly inflamed, the rectum was adherent to the posterior surface of the bladder on the left side, and an abscess had formed in the cellular tissue of this part. The internal surface of the bladder was inflamed, and the ear-pick perforating its walls, projected about three-quarters of an inch into the abscess.

From this case M. Robert draws the conclusion, that, when a foreign body like the above has found its way into the bladder, and it is determined to attempt the destruction of it by crushing, it is desirable to finish the operation at one sitting (that is, to reduce it into such small fragments that they may be expelled from the urethra), for fear of the pointed extremities, which are left, perforating the walls of the bladder.—*Journal de Médecine et de Chirurgie*, November 1847.

25.—*Remarkable Case of Suicide.* By Professor FENGER of Copenhagen.—The patient fired a pistol, loaded with pretty large shot, into his mouth. There was considerable laceration, but he went on very favourably for four days, when violent hemorrhage took place from the mouth and nose, which proved rapidly fatal. The *post-mortem* examination showed that a single shot had penetrated into the right sphenoidal sinus, and wounded the carotid on the side of the cella turcica.—*Bibliotek for Læger*, July, 1847.

VI.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

26.—*Chloroform in Natural Parturition.*—By Dr I. BROWN.—Mrs W——, aged forty, the mother of seven children, was attended in her eighth confinement by Dr Brown, consulting accoucheur to the Paddington Lying-in Charity. On arriving, he "found the os uteri dilated to the size of a crown-piece, but all the external parts dry and tense, the liquor amnii having been discharged many hours previously. The pains were severe, and not very efficient." Dr B. then administered the chloroform in the usual way. "I paid (Dr Brown adds) great attention to the practical and judicious remarks which Dr Simpson kindly gave me in a private note accompanying his pamphlet, viz. 'In midwifery, you do not require to keep the patient so *sound* and deep as in surgery, otherwise you will stop the pains; but she should be *so* deep as not to feel them. With chloroform, I give a few inhalations before each pain. In the interval, keep her just asleep, and no more.' Thus I found (he continues) every pain subdued as to the patient's suffering, but not at all as to its expulsive power." When the head descended to the perineum, Dr B. gave a larger dose, and the child, a fine male, was born without the

knowledge of the patient. She awoke in five minutes, hearing its cry. "The placenta came away entire in ten minutes, *whereas in all her previous labours she had always either hour-glass contraction, or retention from other causes.* The uterus contracted well and continued so; the patient had no bad symptom, either vomiting or headach. In all, I used only one drachm" (ounce?).—*Lancet*, p. 604, Dec. 4, 1847.

Other successful cases of the use of chloroform in natural labour, are recorded by Dr Lansdown (*Lancet*, January 1, 1848), Dr Protheroe Smith (*Lancet*, November 27, 1847), Dr Rigby (*Medical Times*, December 11, 1847), &c.

27.—*Objections made to the Use of Chloroform in Labour.*—Some communications have been published in the medical journals, fulfilling Dr Simpson's statement, that the use of chloroform in midwifery would of course meet with all "due and determinate opposition" from some members of the profession. Mr Grean of London (*Medical Times*, December 18) avows, "amongst the higher classes a general disgust for the use of either ether or chloroform is manifesting itself," and "great numbers have already expressed their abhorrence of the system of being relieved from pain!!" The same writer states *his* belief, that its relaxing effects upon the perineum and soft parts can be of no use in first labours; for "in first deliveries (says he) much more impediment is found in the pelvic *bones* and rigidity of *joints*, as evidenced in the labours of those advanced in years; and as pressure alone is able to cause these parts (the bones and joints) to yield, I do not see that much advantage can be gained by any relaxation that may be imparted to the soft parts." Such groundless assertions as the above we pass over without remark.

Dr Barnes of London (*Lancet*, December 25, 1847) insists, that the pains of labour, and the modifications of cry which the agonies of the patient force from her, are useful to show the progress of the labour, and that they thus afford us "valuable assistance in diagnosis and treatment;" and that, therefore, he is not to be "dragooned" into the practice of permitting his patients to pass through the process of parturition without their exhibiting to him the usual signs of torture.

[We would suggest to Mr Barnes, that all this diagnosis could be far more easily and certainly made out by what every man employs, the usual tactile examination, and we would further suggest to him, that such means would be much more humane. Ideas like those of Mr Grean and Mr Barnes, will read strangely some ten years hence.]

28.—*Chloroform in difficult Parturition.* By Dr Murphy.—E. G——, æt. thirty-six, has already borne six children. All her labours were extremely protracted.

In the present, her seventh confinement, labour commenced, Nov. 24, at six o'clock A.M. "About eleven o'clock on the following day (says Dr Murphy) I saw her, and found the os uteri nearly dilated, the vagina moist and cool, the head above the brim of the pelvis, the conjugate measurement of which was only two inches and a half. I felt satisfied that the head of the child could not descend into the pelvis; but allowed labour to proceed, in order to ascertain whether it might enter the brim sufficiently to be extracted by the forceps." After being thirty-eight hours in labour, with very strong and regular pains, no change took place in the position of the head. The inhalation of chloroform was then commenced, and quiet sleep was induced. Dr Murphy then perforated the head. When the perforator was withdrawn, the bones of the cranium overlapped each other, so that it was difficult to introduce the crotchet. After several manœuvres and vain efforts in traction, the head was at last made to pass the brim of the pelvis. At half-past nine o'clock P.M., the child was born, thirty-nine and a-half hours after the commencement of labour. The placenta was expelled in about ten minutes without any hemorrhage.

Her convalescence was steady and rapid, a "contrast to her previous confinement, from which she did not completely recover for some months."—*Dr Murphy, Lancet*, p. 653, Dec. 18, 1847.

29.—*Ovarian Tumour impeding the passage of the Child's head.* By Mr Hicks.—Mr Richard Hicks, surgeon, London, was called to Mrs P., who had been in lingering labour for twelve hours. Upon examining, he found a large tumour, which he supposed to be fibrous and ovarian, lying in the posterior part of the pelvis in such a manner as to preclude the possibility of the child's head passing without craniotomy. This operation was immediately performed, and then the inhalation of chloroform commenced (Mr H. could not procure any of it sooner). Dr Murphy delivered the infant with some difficulty. Chloroform was again administered during detachment of the placenta, which was adherent. Mr Hicks remarks, that

he does not recollect having seen any one who had had so severe a labour, arrive at so speedy a restoration to health.—*Lancet*, p. 42, Jan. 8, 1848.

[In this case, the safe precaution of puncturing the tumour *per vaginam* seems to have been omitted. The introduction of a small exploring needle (trocar and canula) would have decided whether or not the tumour contained fluid, and of what kind the fluid was. If the tumour was ovarian, this means might probably have evacuated its contents, and allowed the child to pass uninjured. The fibrous hardness of the tumour is no test, under such circumstances, of its containing fluid or not. Dr Ingleby (*Obstetric Medicine*, p. 125) relates a case in point, where the tumour was "so very tense as to feel like bone;" and where it was ascertained that, had it been punctured, the child would probably have survived.]

30.—*Turning substituted for Craniotomy and the Long Forceps. Chloroform-inhalation.* By Dr MURPHY.—Dr Murphy was called to attend a lady in labour with her twelfth child. All her former labours were more or less protracted, and in her last confinement the forceps were resorted to in vain, after labour had continued forty-eight hours. The cranium was then perforated, and the child delivered. "When it was removed, the arm of a second was found in the vagina, which was turned with much difficulty and saved."

On the present occasion labour commenced on Thursday, Dec. 2d. "On the following morning (says Dr Murphy) she sent for me, when I found the os uteri two-thirds dilated, the head of the child presenting at the brim, the passages cool, and the upper part of the sacrum easily touched by the fore-finger; the contraction from pubis to sacrum seemed to me to be about three inches. I hoped, therefore, that by allowing the labour to proceed, the head might advance sufficiently to be delivered by the forceps. . . . Nothing was done until the middle of the day, when I saw her about one o'clock. During this interval the pains were becoming very weak and inefficient; the pulse 100, weak and compressible; no advance in the presenting part, which was still in the brim of the pelvis. I determined to attempt the delivery by the forceps, and requested Dr Snow to commence the inhalation of chloroform. As soon as my patient was sufficiently under its influence, I proceeded to apply the long forceps in the transverse axis of the brim of the pelvis, over the head of the child; when the blades were locked, I gradually increased the extracting force to the utmost I could use, but without any effect; I was more than half an hour engaged in this, but to no purpose. Thus, finding my intentions defeated, and having, as I supposed, no other alternative, I proceeded to perforate the head, when the perforator, which had scarcely entered the cranium, pushed the head altogether above the brim of the pelvis. I withdrew the instrument, and feeling a hand of the child just over the pubis, I resolved to attempt to turn it. I got my hand and arm, with a good deal of difficulty, through the brim, seized the knee of the child, and brought it down, which being accomplished, I was enabled to bring down the remaining limbs more easily, because the cavity and outlet of the pelvis was just as wide as the brim was narrow. The extraction of the head, the great difficulty, was yet to be overcome, but by a steady and powerful effort I succeeded in disengaging it; the child (a boy) was born, to my great surprise, living, and is now doing remarkably well.

"Since the operation, this lady's recovery has been extremely favourable; and, comparing it with her last confinement, she says that she slept better, and felt far more comfortable on the following day. She had much less nervous irritation. She is also quite free from after pains, to which she had been subject in every previous confinement. . . . It seems to relieve the patient from the shock to the nervous system, caused by severe pain.

"This case (continues Dr M.), I think, also proves the importance of a rule proposed by Professor Simpson—that of turning the child where the long forceps fails in extracting it. [*See the No. of Journal for March* 1847, p. 718.] I should have no hesitation, in any future case similar to this, to make the attempt, if I could get my hand and arm through the brim of the pelvis."—*Lancet*, p. 654, Dec. 18, 1847.

31.—*On Placenta Prævia.*—By Dr MEADOWS.—Dr Meadows of Ottley, Ipswich, relates a case of this complication. The patient had had repeated discharges of blood during the two last months of her pregnancy. When labour came on, it was attended with excessive hemorrhage. The mother was completely exhausted and almost insensible, in consequence of which brandy and opium were administered. Dr Meadows, on examination, found the os uteri completely dilated, and the placenta entirely adhering to its circumfer-

ence. In about a quarter of an hour the placenta was detached. Immediately the hemorrhage ceased. A large dose of ergot was now administered, and the child was born, with the head foremost, in about an hour and a half. The patient recovered completely.—*Lancet*, p. 27, Jan. 1, 1848.

32.—*Rupture of the Womb during Labour, followed by Recovery.* By Dr Prassart.—A woman, thirty-seven years of age, after being about eight hours in labour, was suddenly taken with excessive pain in the abdomen. At the same time a noise was heard as of something cracking; the waters also were discharged. The uterine contractions were instantly stopped, and she became cold and collapsed.

Dr Prassart was called in and saw her six hours after the accident. She was at that time in the deepest prostration, and complained of extreme pain and tenderness in the belly. The forceps were then applied, and a dead child easily delivered, followed by a large discharge of blood. After removing the placenta from the cavity of the abdomen, several folds of intestine passed into the uterus. The subsequent details of the case are very imperfectly recorded. The woman, however, was able to leave her bed in four weeks, and afterwards recovered entirely. —*Casper's Wochenschrift*, No. XLI. 1847.

33.—*Spontaneous Rupture of the Uterus before Labour.* By Mr Browbill.—Soon after her first delivery, which was natural, this patient was seized with convulsions, and subsequently delirium, which, after continuing for a week, ended in puerperal mania, which was cured after eight months' confinement in an asylum.

In the beginning of the seventh month of her second pregnancy she had a violent fall, which, however, caused her no pain at the time, or subsequently. At the full period labour commenced, and was accompanied with vomiting. After several good pains, she felt as if something suddenly gave way inside, and immediately a discharge of liquor amnii took place from the vagina. The os uteri was nearly closed. After this the uterine contractions ceased, and she died on the third day after labour had supervened. Before death, she complained of severe pain in the middle of her back.

On the autopsy, the abdomen was found to contain about two pints of a dark bloody fluid. The fœtus, in the first stage of putrefaction, was found lying in the cavity of the peritoneum, entirely excluded from the uterus. The uterus was ruptured from the centre of the fundus as far as the os uteri. It was perfectly healthy, and firmly contracted over the placenta.—*Provincial Med. and Surg. Journal*, Dec. 29, 1847.

34.—*Imperforate Vagina occurring during Labour.* By Dr Ogden.—An interesting case of this nature is related by Dr Ogden. His patient had, when nineteen years of age, undergone an operation for retained menses, in the course of which the urethra was laid open; and, on cutting deeper, a quantity of thick grumous blood was evacuated. This artificial opening ultimately closed, and she menstruated afterwards through the urethra.

After being married for a period of ten years she fell with child. On labour supervening, Dr Ogden made a large incision between the urethra and rectum to the depth of an inch and a half. The membranes were unfortunately opened by the knife. The child was still-born. She became again pregnant two years afterwards, and the vagina was so rigid as to require the use of the scalpel. A living child was delivered.—*Record of Obstetric Medicine*, p. 34.

Another case, very similar to the former, was reported to the Manchester Pathological Society by Mr Dumville (*Medical Gazette*, Dec. 24, 1847). A young woman, nineteen years of age, was operated upon to evacuate the menses retained by a congenital occlusion of the vagina. The incision had to be carried to the depth of an inch. Six years after the operation she became pregnant, and was delivered at the full time. A rigid band of the vagina had to be cut through before the head of the child could make its exit. The mother made a good recovery.

35.—*Extreme Rigidity of the Os Uteri during Labour.* By Dr Buckingham and Mr Barrett.—The patient had already borne two children; both the labours were tedious and protracted. Dr Buckingham was called to attend her in her third confinement. On arriving, he found that the membranes were already ruptured. The pains were very severe. The os uteri was found low down, near the vulva; it was about the size of a dollar, thin in the edges, quite unyielding, and feeling as if formed by a wire. Tartrate of antimony was administered in nauseating doses, without effect. The pains continued very strong, and forced the head, still covered by the uterus, through the bony outlet of the pelvis. While the head rested upon the peri-

neum, Dr Buckingham incised the posterior lip of the uterus by means of a lancet, to the depth of one-eighth of an inch. The wound enlarged of itself, and the child was speedily delivered. The mother made a slow recovery.—*American Journal of Medical Sciences*, October 1847, p. 400.

Mr Barrett records a similar case. In this patient, when first examined, the os uteri was rigid and thick. On the second day the waters were discharged. In consequence of the persistence of this state of matters, the woman was several times bled and purged, and had tartar emetic in nauseating doses, as well as different enemata, and also the local application of belladonna to the os uteri. She was *unaccountably* left in this condition for five days, the pains being generally very severe, and ceasing only rarely while she enjoyed a few hours sleep. After being five days in this state, serious constitutional symptoms supervened, and it was judged necessary to resort to the knife. Two incisions were made in each side of the os uteri. The constitutional symptoms very quickly abated. Subsequently the child's head was perforated, and the woman safely delivered after seven days' labour. She recovered.—*Provincial Med. and Surg. Journal*, Dec. 15, 1847.

36.—*Hydatids from the Uterus.* By Dr BROWN.—Dr Brown relates a case of this description occurring in a woman who had borne four children, the youngest of which was two years old. When Dr Brown first saw her, she believed herself to be in the fourth month of pregnancy, and complained of a great discharge *per vaginam* of a dark-brownish colour, and most offensive odour. The uterus was enlarged to the size of that of the fourth month of pregnancy. These symptoms continued for a month, when profuse flooding came on. Dr Brown, on arriving, introduced his hand into the uterus, and took away a large quantity of coagula with hydatids. Of these last there were, at least, two quarts. The hemorrhage immediately ceased.—*Record of Obstetric Medicine*, January 1, p. 21.

[For some interesting pathological observations on hydatiginous degeneration of the ovum, we would refer to the reports of the Obstetric Society of Edinburgh, published in the number of this Journal for May 1847, p. 868.]

VII.—MATERIA MEDICA AND THERAPEUTICS.

37.—CHLOROFORM—*Preparation.*—M. Soubeiran recommends the preparation of chloroform from a mixture of ten parts of chloride of lime, sixty parts of water, and two parts of alcohol. The mixture is introduced into a large copper still, of which it must not occupy at most above two-thirds, and a brisk fire is applied to the apparatus. At about 176° Fahrenheit, a violent reaction ensues, and just at this moment the difficulty of the process consists, as the materials are apt to swell up and pass over into the recipient. It is necessary to watch it carefully at this point; and when the head of the still at its upper part becomes warm, although no fluid has begun to pass over, the fire must be withdrawn. Shortly after this the distillation commences and proceeds almost entirely of itself; but as soon as it begins to go slowly, the fire is re-applied. The distilled fluid does not amount to more than two or three litres, and consists of two layers, the lower of which is chloroform. It is purified by washing first with water, and then with solution of carbonate of soda, and finally by distillation over chloride of calcium. The proportions above described M. Soubeiran assures us are the most favourable for the preparation of chloroform; and in order to facilitate the process, and to save time, he recommends the chloride of lime to be mixed at once with hot water, by which means a considerable number of distillations may be performed in one day.—*Journal de Pharmacie et de Chimie*, December 1847.

M. Dervault recommends that the proportion of water proposed by Soubeiran should be diminished one-third. By this modification he asserts that four times the quantity of chloroform are obtained than by the process of Soubeiran.—*L'Union Médicale*, December 18, 1847.

The above process is understood to be the one generally adopted. It is, however, not free from danger; and serious accidents have occurred. (We find the following remarks in the *Pharmaceutical Journal* for January 1, 1848). "The materials introduced should not occupy more than one-eighth of the still, and not two-thirds, as Soubeiran directs; otherwise the still-head may be blown off with violence, and the apartment filled with chlorine vapours. Perfectly good chloride of lime should be used, otherwise the product will be very small.

Chemical Characters and Tests.—The chloroform is obtained first as a dense oily-looking liquid. It is purified by treating it with oil of vitriol and carbonate of baryta or of potash, and by subsequently distilling from chloride of calcium, after washing it repeatedly with water. It may yet, however, retain a minute portion of alcohol, the presence of which is detected by the following very delicate test proposed by Mialhe:—"Put some distilled water in a test tube, and drop into it a small quantity of chloroform; if the chloroform be pure, it remains transparent at the bottom of the tube, but if alcohol be present, the chloroform acquires a milky opacity." Mialhe supposes the alcohol in the chloroform to be in the anhydrous condition, and that the milkiness which ensues on the addition of water, is occasioned by the hydration of the alcohol. This test will detect the admixture of one-thousandth part of absolute alcohol. It is feared, however, that it will be inapplicable in warm weather, as a slight increase of temperature, such as the warmth of the hand, causes the milkiness to disappear. Probably the presence of alcohol to a small extent will not interfere with its therapeutical properties.

When pyroxylic spirit is substituted for alcohol in the preparation of chloroform, the product has a disagreeable taste and smell, and is unfit for medicinal use.

Mialhe enumerates the following among the chemical properties of chloroform:—"It rapidly evaporates, producing great cold when dropped on the skin. It has neither an acid nor alkaline reaction, but is perfectly neutral when pure. It is easily dissolved by alcohol and ether, but is again separable by water. It readily deoxidizes nitric acid by the aid of a moderate heat; gold is not dissolved by this mixture, hence no hydrochloric acid is formed, and no chlorine is evolved. Chloroform does not dissolve gold, nor does it bleach vegetable colours; hence, it contains no free chlorine. Potassium floats in it without decomposing it, and no gas is evolved. It forms a milky liquid, but does not enter into combination with caustic potash." It is not inflammable, but it causes alcohol to burn with a yellow smoky flame. Chloroform mixes and combines with the essential oil of turpentine and bisulphuret of carbon. It dissolves camphor, caoutchouc, amber, resins, iodine, and bromine.—Taylor, *Med. Gazette*, December 24, 1847.

Dr Snow has furnished the following table, representing the quantity of chloroform vapour that the air holds in solution at different temperatures:—

Quantity that 100 cubic inches of air will take up.

Temp.	Cubic Inches.
50°	9
55°	11
60°	14
65°	19
70°	24
75°	29
80°	36
85°	44
90°	55

Hence, an elevation of 15° in the warmth of the apartment, doubles the quantity of vapour taken up by the air, and consequently the amount which would be inhaled in a given time.—*Medical Gazette*, December 10, 1847.

Physiological Action—(a) On Animals.—M. Gruby, in a communication to the Academy of Sciences, announces that the effects of chloroform vapour on dogs and rabbits are as follows:—1. "That during inspiration the arterial blood retains its florid colour, and if, under asphyxia, it assumes the dark venous character, the red colour is speedily restored. 2. That a part of the animal, a limb for example, separated from the body, and exposed to chloroform or ether vapour, becomes insensible. 3. That if the member be removed from the vapour, sensibility is restored. 4. That during the inspiration of chloroform vapour, the number of respirations increases with the degree of insensibility produced. 5. That animals may be kept in a state of insensibility for several hours, and afterwards restored, if the inspiration of the vapour be occasionally interrupted. 6. That, on the other hand, rabbits, dogs, and frogs, die suddenly in from one to four minutes after respiring the vapour, if the dose of chloroform is from 46 to 60 grains, and the inhalation he uninterrupted."—*Medical Gazette*, December 24, 1847.

Mr Thomas Wakley has performed an extensive series of experiments with chloroform and ether on the lower animals (dogs, cats, rabbits, rats, mice, pigs, hedgehogs, horses, and birds). The chloroform and ether were administered by inhalation. Mr Wakley's researches show:

1. That there is no important difference in the effects of chloroform when inhaled by the various animals above enumerated.

2. In fatal experiments with the chloroform, the symptoms were quick breathing,

muscular weakness, showing itself first, as generally happens, in the hind legs, foaming at the mouth, dilatation of the pupil, and congestion of the conjunctiva. As the experiment advanced, the breathing became slow and laborious, there was complete insensibility and muscular prostration, loss of reflex action (indicated by the absence of winking on irritating the cornea), and finally death by asphyxia, the heart's action continuing for some minutes after the cessation of the respiration. Death occurred in a period, varying from three to eleven or more minutes, according to the strength of the animal, or the amount of chloroform used.

The post-mortem appearances are not mentioned in connexion with the experiments; but in a concluding remark, the author states that intense venous congestion was found in the lungs, heart, and great vessels.

3. The symptoms, as well as the post-mortem appearances, enjoin caution in administering the chloroform to individuals labouring under congestion of the lungs, or any disease of the heart, or great vessels, which obstructs the free circulation of the blood. It has yet to be shown whether in such cases we might not obtain the anæsthetic effects without the engorgement of the lungs by the introduction of the vapour into the rectum.

4. The chloroform acts with greater energy in young and weakly than in old and strong animals. Thus, in experiment 9, a strong dog, though made to inhale three drachms during eleven minutes, recovered readily, while in experiment 12, a weakly puppy about eight months old died from the effects of inhaling one drachm during three and a half minutes. This fact is important in a practical point of view, as, undoubtedly, great caution ought to be observed in administering chloroform to very weak individuals, or to young children, in whom it will probably be found that a much smaller quantity than is usually necessary, will be sufficient to induce the anæsthetic sleep.

5. The animals offered much less resistance to the administration of chloroform than to that of ether; indeed, they even seemed to like the former.—*Lancet*, January 1, 1848.

We are still in want of a series of experiments illustrating the action of chloroform when introduced into the lungs, stomach, rectum, cellular tissue, serous cavities, and bloodvessels. It should be used both in the state of vapour and of liquid. It is in this way alone, that we shall ever be able to arrive at a knowledge of its *modus operandi*.

6. (*b*) *On man.*—Some (Gerdy, Lankester) have alleged that *nausea and vomiting* follow more frequently the use of chloroform than of ether, but this is opposed to the general experience. *Violent convulsions and delirium* have occurred in several cases—Holt, Beales, Stapleton.—*Medical Gazette, December* 1847.

Therapeutical Uses.—During the last month, the British and Foreign Journals teem with the records of cases in surgery and midwifery, illustrating the value of chloroform as an anæsthetic agent. In *medicine* its applications are daily extending. Its success in *spasmodic asthma* has been most satisfactory. In a severe case, where ether had been previously used without advantage, it afforded immediate relief.—Greenhalgh, Chandler, *Medical Gazette*, December 1847. In two cases of *traumatic tetanus*, it has displayed an undoubted influence over the disease, and, though both cases terminated fatally, we are convinced that chloroform promises more service in this intractable malady than any remedy hitherto proposed.—Velpeau, D'Ivonneau, *L'Union Médicale*, December 1847.

38.—*Ammonia as a Remedy in Asthma*—M. Rayer has recently published his experience of the effects of strong water of ammonia applied to the velum palati for the cure of asthma. M. Monneret and others had previously employed this mode of treatment; but they applied the caustic to the back part of the pharynx, and in some instances death had nearly ensued from suffocation, owing to the action of the volatile alkali on the glottis. M. Rayer's method of employing this remedy is as follows:—he dips a roll of lint, about the length of the middle finger, in a mixture of four parts of strong aqua ammoniæ and one of water, pressing out the superfluous liquid, and immediately applies it for a few seconds to the velum palati, as if about to cauterize the part. The patient is immediately seized with a feeling of suffocation; a fit of coughing ensues, with much expectoration, and this is soon followed by a great feeling of comfort and facility of respiration. Should any return of the fit occur on the day following, the ammonia is again applied. The degree of tolerance of this remedy by patients varies very much; it is, therefore, always well to use it weak at first, which is easily done by moving the piece of lint, dipped in the solution, three or four times rapidly through the

air, and then smelling it, when the strength is readily ascertained. In M. Rayer's experience, extending to over a hundred cases, a single application rarely failed to afford relief, and in many instances prevented a return of the attack for three or four months. This mode of treatment is alone applicable to simple or idiopathic asthma, that form which is so often dependent on emphysema, and is attended with catarrh; it has, nevertheless, afforded relief in some cases of symptomatic asthma.—*Annales de Thérapeutique de Rognetta*, November 1845.

[We had an opportunity in Paris of seeing several cases of asthma relieved by Rayer's mode of applying the caustic ammonia. It is our opinion, however, that the practice is not unattended by danger.]

39.—*Ricord's Treatment of Gonorrhœa—Action of Copaiba.* If the patient be seen within the first twenty-four hours, M. Ricord recommends the immediate injection of a strong solution of nitrate of silver, (15 grs. of the nitrate to an ounce of distilled water). In many cases, one injection suffices for this abortive treatment, in others a second may be necessary after an interval of two days.

At the same time copaiba and cubebs are administered internally in large doses. M. Ricord observes, "The injections modify, and create a new action in the mucous membrane, and copaiba and cubebs, by yielding their principles to the urine, contribute powerfully in rendering that modification more effective." He considers copaiba the most important of the internal remedies against gonorrhœa, and treats of its action under three heads:—

1. *Revulsive action.*—When copaiba acts on the bowels, it may bring about a revulsion on the intestinal canal, and thus possibly establish a cure; it then acts like any other purgative, as colocynth, &c. But you must not trust to cures thus obtained, for it often occurs, that when the revulsion ceases, the blennorrhagia returns; so that I would lay it down as a general rule, that the purgative action of copaiba is not to be sought for, when we administer this substance against blennorrhagia.

2. *General action on the system.*—The blood being modified by the principles of the copaiba, may, in its passage through the textures of the mucous membrane, act upon it in a peculiar manner; but it is plain that this mode of action is very feeble, since those varieties of blennorrhagia, which have not their seat within the urethra, are in nowise benefited by its administration.

3. *Direct anti-blennorrhagic action.*—Copaiba, after being taken up by the torrent of the circulation, is elaborated in the kidneys so as to acquire new properties. Thus it is that the urine of persons who are using copaiba has a peculiar smell, very easy of recognition for those who have had practice in these matters. This principle, the result of the renal elaboration, is contained in the urine, and it is by means of this peculiar element that the affected surfaces become modified.

M. Ricord has seen several cases of gonorrhœa in individuals who had a urethral fistula, and in whom the internal use of copaiba succeeded in controlling the discharge which issued from that portion of the canal which was situated posteriorly to the fistula, namely, that portion placed under the influence of the urine—*Lancet*, December 1847, p. 617.

40.—*Action of Nitrate of Silver on the Liquids and Solids of the Body*: By Keller.—The use of this salt as an external application in affections of the mucous membranes of the eye and of the generative organs is generally allowed. These effects, says our author, are easily explained by the property which the salt possesses of destroying the vitality of the parts with which it comes in contact. Further, it decomposes the chloride of sodium and the soluble phosphates, so that there are formed two insoluble salts, the chloride and phosphate of silver. The frequent application of this salt to the epithelial cells of the mucous membranes, not only causes their rapid separation, but also their rapid and abundant reproduction.

The mode of action of the salt, when taken internally, is not by any means so clear. From seven experiments, in which the blood, urine, and fæces of patients who had taken large doses (3 to 12 grains daily) for some months were examined, he was led to the conclusion that the whole was removed, in the form of chloride of silver, with the fæces. From a direct examination of its action on the gastric juice, he concludes that the whole is at once converted into chloride of silver, and consequently that no portion enters the circulation; he even goes so far as to regard the well-known change of colour as merely fortuitous. We need hardly state that the coloration in these instances is too certain to be doubted; we have far better evidence of *its* truth than that of Keller's

accuracy. That the quantity entering the blood is *extremely* small, we do not doubt. In fact, similar experiments were made some time ago by Heller, with the same results.—*Half-Yearly Abstract*, Vol. VI. from *Jour. de Pharm.* December 1846.

[Dr Hebra informed us that the nitrate of silver has been administered to upwards of forty epileptics in the General Hospital of Vienna. Large doses were given, and in many of the individuals, the use of the drug was continued for several months. The disease was in no case benefited, nor was the slightest tendency to coloration of the skin ever observed.]

41.—*Di-Arsenite of Quinine.*—This substance has been found by Dr Kingdon very efficacious in the treatment of chronic skin diseases. A cure was obtained by its use in a case of lepra, in which the liq. potassæ arsenitis had failed. Dr Kingdon believes that it will be found equally useful in ague, tic-douloureux, and neuralgia. The dose is one-third of a grain twice a-day. It is prepared thus:—He dissolves 64 grains of arsenious acid, and 32 grains of pearl-ashes, or sub-carbonate of potassa, in four ounces of distilled water, by boiling it for about half an hour, and then makes it up to four ounces with as much water as may be required, so that each drachm may contain two grains of arsenic. He adds five drachms of this solution to two scruples of di-sulphate of quinine, previously dissolved in boiling water; immediately a white curdy precipitate is formed, which is the di-arsenite of quinine.—*Provincial Medical and Surgical Journal*, Aug. 1847.

42. *Rhatany.*—Between the Cordilleras and the Andes, at the height of 12,000 feet above the sea, there are vast tracts of uninhabited table-lands. These are called in the Quichua language, the Puna. The aspect is singularly monotonous and dreary. The expansive levels are scantily covered with grasses of a yellowish-brown hue, and are never enlivened by fresh-looking verdure. Here and there, at distant intervals, may be seen a few Quenua trees (*Polylepis racemosa*), and large patches of ground covered with the Ratanhia shrub, (Krameria triandria.)

From the most remote times, the Ratanhia has been employed by the Indians as a medicine. It is one of their favourite remedies against spitting of blood, and dysentery.

Most of the Ratanhia exported to Europe, is obtained in the southern provinces of Peru, particularly in Arica and Islay. The extract which is prepared in Peru, and which was formerly sent in large quantities to Europe, is scarcely an object of traffic. For several years past, no Ratanhia has been shipped from Callao, and but very little from Truxillo.—*American Journal of Medical Sciences*, July 1847, from *Dr Tschudi's Travels in Peru.* The decoction of the Rhatany root, administered in the form of injection, is very valuable in the treatment of internal hœmorrhoids, as we have often had occasion to observe in the hospital practice of Professor Trousseau, Paris.

43.—The *Chenopodium olidum* (Stinking Goose-foot), *in Amennorrhœa.*—An extract of this plant is recommended by Mr Houlton, in the treatment of amennorrhœa. He gives from five to ten grains in the form of pill, night and morning, for a fortnight previous to the expected return of the catamenia.—*Medical Times.*

43.—*Cutaneous Eruptions induced by various Medical substances—Opium.*—The eruptions which in certain individuals follow the use of the preparations of opium, are always of an exanthematous nature. In general they consist of red isolated patches, not unlike those of measles. This kind of eruption is rare.

The *Solaneæ.*—The eruptions induced by the ingestion of the preparations of this tribe of plants are also of the order exanthemata, and are as uncommon as those which are the effect of opium. The patches are larger and irregular, resembling scarlatina.

The *Oleo-resins.*—All the medicinal substances of this class are liable to be followed by cutaneous eruptions, but none so frequently as turpentine and copaiba. The eruption very much resembles that produced by opium and belladonna, being sometimes measly, at other times scarlatinous in its appearance. It is a rare exception to see either vesicles, pustules, or papules.

Cod-liver oil.—This medicine sometimes gives rise to a form of eczema, which appears generally about the fifth day from the commencement of its use; it is, however, rarely observed.

Iodide of potassium.—The eruptions which follow the use of this medicine are far from uniform, sometimes being eczematous, at others pustular, as in acne. It sometimes happens that the skin escapes the action of the medicine, and that the mucous membranes are attacked instead; in such cases we observe coryza and con-

junctivitis, which cease as its use is suspended, but which will not yield to topical treatment as long as the medicine is persisted in.

The discrimination of the cutaneous affections which are induced by different medicinal substances taken internally, is of no slight practical importance; we have seen ignorance of these characters and causes give rise to very unpleasant mistakes.—*American Journal of Medical Sciences, from Annuaire de Thérapeutique*, 1847.

45.—*Citrate of Magnesia.*—This salt has been proposed by M. Rogé Delabarre as a substitute for the sulphate of the same base. It purges like the sulphate, but is entirely devoid of its bitter taste.

The process recommended by Delabarre, is objected to by M. Garot as being tedious and expensive. The following is Garot's formula:—

R. Carbonate of magnesia,	-	15 parts
Citric acid,	- - -	22 ...
Aromatic syrup,	- -	60 ...
Water, - - -		500 ...

The acid and carbonate are separately prepared, and afterwards mixed, as with the ordinary Seidlitz powder. The proportions in grammes (15 grains) form a dose.—*Journal de Médecine et de Chirurgie*, September 1847.

46.—*How to conceal the bitter taste of Sulphate of Magnesia.*—M. Combe has shown that this may be effected by the addition of tannin (one and a half grains to the ounce of salt), or still better by the use of roasted coffee. He recommends the following proportions; water, 16 oz.; powder of roasted coffee, $2\frac{1}{2}$ drachms; sulphate of magnesia, 1 oz. The mixture is boiled for two minutes, and afterwards strained. The coffee acts in virtue of the tannin, which it contains. Tea answers the same purpose, but not so well.—*Jour. de Pharmacie*, August 1847.

47.—*Benzoate of Ammonia in Gout.*—Dr Seymuor (Thoughts on Several Severe Diseases, &c.) has found this medicine of decided service in cases where the small joints were red and swollen, or where fluid was deposited in the joint of the great toe, and also in cases where the lithate of soda existed in the joints of the fingers. He has found it a valuable diuretic. It is especially useful in cases where nausea and occasional vomiting, or the existence of diarrhœa, prevent the employment of other diuretics.

Ergotin (?) *a Styptic.*—M. Bonjean has established by experiments on animals the efficacy of a watery solution of ergotin (one part ergotin to ten of water) as a styptic in constringing the capillary vessels and arresting hemorrhage. MM. Bonnet and Petrequin have found it equally useful in man. They cite two cases—one of hemorrhage consequent on gangrene of the leg, and another of secondary hemorrhage following an operation on the face—in which its use was eminently successful.—*Comptes Rendus*, October 1847.

According to M. Sée, the ergot of rye and ergotin have no influence in internal hemorrhages not connected with parturition. He administered the ergotin in eleven cases (three of menorrhagia, six of hæmoptysis, one of hæmaturia, and one of intestinal hemorrhage) without obtaining any benefit.—*L'Union Médicale*, 27th November 1847.

VIII.—FORENSIC MEDICINE AND TOXICOLOGY.

48.—*Case of Attempt at Murder by pouring Melted Metal into the Ear.* By M. Boys de Loury.—The mother of an idiot son thought to get rid of him by pouring melted lead into his ear during sleep. The pain and inflammation so produced were violent, yet the boy recovered and the mother was delivered up to justice. The authorities proposed the following questions:—1. Can melted metal (lead or tin) poured into the ear cause death? 2. If so, what was the cause of the failure in this instance? The medical men applied to found by experiment, that tin heated to its point of fusion and poured into the ear penetrates merely into the cavity of the tympanum without destroying the membrane; that melted at a high temperature the membrane of the tympanum is completely destroyed; that the metal penetrates into the mastoid cells, and into the bony canals which open at the base of the cranium. They concluded, that tin fused at a high temperature, introduced into the ear and reaching the brain, must cause death; and that, in the case submitted to them, the failure was probably owing to the low temperature of the metal, the abundance of the cerumen, and the resistance of the victim.

These experiments were repeated by M. Boys de Loury, but with a different result. He found that it is difficult to introduce a quantity of fused metal into the ear, because, whatever be the temperature of the metal, the expansion of the air contained in the meatus expels it. Nevertheless he succeeded, by taking precautions, in introducing a portion of fused metal, and in no instance did the bones of the ear, the mastoid cells, or the labyrinth, suffer from the effects of the heat,—and it never reached the dura mater. M. Boys concludes, that the pain from such an attempt in the living body, and the consequent inflammation, must be most violent; but he is not of opinion that it is capable of destroying life.—*Annales d' Hygiene*, No. 76.

49.—*Case of Poisoning by Aconitina.* By Dr Golding Bird.—The subject of this case, a person of station in society, and of high intellectual attainments, swallowed about two grains and a half of aconitina, procured by his own prescription from one of the most respectable druggists in London. He was not discovered for some time after the poison must have been taken: it seemed probable, however, that either from the poison, or from a severe blow received on the head in falling, violent vomiting had immediately ensued, as the room was flooded with vomited matter. After a period of not less than eight hours from the swallowing of the poison, the patient was found fearfully collapsed; the surface cold and sweating; quite pale; the heart's action scarcely perceptible; pupils acting to light; no paralysis whatever either of sensation or motion; intellect unimpaired; repeated and terrific vomiting of a brownish fluid, the act being produced by a sudden jerk of the abdominal muscles and diaphragm, recurring every minute or two. The attempt to swallow produced a spasm like what is described in hydrophobia. The hot bath, a large mustard poultice over the stomach, and a turpentine enema, produced no immediate effect, yet a gradual improvement took place. The impediment to deglutition still prevented the administration of internal remedies. Enemata of beef-tea with yelk of egg and ten minims of laudanum were ordered during the night. The night was severe from spasm and exhaustion. On the forenoon of the next day he was pronounced convalescent.—*Lancet*, January 1st, 1848.

[Though numerous cases of poisoning with the root of aconite, and some even with the leaves (*Northern Journal of Medicine*, vol. I. p. 120) have been recorded, the above case is the first distinct statement with which we are acquainted, of the effects of a poisonous dose of aconitina. Pereira mentions that the life of an old lady was endangered by so small a dose as the 1-50th of a grain. And it may be regarded as a settled point, that the internal administration of aconitina is too dangerous an experiment to be countenanced by men of ordinary prudence. Dr Fleming considers that aconite may cause death; 1. by producing a powerfully sedative impression on the nervous system; 2. by paralysing the muscles of respiration, and causing asphyxia; and 3. by producing syncope. (An Inquiry into the Properties of Anconitum Napellus. 1845, p. 43.) The symptoms reported in the case before us, as produced by aconitina, so far coincide with those usually arising from a poisonous dose of aconite; so that we can hardly agree with Dr Bird, that any thing likely to be characteristic of aconitina as a poison is here discoverable. Of this nature, Dr B. seems disposed to consider the convulsive vomiting and imperfect hydrophobia; but these symptoms, well marked as they were in Dr B.'s case, are but aggravations of the severe vomiting and constriction of the throat, observed in the effects of aconite itself and other poisons; and this increase of intensity in these symptoms may be suspected to have arisen, as much from the peculiarities of the patient's constitution, as from the nature of the poison.]

50.—*On Poisoning by the Extract of Belladonna.* By MM. Bayard and Chevalier.—Four cases of poisoning by the extract of belladonna, are reported in a recent memoir, three accidental and one by design. In all of them pretty much the same symptoms were observed; namely, dilatation of the pupils, disturbed vision, uneasiness, hallucinations, incoherence of purpose, dryness of the throat. In three of the cases a cure took place under the effect of blood-letting and purgatives; in the fourth death occurred on the seventh day after the poison was taken. In this last case, however, it was impossible to say what share the poison had in the fatal event, as the narcotic symptoms had disappeared, and signs of a typhoid character had arisen, which continued till death took place.—*Annales d'Hygiene*, No. 76.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

51.—*Interosseous Nerve of the Leg.*—Dr H. J. HALBERTSMA has described the branch of a nerve which is distributed in the interosseous ligament of the tibia and fibula. This *interosseous nerve of the leg* arises along with the *popliteus nerve* and some other branches from the *tibialis nerve*, opposite the semilunar cartilages of the knee-joint. After running from one to two inches in the posterior surface of the interosseous ligament, it enters among its fibres, in which it becomes embedded, and at last terminates upon the lower fibulo-tibial articulation. In this course downwards, it gives off several branches, which can be traced to the periosteum of the tibia and fibula. That these filaments were really nerves, and not threads of areolar or fibrous tissue, was proved by the microscope. The trunk and branches of this nerve are not accompanied by branches of bloodvessels where they adhere to the interosseous ligaments, while those branches that are ramified on the surface of the tibia and fibula are accompanied by bloodvessels. The primitive fibres of this interosseous nerve, for the greater part, belong to the sympathetic system, the cerebro-spinal fibres being few in number. As the popliteus nerve distributed in the popliteus muscle consists chiefly of cerebro-spinal fibres, and the nerve which accompanies the medullary artery of the tibia is composed almost entirely of sympathetic filaments, the interosseous nerve is intermediate between these two in this respect. From the time of Morgagni and Haller up to very recent times, the presence of nerves in the fibrous tissues was disbelieved. Arnold, Schlemn, Varrentrapp, Bidder, and others, have described small filaments of nerves in the dura mater, though they are not agreed upon the source from which they come; and Purkinje and Pappenheim have detected nerves distributed in, and terminating upon, the periosteum and tendons of muscles.—*Müller's Archiv.* Heft. iv. 1847.

52.—*On the Structure of the Human Retina.* By ERNEST BRUCKE.—The retina is, on an average, 0·08 of a millimeter thick, is transparent as glass during life, but becomes of a dirty white colour after death. It consists of two parts intrinsically different,—of the *light-perceiving apparatus* of the eye, or the *tunica nervea*, and of the *catoptrical apparatus* of the eye, or the *layer of batoon-like bodies* (stratum bacillosum). The tunica nervea is placed next to the vitreous humour, the stratum bacillosum below the tunica nervea, and next the choroid coat. The *tunica nervea* is a part of the brain situated in the eye-ball, and the optic nerve is a band of brain-fibres, by which the brain in the eye communicates with the brain within the cranium. The *tunica nervea* consists of four distinct layers. The most internal, or that next the vitreous humour, is a very thin membrane, termed the *membrana limitans* by Pacini, and, when acted on by acetic acid, is seen to be formed of six-sided cells. The second layer consists of the expanded fibres of the optic nerve, is thickest where the nerve perforates the sclerotic coat, and becomes thinner as it proceeds forwards. The third layer is formed of *brain-cells* embedded in soft fibres, similar to those which bind together the nervous fibres in the nervous chords. These cells have a diameter from 0·01 to 0·02 millimeters, are round like a ball, are in the fresh state translucent like drops of oil, and each generally contains a nucleus, occasionally two. The fourth and last layer is 0·025^{mm}

thick, and is composed of granules or nuclei (Körnerschicht oder die nuclear formation). These granules consist of irregularly rounded bodies, measuring from 0·006^{mm} to 0·008^{mm} in diameter, and generally present a dark spot in their centre. Some of these are of a yellow colour, and constitute the yellow spot in the axis of the eyeball. The tunica nervea has its proper vessels, which are spread out between the membrana limitans and the layer of nervous fibres on the second layer described above. These form a pretty close network, and the blood is brought to the arteria centralis retinæ, and carried from them them by the vena centralis retinæ.

The layer of *batoon-like* bodies (apparently the same as the membrane of Jacob) resembles perpendicular palisades closely set together, each measuring from 0·027^{mm} to 0·030^{mm} in length, and 0·0018^{mm} in thickness, and composed of materials which reflect light strongly. One end of these batoon or rod-shaped bodies is covered by the *granular layer* of the tunica nervea, the other end is imbedded in the layer of pigment cells (pigmentum nigrum) on the inner surface of the choroid. When the light passes through the tunica nervea, it is reflected back again through it by the stratum bacillosum, and again excites it. Pacini has described a layer additional to these observed by Brücke. He calls it the layer of the grey nervous fibres, from being composed of these fibres, and says that it is placed between the layer of *brain-cells*, or *ganglion-globules*, and the *granular* layer; but Brücke failed in finding this layer, and, therefore, calls its existence in question.—*Anatomische Beschreibung des Menschlichen Augapfels.* Berlin, 1847.

53.—*On the Disposition of the Ramifications of the Extremities of the Bronchi.* By M. ALQUIÉ of Montpellier. Read to the French Academy of Medicine.—M. Alquié uses metallic injections to show the ends of the bronchial tubes. The results of his demonstrations are as follow:—1*st*, The bronchi divide progressively in the pulmonary tissue, forming main ducts, from the sides of which a large number of very small canals diverge; this subdivision is larger in man than in animals; 2*d*, The number of bronchial ramifications has no relation to that of the dilatations which terminate them; 3*d*, These terminations are vesicles having in general a long diameter of $\frac{1}{10}$th of a line, oval in form, and having an even and flattened surface, where they lie in contact with one another; 4*th*, These vesicles are sometimes solitary, and are then laterally connected with the bronchial ramifications: more frequently they are 5, 6, or 9 in number, and are developed at the end of a small bronchial tube; 5*th*, These vesicles have proper parietes, are isolated at many points, and communicate in many of the lobules with others.—*Archives Générales de Médecine*, December 1847.

54.—*On the Origin and Development of the Vegetable Embryo.* By Mr A. HENFREY.—In the Report on the Progress of Physiological Botany, we find the following observations, which are of considerable interest from the light they may throw upon the corresponding processes in the animal kingdom. The "vexed question" on which botanists in general have of late years been unable to form a satisfactory opinion, so contradictory and well-balanced has been the evidence for the various hypotheses, appears now somewhat nearer to a decisive settlement, since within the last year we have had no less than four elaborate and comprehensive essays presented to us, detailing the whole series of changes which the ovule passes through, from the opening of the bud to the ripening of the seed. When the names of Amici and Von Mohl appear as the authors of two of these papers, it will be understood how important these new investigations are; and the fact of the agreement of all four *inter se*, excepting in some trivial points, and the possibility of reconciling their results with the appearances which have presented themselves to authors holding different views, will probably cause them to be regarded as tolerably conclusive. The great result at which all these recent writers have arrived is, that Schleiden's statement, viz. that the end of the pollen-tube becomes the embryo, is incorrect, and that the old opinion, which regarded the pollen as the source of a fertilizing matter, necessary to stimulate the embryo-sac to the development of the germ of the future plant, is true; the pollen-tube being consequently merely the agent for the conveyance of the fertilizing matter through the style and the foramina of the ovule, having its progress arrested upon the outside of the wall of the embryo-sac, through which, and the membrane of the pollen-tube itself, the fecundating fluid is supposed to be imbibed.

55.—Mr PAGET *on Nutrition.*—According to Treviranus, while each organ nourishes itself, it removes from the blood certain constituents, which leave that fluid in a state more fit for the nutri-

tion of other parts ; and the consequence of the existence of certain materials in the blood, is the formation of an organ or structure, into the composition of which those materials enter. Thus, when one kidney is destroyed, the other often becomes larger, does double work, as it is said, and the patient does not suffer from retention of urine in the blood. The meaning of this, according to Mr Paget, is, that as the principal constituents of the urine are ready formed in the blood, and are separated through the kidneys by the agency—that is, by the development, growth, and discharge of the renal cells—it will happen, that if one kidney be destroyed, there must, for a time, be an excess of the constituents of the urine in the blood ; for, since the separation of urine is not mere filtration, the other kidney cannot at once, and without change of size, discharge a double quantity. The kidney therefore grows ; more renal cells develop and discharge and renew themselves : in short, the existence of the constituents of urine in the blood, induces the formation of renal substance. These two hypotheses, "firstly, that the blood is definitely altered by the abstraction of every material necessary for the nutrition of a part ; and secondly, that the existence of certain materials in the blood induces, or at least favours, the formation of corresponding tissues ; it seems to follow as a reasonable hypothesis, that the order in which the several organs of the body appear in the course of development, while it is conformable with the law of imitation in the parent, and with the law of progressive ascent towards the higher state of being, is yet (at least in part, and this part more directly) the result of necessary and successive consequences." Thus, the formation of one organ, or series of organs, induces or supplies a necessary condition for the formation of others, by the changes successively produced in the composition of the material from which they all take their nutriment. In illustration, Mr Paget refers to the coincident development of hair on certain parts of the body, and of the genital apparatus, as well as to the perfection of plumage at the period of full activity of the reproductive organs of the bird, particularly in the male. Further, in man, when the development of the genital organs is prevented, that of the beard, and all the other external characters is, as a consequence, hindered ; in birds, when the breeding season ends, and the several organs pass into their periodic atrophy, the plumage assumes paler and more sober colours, characteristic of barrenness. The development of the antlers in the deer offers another illustration. Thus, when two or more organs are connected in nutrition, but not in external office, their connexion arises because one is partly formed of materials left in the blood by the formation of the other. Thus, also, may be explained the commensurate development of many other organs which, in their function, appear unconnected, such as the thymus gland, and the air-breathing organs ; the thyroid gland and the brain ; the spleen and pancreas ; and the embryo and the mammary gland of the parent.—*Medical Gazette, and condensed from Ranking's Abstract*, January 1848.

56.—*Researches on the influence of Salt added to the Food on the Development of Cattle.* By M. Boussingault. — Some time since Boussingault published the commencement of some researches upon this subject, which tended to show that the influence of common salt, as an article of diet, is much less than is generally supposed. The experiments were made by selecting two lots of cattle and supplying them with a fixed quantity of food ; in the one lot with, and in the other without, an addition of salt. The cattle were weighed previously to the commencement of the experiment, and again at its conclusion, and it was found that the gain in weight of the two lots, was scarcely appreciably different in amount. The author has extended these experiments in the present paper ; so that one of the lots of cattle has now been thirteen months deprived of salt, and his former results are fully confirmed. He has found that the consumption of 100 kilogrammes of hay, caused an increase of 7·19 kilogrammes of weight on those which were supplied with salt ; and of 6·83 in those which got none. This difference is extremely trifling, and it is probable that it would be as great, or even greater, between different lots fed in precisely the same manner ; and in an economic point of view, M. Boussingault observes, that the trifling gain in the former lot would not cover the expense of the salt with which they were supplied.

It is remarkable, however, that though the absence of salt excited no influence upon the growth of the cattle, it had a well-marked effect upon their general appearance, In those which were deprived of salt, the coat became rough, and the hair even detached itself in some places, and they were dull and inactive ; while those of the other lot presented a fine smooth coat, and were perfectly lively and active, and, from their more favour-

able appearance, would unquestionably have brought a higher price in the market.—*Comptes Rendus*, 22d Nov. 1847.

57.—*Researches on Ox Bile.* By M. STRECKER.—It appears from the researches of M. Strecker, that ox bile is composed principally of salts of soda, potass and ammonia and of two azotised acids, one of which contains sulphur as a constituent.

The acid free from sulphur is the cholic acid, which was discovered by Gmelin, and which must not be confounded with the substance described by Demarcay under the same name. M. Strecker prepares it in the following manner. Fresh bile is precipitated with neutral acetate of lead, and the well-washed precipitate is boiled with strong alcohol. A current of sulphuretted hydrogen is then passed through the hot concentrated solution, in order to separate the lead. The fluid is filtered off, and the sulphuret of lead washed with water, which is allowed to run into the alcoholic fluid, which becomes turbid and milky, and in this state is left to itself. After the lapse of twelve hours, the entire liquid is converted into a mass of minute needle-formed crystals of pure cholic acid. Impure dry bile yields about $\frac{1}{4}$ of its weight of these crystals. 1000 parts of cold water dissolve 3·3 of cholic acid, and 1000 parts of boiling water 8·3. The aqueous solution deposits crystals on cooling, but the acid cannot be obtained in crystals from the alcoholic solution. Its constitution is expressed by the formula $C_{52}\ H_{43}\ NO_{12}$. When boiled with an excess of caustic baryta for some hours, it is entirely decomposed, and converted into the cholic acid of Demarcay, which Strecker proposes to distinguish by the name of cholalic acid. The formula of this acid dried at 284° is, $C_{48}\ H_{40}\ O_{10}$, and the crystallised acid contains in addition 2 atoms of water.

By subtracting the formula of cholalic acid from that of cholic, we arrive at a formula which, with the addition of two atoms of water corresponds to the composition of sugar of gelatine (glycocol).

Cholic Acid,.....$C_{52}\ H_{43}\ NO_{12}$
Cholalic Acid.....$C_{48}\ H_{40}\ O_{10}$

$C_4\ H_3\ NO_2$
$H_2\ O_2$

Sugar of gelatine.... $C_4\ H_5\ NO_4$

And Strecker has separated from the fluid sugar of gelatine, and determined its identity by analysis. By boiling cholic acid with hydrochloric acid, the hydrochlorate of glycocol is produced; but, instead of cholalic acid, we obtain the choloidic acid of Demarcay, and, by longer ebullition, the dyslysine of Berzelius. These two latter substances are represented by the subjoined formulæ:—

Choloidic acid,...$C_{48}\ H_{39}\ O_9$
Dyslysine,.....$C_{48}\ H_{36}\ O_6$

They consequently differ from one another, and from cholalic acid, only by a certain amount of water.

It would appear, then, that the decomposition of cholic acid is precisely analogous to that of hippuric acid, which, according to the beautiful experiments of Dessaigne, splits up into glycocol and benzoic acid when treated with strong mineral acids. The sulphuretted acid of the bile of the ox undergoes a similar decomposition, and yields, under exactly the same circumstances, cholic acid, choloidic acid, and dyslysine; but, in place of glycocol, we obtain taurine, which contains all the sulphur of the bile.

Dr Bensch has determined the amount of sulphur contained in the bile of different animals. He has found the following quantities in 100 parts of the bile of the under-mentioned animals.

Calf,.....	5·62
Sheep,.....	6·46
Goat,.....	5·55
Bear,.....	6·38
Wolf,.....	5·03
Fox,.....	5·56
Fowl,.....	5·57
Dog,.....	6·21
Serpent (Schlieper),..	7.20
Ox,.....	3·5 to 4·0

All these numbers have been obtained from the analysis of the fresh bile, separated from the salts of the fatty acids, and decolorised by animal charcoal. The quantity of sulphur is referred to the *organic matter* alone of the bile. The difference in the numbers expressing the quantity of sulphur, leads to the conclusion that the bile is a variable mixture of the two acids of which it is composed.—*Comptes Rendus*, 13th December 1847.

[This is a most important contribution to the chemistry of the bile, and one to which we shall in all probability have occasion to return on the publication of the paper in full. We may, however, observe, that some of Strecker's results agree with those previously obtained by Mulder, although the latter chemist has given different formula for his substances. Thus, for instance, he gives for dyslysine, $C_{50}\ H_{36}\ O_6 + \frac{1}{2}$ HO, which gives almost exactly the same per cent. results as Strecker's; and he has, moreover, ascertained the existence of several other sub-

stances allied to dyslysine, and differing from it only by a small quantity of water. We shall endeavour, when we return to Strecker's experiments, to give our readers an idea of those of Mulder, and a short general view of the constitution of the bile.]

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

58—*On Inflammation of the Vena Portæ—Pylephlebitis.* By Dr J. Waller, Prague. This form of disease has only lately been brought to light by the researches of pathological anatomists. In several French and English writings of the years 1823, 1829, and 1839, observations relating to it are to be found; but they present so many omissions, in an anatomical point of view, as to leave the diagnosis unassisted. In Germany, Balling was the first (1839) to find inflammation of the vena portæ after death; after him, Schonlein observed several cases; Rokitansky has taught us its anatomy more correctly. The diagnosis is, however, still uncertain. The author relates five cases, from which the following observations are deduced:—

Anatomical Characters.—1st, The alteration of the coats of the vena portæ was in every case but slight, and bore no relation to that of its contents. From the circumstance that, in one case, the coats of the mesenteric vein were shrivelled, of a whitish-grey colour, and, in isolated spots, adherent, and almost cartilaginous, it would appear probable that the inflammatory process had commenced here. In every case, the cavity of the vein was dilated by inflammatory products, its trunk rigid, and its diseased condition externally apparent. 2d, Alterations in the portal blood; *a*, various degrees of coagulation were present in four cases; *b*, formation of pus was only observed in three cases; *c*, acute deposit of medullary sarcoma occurred in two cases. As to the extent to which the portal system was involved, in the first case only the splenic vein escaped. In the second and fifth cases, the trunk and branches of the vena portæ were affected—not, however, either the mesenteric or splenic veins. In the third case, the splenic vein, and a branch of the inferior mesenteric, to its finest subdivisions; and, in the fourth case, the branches of the entire portal system, were affected. The complete absence of anatomical alterations in the coats of the vessels, and the striking evidence of inflammation in their contents, show that there is here no primary phlebitis, but one of which coagulation of the blood is the proximate cause, whether that be spontaneous, or occasioned by the absorption of pus or its elements. The separation of the fibrine by coagulation is sometimes perfect, and at others imperfect, and the longer the duration of the disease, the more complete is the transformation of the entire coagulated lymph into pus. Secondary inflammation of the coats of the superior mesenteric vein occurred in the first case, as a sequel of the purulent phlebitis; in the other cases, death occurred too early for the development of such consequences. The time required for inflammation of the coats of a vein, subsequent to coagulation of its contents, varies. In the first case, after forty-seven days, the only part of the portal system inflamed, was a small portion of the superior mesenteric vein; while in the fourth case, in which the disease had only lasted five days, this had already commenced. The rapidity and intensity of the affection of the blood, seems, therefore, to exert a decided influence.

Symptomatology.—Physical examination of the vena portæ and its branches, is, on account of its anatomical position, impossible; we must, therefore, have recourse to the symptoms observed.

The Objective Local Symptoms.—Of these, the first is the abdominal distension, either meteoristic, or from the accumulation of serum. Neither appears of diagnostic value in pylephlebitis, as in no case is there a direct connexion between them and the inflammation of the vein. The meteorismus depends on the pyæmia and the coexisting peritonitis; the ascites, on a carcinomatous, or granular state, of the liver. This organ was enlarged in all the five cases; but this symptom is uncertain, because common to many other diseases. Icterus was observed in four cases. It was caused in the first and second cases by numerous abscesses in the liver, containing pus and bile mixed; in the fourth and fifth, by granular and carcinomatous states of the liver; in the non-icteric case, the colour of the skin was that usual in the carcinomatous dyscrasia. Although pylephlebitis, like every other pyæmia, may produce an icteric coloration of the skin, in none of the five cases was it dependent on the pyæmia alone; and it is, therefore, undeserving of being reckoned pathognomonic.

Enlargement of the spleen has been cited by Schönlein as a diagnostic mark. It was present in four cases. In the three first cases, it was caused by mechanical hyperæmia ; in the second case, it was accompanied by partial plastic exudation ; in the third, by simultaneous copious formation of pus in the branches of the splenic vein ; aud, in the fourth case, it was dependent on the granular and carcinomatous state of the liver. In the fifth case, the spleen was indeed smaller ; but its texture was hypertrophied. Enlargement of the spleen can evidently be produced by inflammation of the portal vein, and is not unimportant, in conjunction with other symptoms, where the state of the chest and abdominal organs permits a correct examination of its state by percussion. Nausea and vomiting, even of blood, have been given as symptoms by Balling and Schönlein. Our author observed in three of his cases only a trifling vomiting of a whitish or yellowish fluid ; in one case, caused by encephalitis ; in the second, by chronic catarrh of the stomach, aided by the presence of the carcinomatous liver ; and, in the third, the section revealed no sufficient cause. From these cases, vomiting cannot be considered a symptom of pylephlebitis. The alvine dejections were seldom normal. In the first case, they were costive ; in the second, sero-mucous, occasionally dark green. Diarrhœa harassed the patient. In the third case, there was constipation ; in the fourth case, a yellowish-green diarrhœa, with occasional streaks of blood ; in the fifth case, frequent muco-serous, and blackish, pulpy evacuations. Different conditions of the stools, as well as hematemesis, may accompany inflammation of the vena portæ, yet have no immediate connexion with it, as they are brought about by the occurrence of mechanical hyperæmia, or other complication. The mechanical distension of the epigastric and hypogastric veins, reckoned by Schönlein as a symptom of this phlebitis, was not observed by our author.

Subjective Local Symptoms.—Pain was entirely absent in the fourth case. In the first case only it was occasional, and increased by pressure. In the second, the entire epigastrium was sensitive, and the inguinal and iliac regions violently painful. In the third and fifth cases, the pain was likewise most violent ; but in each of them complications existed capable of producing pain. It is, therefore, uncertain whether inflammation of the vena portæ be accompanied by pain. Ascites was looked upon by Cruveilhier as a symptom of this disease. Neither our author, nor others, have confirmed this observation. Impermeability of the vena portæ, however produced, is nevertheless certainly followed by ascites. Œdema of the inferior extremities cannot be looked on as dependent on the inflammation of the portal vein, inasmuch as the veins of the extremities do not empty themselves into it, but into the vena cava inferior. Occasional pulsation in the right jugular vein, in the abdomen, and various parts of the body, fainting fits, dry cough, &c., included in the list of symptoms of this disease by Balling, are not recognised as such by our author, inasmuch as he never observed them, and cannot discover their relation to the disease. As to the state of the circulatory system, Baczinsky thinks he has observed, in the first stage, the symptoms of inflammatory fever, and, in the second, a sinking in both the nervous and circulatory systems. Schönlein prides himself on having, from the occurrence of a rigor, recognised the transition of the inflammation from the peritoneum to the vena portæ. The possibility of inflammation of the vena portæ being accompanied by inflammatory fever, cannot be denied. In the cases observed by our author, only that form was observed commonly called adynamic, or nervous fever, and in them is only indicative of the presence of pyæmia. In the second and third cases, the occurrence of inflammation of the portal vein appears indubitably to have been ushered in by a rigor, and, in the fourth and fifth cases, a rigor was also the first symptom of the affection of the portal system. The pulse was constantly accelerated—from 92 to 100. The skin, in every case, hot at the commencement. In the first case, dry, and, in all the other cases, moist from perspiration. In the second, it was repeatedly covered with miliaria. In no case were petechiæ observed. The urine was constantly acid, and in none of the cases contained pus corpuscles. The pyæmia gave evidence of its deleterious action on the reproductive system, by the rapid disappearance of the fat and muscular substance : it caused only trifling disturbances of the nervous system. The cerebral symptoms in the third case are to be ascribed to the encephalitis. In two cases, a peculiar melancholy expression of deep suffering was present. The delirium, stupidity, distortion of the features, nuplesmus, or coma, described by several observers as symptoms of portal inflammation, ought, according to our author, more properly to be ascribed to the pyæmia. The symptoms most worthy of regard are, therefore, enlargement of the liver, icterus,

pyæmia, and enlargement of the spleen. Yet, even from these, the diagnosis cannot be decided.

Duration, Course, and Termination.—The shortest duration of these cases was three days; the longest, forty-seven. It has consequently been considered necessary to distinguish between an acute and a chronic form of this disease; but this seems quite unnecessary. The acute form has likewise been divided into an inflammatory and an adynamic stage. The pyæmia has been, in all hitherto observed cases, the cause of the adynamic symptoms. Recovery from pylephlebitis, though it cannot be denied, has not hitherto been observed. The most frequent termination seems to be suppuration—though it would be difficult, indeed, to diagnose at the sick-bed. As consequence of purulent pylephlebitis, abscesses are formed in the liver. Adhesion and obliteration of the vena portæ, happen either in the trunk, or more frequently in the larger or smaller branches. The appearances accompanying this termination are all referable to mechanical hyperæmia, and consist in enlargement of the spleen, hyperæmia of the gastro-intestinal mucous membrane, and of the peritoneum, turgescence of the hemorrhoidal veins, ascites, &c. Death has been the final termination of all the cases hitherto observed: in the author's cases, partly brought about by pyæmia, partly by carcinomatous dyscrasia, or carcinomatous destruction of the liver and stomach. The complications may also prove fatal. Some of these were connected with the pyæmia,—partly as cause, partly as effect; others with the carcinoma, and the dyscrasia producing it.

Etiology.—Our author regards as primary pylephlebitis, the case observed by Balling, in which, neither in life nor after death, any cause of the disease could be discovered, and in which the disease of the coats of the vessels seemed to be older and more advanced than that of the blood. The causes of primary pylephlebitis are traumatic inflammations and exposure to cold. Almost all hitherto observed have been secondary, in which the coagulation of the blood has been the first and most important occurrence, followed by inflammation of the coats of the veins; that this occurred in our author's five cases he shows in detail. According to foreign observations, inflammation of the vena portæ is frequently a secondary disease, arising in the course of inflammation of the substance of the liver, or of other veins, &c. As to a peculiar disposition to this disease, nothing decided can be said; it may often occur in new-born children as an extension of the inflammation of the umbilical vein, which is not umcommon at this age. The influence of age or sex is yet undecided.

The prognosis must in general be unfavourable. While the diagnosis remains so uncertain, nothing can be said as to the therapeutics of this disease.—*Wien. Zeit.*, Sept. and Oct. 1846.

59.—*On the Chemical Composition of the Blood in Scurvy.* By Becquerel and Rodier. Also by Andral.—Becquerel and Rodier draw the following conclusions from the analysis of the blood in five well-marked cases of scurvy :—

1. The blood presented none of those characters of dissolution so much insisted on by the older writers. It was not unusually alkaline, and contained no remarkable proportion of salts. 2. It was poor in corpuscles (127 in 1000 parts) and in albumen, and therefore relatively abounding in water. This condition was probably owing in these cases more to the deficiency of appetite, than to the peculiar scorbutic condition; but it is remarkable that, notwithstanding this anemic state of the blood, there was no trace of murmur in the vessels. 3. The fibrin, instead of being, as supposed by Magendie, Andral, and Gavarret, diminished and altered in quality, was in normal quantity, or increased (4·1 in 1000 parts), and of normal characters. 4. The only appreciable positive alteration of the blood is a diminution of the specific gravity, both of the defibrinized blood (1057), and of the serum (1027); this diminution is nevertheless not proportionate to that of the solid constituents. The authors have not been able to come to any conclusion as to the cause of this; but suggest, that it may be owing to some peculiar combination, hitherto overlooked, of the chemical elements.

Andral examined the blood in a case of scurvy, in which petechiæ and ecchymoses were present in great abundance, and there was bleeding from the gums and nostrils. Venesection was practised on account of a bronchial inflammation, with distinct fever, and gave manifest relief. The blood had a small, thick, tenacious clot, which was covered with a perfect buffy coat, and swam in a large quantity of serum. In this respect it had much of the appearance of chlorotic blood. 1000 parts gave fibrin, 4·420; corpuscles, 44·400; solid constituents of serum, 76·554; water, 874·626. It resembled, therefore, chlorotic blood in the relatively small proportion of the corpuscles. The fibrin was above the nor-

mal proportion. Andral, therefore, holds that the quantity of fibrin in the blood bears no necessary relation to the development of scurvy; but that it is increased or diminished in that disease according to accidental circumstances. The decrease of fibrin is therefore not the cause of the extravasation of blood, as many have supposed; neither is there any ground for the supposition of a decomposed state of the blood. — *Gazette Médicale*, Nos. 27 and 28. 1847.

60.—*On the Variations in the amount of Fatty Matter in Diseased Lungs.* By M. NATALIS GUILLOT. — During fœtal life the fatty matter continued in the lungs amounts to 10·18 per cent.; but, after respiration is established, the proportion never rises in the normal state above 6 per cent. When, however, a portion of lung is rendered impervious to air by disease, the fat accumulates, and becomes in relation to the whole weight of the lungs 15·40, or even 50 per cent., according to the amount of pulmonary tissue involved. In pneumonia and phthisis the relative amount of fat in the lungs becomes as great as in the liver, which always contains a large proportion. A similar accumulation of fat takes place in animals after section of the vagi nerves, as also in asphyxia and during hybernation. M. Guillot considers the accumulation of this substance in the lungs to be caused by deficient oxygenation of the blood, which he believes to contain some of the fatty matter of the tissues destined to be consumed in the lungs.—*Gazette Médicale de Paris.* No. 29. 1847.

61.—*Examination of the Nasal Secretion in Glanders in the Horse.* By Professor LANDERER of Athens.—In the earlier stages of the disease, the fluid which flows from the nostrils is without smell, or any other conspicuous property; but, as the disease advances, it becomes green or reddish-coloured, of a slimy consistence, and nauseous odour. In the former stage, it is slightly acid to test paper, coagulates by boiling, with a distinct odour of acetic acid, and is precipitated in white flocks by alcohol and ether. In the later stages it becomes alkaline, evolves ammonia when heated with slaked lime, and blackens silver instruments, owing to the presence of sulphuretted hydrogen. Accurate examination proved the fluid in the later stage to contain muriate and hydro-sulphuret of ammonia, salts of sulphuric acid, watery extractive possessing a very disagreeable odour, a rancid fatty matter, containing sulphur, albumen, phosphate, and carbonate of lime.—*Heller's Archiv.*, 1847, Part III.

62.—*On the Urine in Typhoid Fever.* By M. MARTIN-SOLON.—M. Martin-Solon recently (Nov. 1847) read at the Académie an interesting paper upon the condition of the urine in typhoid fever, the principal points of which are thus summed up: 1. The urine in typhoid fever is less abundant, higher coloured, and generally more dense, than in health. 2. It is as acid as in the normal state, and sometimes more so. 3. It is rarely alkaline, but, in consequence of its large proportion of urea, it readily passes into the condition of alkalescence. So abundant is the urea, that sometimes a nitrate may be at once formed by the addition of nitric acid without any preliminary evaporation,—a density of from 1·030 to 1·036 indicating this condition. 4. Generally transparent, the urine is sometimes clouded with mucus (the *enœorema* of the ancients), or by an excess of too sparingly soluble salts, which give it a "*jumenteux*" appearance, and which give rise to sediments, formed especially of uric acid and the urates with colouring matter. 5. That critical signs deduced from these appearances are not to be depended upon. 6. That in transparent urine, nitric acid sometimes gives rise to no reaction, but in other cases produces a *cloudiness* immediately. 7. The same thing is observed in "jumentous" urine, when rendered clear by filtering. 8. That this cloud, of a peculiar tomentous aspect, formed by a bi-urate of ammonia, but the nature of which is perhaps not yet entirely known, is seen especially at the period of the resolution of typhoid fever, and acute diseases, which it precedes and announces; and according to our clinical observations (in fifty-four cases) possesses a *critical* value which deserves attention. 9. That the bile undergoes a notable alteration during typhoid fever, which is doubtless the cause of the appearance of *biliverdine* in the urine. 10. That the urine sometimes becomes temporarily albuminous during the course of acute diseases; but that the congestion of various organs, especially partaken of by the kidneys, and the especial tenuity of the blood in typhoid fever, render such temporary albuminuria far more common in this than in other affections. 11. Temporary albuminuria is especially seen in severe cases of typhoid, and generally gives rise to the most unfavourable prognosis. 12. Temporary albuminuria may sometimes become continuous, and the kidneys then exhibit the usual pathological characteristics of con-

firmed albuminuria. 13. The inspection of the urine throws light upon the progress of a case of typhoid fever, and may serve as a means for the direction of its treatment.—*Bulletin de l'Académie*, tom. xiii, p. 398.

III.—PRACTICE OF MEDICINE.

63.—*Hebra's System of Skin Diseases.* By Dr Fürstenberg of Berlin.—*Continued.*—The chronic exudative processes are also subdivided according to the nature of the exudation :—

a The fibro-albuminous are firm, organizable exudations, and comprise—

1. *Pityriasis rubra* seldom occurs alone, and then but for a short time ; it is generally but a stage in the development or retrogression of other diseases, as *Eczema*. Its diagnostic characters are slight swelling, with diffuse redness of the skin ; the scales separated are small, resembling bran. Treatment, cold fomentations.

2. *Psoriasis* forms numerous thin white scales on a red ground ; is not itchy, and has also, according to Hebra, the characteristic peculiarity, that if the diseased part be gently scratched, a drop of blood speedily issues; in *lichen*, this last symptom is never present ; it is also accompanied by great itching, forms few scales, but rather broad stripes. We know nothing of its etiology ; it is frequent among drunkards ; has no ill effect on the general health ; but is difficult to heal, and readily relapses. In private practice, particularly when the patients are at work during the day, Hebra recommends the following practice :—A bath at night, friction over the diseased part with an ointment of *Precipit. album*, *Protoiod. hydrarg.*, or *Deutoiod. hydrarg*, the last most frequently, ℈ j — ʒ ss to the ounce of lard, warm poultices during the night, inunction again next morning, and so on daily. In a few cases, he prescribes *Sublimat. corros.*, or *Tinctur. cantharid.*, 6 to 30 drops daily, and, in obstinate cases, the *Sol. Arsenic Fowleri ;* first 6, then 12, and, later, 30 drops daily. This is the largest dose given ; and from this he descends again to the lowest. Opiates are useful when the arsenic produces unpleasant symptoms, as cardialgia, emesis, or eructations; but when symptoms of gastritis, or *arsenical rheumatism* appear, the remedy must be forthwith discontinued. All other internal remedies put to the test have failed. In hospital, the patient is made to rub himself with pitch, or, by preference, with soft soap (grüne seife), and lie in bed, or warm fomentations and warm or vapour baths are applied ; or the patient is made to go through the cold water cure as rigorously as with Priessnitz himself. Internally, arsenic is at once given. The various kinds of *Psoriasis*, as the *punctata*, *conferta*, &c. &c., are but various stages of development of one and the same disease.

3. *Lichen ruber*, luckily as rare as it is obstinate; not to be confounded with the *Lichen albus Willani*, appears as a red infiltrated portion of skin, the thickness of which is not, however, doubled; it is covered with thin delicate scales; there is little itchiness. The great swelling distinguishes it from *Pityriasis rubra*, the absence of moisture from *Eczema ;* when it extends over the whole body it forms the *Lichen diffusus*. At its commencement only small lumps are seen, always in the follicles, which desquamate at their apices. The treatment has been hitherto almost fruitless ; the most useful remedies have been Fowler's solution and Priessnitz's cure.

4. *Acne disseminata* consists in an inflammation of one or more follicles, caused by accumulated sebum; consequently, it is always preceded by *comedones*, which, subsequent to exudation, become *papules* and *pustules*, and afterwards either suppurate or become hard and callous. If only comedones are present, the disease has been called *Acne punctata ;* if there be pustules combined with destruction of the follicles and formation of a cicatrix, *Acne pustulosa ;* where all three forms are present, *Acne disseminata*. In *Acne syphilitica* there is no previous formation of comedones.

Though far from denying that this disease may have a dyscrasic origin, yet Hebra has come to the conclusion that general remedies are useless. The formation of comedones is prevented by washing and bathing ; where they are already formed, dry cupping is used. If the *Acne* be completely formed, caustic potass, one part to two of water, is painted over the diseased part after it has been well washed and rubbed with soap; from this an *Impetigo achor* generally arises, which dies of itself, fomentations being avoided, and the disease thereby cured.

5. *Sycosis* and *Acne mentagra*, at first are seen single, swollen, and red hair

follicles, forming papules of various sizes, each perforated by a hair. The exudation forming the papules is either thrown off in scales, becoming, however, always renewed from beneath, or it suppurates, beginning in the centre ; if the disease be more acute, a single red infiltrated portion of skin is seen covered by a crust of pus or scales ; or the entire portion may be in the same stage. It is distingushed from all other skin diseases by being confined to the seat of the beard. It heals of itself by suppuration, but requires a long time. Medical interference must therefore be directed to this end. Fomentations are first applied to remove the crusts, and then concentrated nitric acid is applied, by a piece of lint rolled, quite superficially; cold fomentations are then applied over the yellow crusts so formed. The acid is applied only once in seven or eight days ; ten to twelve applications alone are necessary—so that the author has frequently, in Hebra's clinic and private practice, seen this obstinate disease completely cured in three months.

6. *Lupus.* Its different species are merely different stages of development. It heals in from five to twenty years, either by exfoliation or suppuration. During the febrile stage of acute diseases, particularly typhus, the eruption disappears. According to Hebra it recurs with convalescence; but our author saw two cases under Dr Gibert, in the Hôpital St Louis, in which lupus disappeared on the occurrence of typhus, and, eight weeks after the cessation of the fever, it had not reappeared. Only in scrofulous or syphilitic lupus is there any hope of benefit from internal remedies ; the idiopathic lupus, forming the greater number of cases, can only be treated by cauterization. Hebra paints the surface with concentrated nitric acid till it becomes white, fomenting with cold water after half an hour; if ulceration exists he employs the Nitras argenti. If the actual cautery be employed it is as well to burn deeply at once, as the patient will seldom submit a second time ; he also employs Plenck's paste with patients who are shy of pain. It is composed of *sublimat. : alum. crud. : spir. vin. : camphor. : ceruss. : acet. vin. āā partes. æquales,* and is very powerful, but very insidious, producing no pain for some little time after application, but then pain occurs, lasting continuously for eight and ten hours, even when cold fomentations are immediately and assiduously applied. Patients who cannot bear cauterization are treated with "das cosmische pulver."

b. Sero-albuminous exudations,—

1. *Prurigo* originally consists of effusion of serum into the deep lying follicles; these are at first uniform in colour with the skin, subsequently becoming red. If the papules be then scratched, the blood and serum form a black brown crust ; if the scratching be continued, ulceration follows. If the papules be not scratched, the serum becomes metamorphosed to pus, and pustules are formed. In old affections the lymphatic glands become swollen ; the papillary bodies are likewise hypertrophied, forming deep furrows in the skin. It is often complicated by dropsy of some cavity, or of the skin, and is always incurable; for although easily removed by any remedy causing the epidermis to be thrown off, it is impossible to prevent relapses. Hebra employs the following ointment :—

R.—Kali caustic. saturat. ℥ vj (spec. grav. 1·333)
Axung. ℥ xij.
M. ft. ungt.

Four ounces of this are rubbed into the patient during the first three days, and two ounces during the next three, and during the whole time he must sleep between blankets ; in a few days the skin is quite clean. Sublimate baths have a similar effect. *P. mitis* has small papules, the *formicans* large ones. *P. sine papulis* is an affection of the nerves of the skin, and *P. pedicularis* has no place here.

2. *Scabies sarcoptosa.*—The presence of acari is the sole diagnostic symptom of value; where they are not present, the case is not scabies ; their dwellings resemble slight rents through the epidermis, and by a little attention are easily discovered. The efflorescence is generally vesicular, which may remain entire, or, being scratched, may form red spots from injury of the epidermis, on which crusts may form ; or pustules are formed, which, as well as the former, may, by further metamorphosis, form the so-called scabious ulcers.

All these forms arise from the presence of acari, scratching, and pressure. As certain individuals are not liable to be attacked by other parasitic insects, so transplantation of acari does not always produce scabies. In the hospital he employs what is called the English cure (6 ounces sulphur and tar, 1 pound soap and axunge, 4 ounces white chalk; this is sufficient for twenty-five patients.) In private practice, the patients are bathed between 5 and 6 P.M., and then rubbed with an ointment composed of equal parts of caustic ley, linseed oil and soap, particularly on the hands and arms, on which the acari are almost always present. After inunction, gloves are put on to prevent

further infection by scratching during the night; when several of a family are affected, all must be rubbed at the same time. Four or five such innuctions are sufficient for a complete cure; if a papular effloresence remains, it must be rubbed with a solution of one drachm caustic potass in one pound water; the clothing must also be carefully disinfected.

3. *Eczema.*—Vesicles which are regarded as being constantly present, are not present in all the varieties; in *E. simplex* they are present, but in *E. rubrum* so much serosity is secreted that the epidermis falls off. Hebra gives, therefore, as diagnostic symptoms, thickening of the cutis, moist state of the skin, base of epidermis, and finally desquamation; excoriations are produced by the patient's scratching. The vesicles may leave a scurf behind, more or less adherent to the subjoined parts, or the contained fluid may become purulent, forming pustules, or both may be present, the one leaving dampness and scales, the other crusts. The crusts vary in colour, are at first yellow, becoming darker by age, and brown when mixed with blood coming from the scratched portions.

E. impetiginosum is a variety with large crusts. The strength and elevation of the injurious influences, and the disposition of the individual, give character to the disease; in one the *impetiginosum* occurs at once, which may, by fomentations, be changed to a *rubrum*, and all the three varieties may be present at once. *Tinea mucosa*, *Tinea ciliorum* are only eczema of the head and eyelids; *Porrigo larvalis* is *Ecz. impetig.* of the face, &c. &c. Any irritation of the skin from rubbing, heat, cold, or chemical preparations, can produce eczema, and, although frequent in scrofulous people, yet in them its characters are nowise different. Hebra, therefore, disbelieves in any connexion between scrofula and eczema. External treatment suffices; in slight cases, cold douches applied for five to twenty minutes over the diseased portion, are sufficient. In more severe cases, Hebra prefers caustic potass, one pint to two of water, rubbed in, after removal of the crusts by fomentation; a soap-like mass is thereby formed on the diseased portion, drops trickle out about half an hour after, which then form crusts. Cold fomentations are applied, and the caustic reapplied as soon as new efflorescence is seen. Hebra has observed that, in general, as many cauterizations are required as the disease has lasted months. In the worst cases, the cure is never longer than three or four months. An ointment of ox. zinci ʒj in axung. ℥j is recommended as palliative, particularly for the itchiness. Internal remedies are useless.

4. *Pompholix seu Pemphigus chronicus.*—Vesicles, arising with or without fever, containing a clear watery fluid, which burst, and are constantly renewed, so that the disease may last for months or years. *Pemphigus acutus* Hebra has never seen; he has never found the fluid to contain uric acid, it is always either weakly alkaline or neutral. As we cannot hinder the eruption, the treatment must chiefly consist in supporting the strength of the patient, which is generally much depressed. Of five patients treated by Hebra, three died and two recovered.

5. *Rupia* is not very common, and generally of syphilitic origin. Commences by the formation of vesicles which are never full; the fluid speedily dries, and fresh vesicles constantly recur, as the centre portion is the oldest. We find the characteristic symptom of this disease to be vesicles surrounding a depressed crust, yellow at the edges, dark brown or black in the centre. Hornlike crusts are very rare. Hebra has never seen *Rupia escharotica.* The treatment must in general be anti-syphilitic.—*To be continued.*

64.—*On Pericarditis Scorbutica, and its Treatment by means of Paracentesis.* By Dr A. Kyber.—The disease here described is found on the extreme northern coasts of Europe, where scurvy reigns endemically from spring to autumn; and affects almost exclusively the class of sailors, who are of course peculiarly exposed to all the causes of the scorbutic diathesis. This form of pericarditis appears to have been described by Cælius Aurelianus under the name of *morbus cardiacus;* but in more modern times has fallen into neglect, partly from the remoteness of the regions in which it prevails, and partly on account of the obscurity of the symptoms, and the deficiency of pathological observations. Dr Kyber considers it as a very different disease, in its course and phenomena, from ordinary pericarditis. He thinks that its causes are the same as the scurvy, to which it is so closely allied; and remarks that the extent of its epidemic prevalence in a given year is always proportionate to the violence of scurvy in the same year. It seldom appears before February, attains its height about April, declines in summer, and disappears during autumn. It affects chiefly men from twenty-five to forty-two years of age; it has not been observed in women. A fourth of those affected are Russians, and three-fourths are Lettons (Lithuanians, &c.), and Esthonians, men mostly of a relaxed

habit, and prone to hypochondriac and nostalgic affections. The external signs of scurvy are not always visible. In fatal cases the pericardium is found enormously distended, often measuring a foot in length, and containing three to eight, or even ten pounds of a dark-red, or blackish opaque fluid, composed of serum and fibrin, with blood corpuscles angular, and otherwise altered in form. The inner surface of the pericardium is covered with a coat of lymph, which is easily torn, reticulated on the free surface, of the colour of cinnamon; it can often be removed in layers, of which the palest and firmest are those attached directly to the membrane. The membrane itself is either injected, or stained with dark-coloured sugillations. On the part covering the heart, the lymph is often irregularly disposed in shreds, having a ragged or honeycomb appearance, and composed of bright red or yellow granules. The heart is diminished in size, and its substance is pale, flaccid, and easily torn. In cases where the fluid has been absorbed, adhesions are found between the layers of the pericardium. A similar exudation to that above described, is frequently found in the pleura or peritoneum. The left lung is frequently much compressed by the distended pericardium, the right gorged with blood, or even inflamed.

The author describes the symptoms of this affection as occurring under two forms, acute and chronic; of which the former is commonly primary, the latter supervening secondarily on a catarrhal, or rheumatic affection. The acute form begins with a sensation of coldness and prostration, oppression alternating with pain in the chest and epigastrium, rapid painless breathing, and decubitus on the left side; to these follows a discontented, gloomy condition, or complete apathy; with a pulse small, intermitting, or, when the effused fluid reaches two or three pounds, inappreciable. When the quantity of fluid is very large, the extremities are cold, the pupils dilated, the jugular veins distended, the expression exceedingly anxious; consciousness remains unaffected. The percussion may be dull on the left front up to the clavicle; the heart's sounds distant or inaudible, if the fluid be large in amount; if this be small, there may be friction sound. The left side of the thorax is distended, and does not move freely; the lung on this side does not act; the right side, on the contrary, has puerile respiration. The epigastrium is protruded, and sensitive on pressure. In the acute form these symptoms may be developed in twelve hours; in the chronic the progress is longer, the danger to life less immediate; but the retrograde process of the disease, in case of amendment, is also much slower and less satisfactory in its results.

In the treatment of this formidable affection, most of the remedies for ordinary pericarditis are either inapplicable from the cachectic constitution of the patients, or, if applied, fail to accomplish any good purpose. The apparent certainty of a fatal issue in such cases, induced the author to afford a chance of prolonged existence by paracentesis of the pericardium. This operation, however, he has not yet attempted, except in cases where death seemed impending, and where the fatal issue could only be postponed by a bold measure of immediate relief.

The operation performed by the author consists in the insertion of Schuh's trocar between the fourth and fifth ribs of the left side, close to the sternum, and passing it a little obliquely outwards, till the point is felt to enter the pericardium. The trocar is then withdrawn, and the fluid allowed to flow through the canula, which is apt to become blocked up by lymph, and in this case must be kept clear by a stilet or probe. By this method, both the pleura and the internal mammary artery are avoided. The operation is painless, except where it is necessary to remove, by the adaptation of a syringe, either fluid or air which has entered into the cavity. The immediate effects of it are, return of the pulse, removal of the anxiety and dyspnœa, and renewed animal heat, with comfort and cheerfulness of mind; at the same time, the friction sounds return, and the heart's sounds also become again appreciable. In the greater number of cases, life is merely protracted, as the fluid is again effused in a few weeks in as large a quantity as before, and becomes fatal. Nevertheless, in four cases the author has succeeded in accomplishing a radical cure. In three of these he administered, after the operation, the sulphate of quinine, which he recommends to be used in doses of six to fifteen grains every two or three hours, with the object of affecting favourably the capillary system, and preventing the renewed effusion of serum. The dissections of patients who, after an attack of this disease, have died of some other affection, show, that when a radical cure takes place, it is through adhesion of the pericardial surfaces, which occurrence the author believes, however, to be much rarer in this than in other forms of pericarditis. He thinks that stimulating injections might

possibly conduce to this favourable result, especially as it has appeared to him that the entrance of a certain quantity of air is productive of no bad result, but even seems to stimulate the membrane to a healing action.

In the four cases which were cured by paracentesis, the operation was only once performed; it was repeated (after the lapse of seventeen days) in one case only, and in this the result was unfavourable. He seems to think, that if it were performed at an earlier period, it might be more frequently and permanently successful; but he has not thought himself justified in attempting this, having only operated in cases altogether desperate.—*Œsterreichische Med. Wochenschrift*, No. 35, 1847; from the *Med. Zeitung Russlands*, No. 20-25, 1847.

[Neither the symptoms nor the *post-mortem* appearances in the disease above described, appear to differ remarkably from those of ordinary acute and chronic pericarditis, except in so far as they are modified by the coincidence with the scorbutic diathesis. The endemic occurrence of such a disease is a curious and important fact; but we cannot regard it as being *sui generis* and peculiar to the shores of the Baltic, as Dr Kyber seems to consider it. On the contrary, we believe that the disease may occur wherever the scorbutic or hemorrhagic constitution concurs with the exciting causes of serous inflammations; and we are confirmed in this view by having seen one case in the Royal Infirmary during the prevalence of the epidemic scurvy of last spring, where the appearances on dissection corresponded most accurately with the description given above. Paracentesis of the pericardium, for the removal of effused fluid, is not a new operation, although it has been rarely performed; and, according to Chelius, has been successful in only two instances; in the practice of Schuh (*Oester. Jahrbücher*, vol. xxxvi.) and of Karawajew (*Preuss. Vereinzeitung*, 1840, No. 52), who performed it twice in cases similar to the present. It was first proposed by Senac, and has engaged the attention of various surgical writers, but with little practical result. It has been performed by Skoda in the hospital at Vienna, but, we believe, without more than a temporary good result. Under these circumstances, Dr Kyber's cases are certainly worthy the attention of the profession. The instrument known in Germany as Schuh's trocar has a canula, which is furnished with a stopcock, and to the end of which is fitted an additional tube. This is bent at a right angle, and supports at its further extremity a small trough, or cup, into which the liquid flows, and, by its accumulation, prevents the sudden reflux of air into the serous cavity. A contrivance which is used by M. Trousseau of Paris, seems to be very effectual for this purpose, and has the merit of great simplicity. On the withdrawal of the trocar from the ordinary canula, he adapts to its free end a piece of oiled silk, or goldbeater's skin, so disposed, that while the fluid escapes readily between the lower lip of the canula and the silk which overhangs it, the least reflux movement forces this down upon the opening, in the manner of a valve. It appears to us, that in the event of an operation being undertaken, the propriety of drawing off the whole of the fluid at once, as recommended by the author, is very doubtful.]

65.—*Pleuritis and Empyema in Children.* By F. Battersby, M.B., Dublin.—Dr B. proves, by reference to various authors and hospital reports, the incorrectness of the statement made by Maunsell and Evanson, that "there does not seem to be much tendency to these diseases in the young subject." These writers still adhere to the antiquated notion handed down from Cœlius Aurelianus, Aretæus, and Morgagni, "*passionem pleuriticam difficulter pueros incurrere.*" Dr B. agrees with most authors, that pleuritis, uncomplicated with pneumonia, is rare until after three years of age, when it is as frequently met with as in adults; he further agrees with Rilliet, Barthez, and Baron, that single pleurisy is more frequent than double, but he disputes the statement of these authors, that it is more frequent in the right than in the left side of the chest.

Our author then proceeds to relate his cases. The first was that of a boy aged two and a half years, whose illness was of three weeks' duration. There was then increased heat of skin and fever, hurried and oppressed breathing, with a short dry cough. The left side was visibly and greatly enlarged, and remained perfectly unmoved during the respiratory effort, and the entire of this side, which was an inch and a half in circumference larger than the right, presented a remarkable roundness and smoothness, owing to the wide separation and protrusion of the intercostal spaces. Every part of this side yielded on percussion a dull dead sound, and the stethoscope could elicit nothing but what seemed to be a distant vesicular murmur close to the spine. On the right side of the chest the resonance, respiratory movements, and sounds, were

all increased in intensity. The heart was displaced so as to present behind the sternum. In a fortnight a tumour presented between the fifth and sixth ribs, situated somewhat above and behind the usual position of the apex of the heart, in circumference about the size of half-a-crown, slightly inflamed, very sensitive to the touch, and with its centre prominent. It was quite soft even at its base, which was not well defined; fluctuation was not distinctly perceptible, but the skin over it became tense when the patient cried. The enlargement of the chest was now even more marked than before, and the heart was so far dislocated as to be below and to the right of the right mamma. The child seemed scarcely to suffer; in a few days the integuments over the tumour gave way, and a quantity of thin brownish coloured fluid escaped. At the end of a fortnight he was much wasted by sweating, diarrhœa, &c., but the discharge was not great. The heart was now beating at the left side of the right mamma; the stethoscope indicated no other change. The left side of the chest seemed to be contracting. From this period the case appeared to proceed favourably, the subclavicular and upper inter-scapular spaces becoming less dull on percussion; in the former a loud bronchial respiration, and in the latter a hoarse respiratory sound, became audible. The heart retrograded to behind the sternum; the left side of the chest was now smaller by measurement than the right, and visibly flattened beneath the clavicle. The diarrhœa ceased, there was little dyspnœa; the discharge from the side was thick healthy pus; the child had gained strength, and was able to run about. He was now lost sight of, but Dr B. heard that he was alive four months later.

In the second case the empyema was disappearing when the author saw the child. The affected side was much contracted and flattened, percussion was dull over its entire surface, and large mucous rales alone were audible. The treatment adopted was the administration of iodine internally and externally. In about a month the lung began to return to its normal condition, an extensive soft crepitus over the entire side was first heard, with considerable resonance on percussion; in a fortnight more this increased, and the natural respiratory sound became audible at the upper part, with large bronchial rales in other portions of the lung; bronchial respiration gradually disappeared, and was succeeded by mucous rales, which again were replaced by moist and dry crepitus; from this period the patient continued to recover.

The other four cases scarcely require remark. Dr B. believes that case three proves that the amount of contraction after recovery, is in the direct ratio of the intensity of the previous inflammation; and that cases three and four show that disease, to a very serious extent, may exist without there being "any prominent sign of chest affection." In short, all the four cases demonstrate how possible it is to overlook pleuritis, and its effects on children.

66.—*Simulated Œdema of the Left Arm.*—A WOMAN, aged forty years, said to be from the provinces, came expressly to Paris in order to be treated for a considerable œdematous swelling of the whole of the left arm, a swelling which she attributes to a commencing elephantiasis, one of her sisters having, according to her statement, had a similar affection of the arm. She was received at La Charité, in the wards of M. Cruvelhier. The limb was placed upon a pillow, forming an inclined plane from the axilla. An attentive examination of the arm, axilla, shoulder, and breast, led to the discovery of nothing which explained the singular and anormal swelling. The inclined position caused no change in it for several days. Her general health was excellent. The swelling of the limb was more evident in the morning and during the day, and greater in the arm than in the forearm and hand. It did not, however, resemble an ordinary œdema; the pressure of the fingers left no depression, nor was the skin hard, doughy, or otherwise diseased. Early one morning the patient was surprised with a tight ligature, which she had placed during the night, round the upper part of the arm near the axilla, which had strangled the circulation. The following day, not having a cord to tie round the arm, she produced the same effect by pushing up the sleeve of her chemise, and twisting the edge of it strongly, so as to compress the limb. The deception could easily be perceived on carefully examining the superior part of the limb, where a circular mark was observed made by the ligature.—*Annales de Thérapeutique*, November 1847.

67.—*On the Treatment of Diarrhœa accompanying Dentition.* By Dr HUGHES WILLSHIRE.—IN a course of lectures on the diseases of children, Dr Willshire observes, that both in this country and on the continent, two very opposite views are held as to the treatment to be followed in the

less severe forms of the intestinal irritation ; one party believing that the diarrhœa should not be put a stop to, as it serves as a safety valve,—a derivation preventing more serious symptoms during the continuance of the gingival irritation ; the other party consider that it is only productive of debility, is a phenomenon of disease, and should be at once stopped. A middle course is the best to pursue. If but a slight sympathetic derangement is produced, the infant be not debilitated or thin, and seems likely, as many children do, to bear it well, or the stools not very watery or serous, the better way is not to interfere, either as regards the intestines or the gums. But it will be quite a different matter when the diarrhœa becomes catarrhal, the stools very frequent and watery, or greenish, and the gingival irritation great. The intestinal excitement must be stopped, and the gums at once looked to ; for the very worst form of diarrhœa may arise—that of enterocolitis. In arresting the disorder you must, of course, first of all attend to the condition of the gums, for two reasons ; first, because here is seated the main cause ; secondly, because, if you stop the diarrhœa by giving astringents, and leave its cause still in operation, you will perhaps have excito-motory symptoms affecting the child. If the gums appear tense, swollen, tender, very red, or hot, lance them immediately, then let the child be put to the breast, or encouraged to sip some warm demulcent liquid, to encourage slight bleeding ; afterwards, have it put into a warm bath, and then sent to sleep. Afterwards, keeping your eye upon the gums, have recourse to some of the remedial agents proper for catarrhal diarrhœa. You must not, like the French, think lancing the gums of no great moment ; you must not, like some of us, go on lancing for every thing, and two or three times a-day. In many of these cases, in addition to the remedies already spoken of, you will find, when the mouth is hot, or the tongue coated, or the child feverish, two or three grains of the nitrate of potassa dissolved in caraway or cinnamon water, or in thin mucilage, and placed in the mouth every two or three hours, of benefit.—*Medical Times*, Jan. 8, 1848.

IV.—PRACTICE OF SURGERY.

68.—*On Staphyloma.* By M. Sichel.—M. Sichel considers staphyloma of the cornea to be formed as follows:—When the transparent cornea is the seat of ulceration, more or less deep or broad, its laminæ become, in a great measure, thinned and destroyed, either on its anterior or posterior surfaces. An exudation of fibro-albuminous matter repairs this loss of substance. When the exudation is sufficiently copious, or quickly thrown out, when it is disposed uniformly over the whole of the ulcerated surface, and in the enlarged interstices of the corneal lamellæ, the condensation and solidification of this plastic substance gives rise to a cicatrix of a whitish colour, and of variable thickness. This cicatrix is, however, sufficiently firm to resist the impulse which the muscular contractions of the eye give to the refracting media; hence the curvature of the cornea is not much altered, and its form is not very different from that of the normal state. But frequently, from causes which are not as yet known, the fibro-albuminous exudation is insufficient, and is thrown out only over the ulcerated surface, without having a greater degree of thickness over the thinnest parts, and without penetrating uniformly into the interstices of the lamella. This exuded matter, then, only fills imperfectly the hollow in the diseased membrane caused by the loss of substance. The inequalities of its surface become partly effaced, but its tissue remains thin, and incapable of resisting the impulse given to the contents of the globe by the action of the muscles. The affected membrane, while it becomes opaque, is at the same time distended. The opacity is caused, not so much by an exudation into its tissue, as by the deposit on its surface, and into its hollows, of a fibro-albuminous matter, not very thick at first, on which there forms a sort of epithelium. It is by the distension that the cornea, while losing its transparency, assumes an abnormal form, which constitutes opaque staphyloma of the membrane. Sometimes it is conical, more or less pointed when the thinning takes place only in the central part of the membrane, without the circumference being much involved ; or least, when the centre has undergone a deeper loss of substance than the lateral parts. At other times, when the whole surface of the cornea, thinned almost to the same degree, becomes equally too feeble to resist the distension, the form of the tumour becomes hemispherical or globular.

Staphyloma of the iris, M. Sichel thinks, can hardly, in many cases, be distinguished from that of the cornea. It is thus formed: destructive ulceration of a corresponding part of the cornea, allows a greater or less portion of the iris to pass through it, which is thus exposed and forms a prominence. This, which is moveable at first, and without any covering, soon becomes covered with a fibro-albuminous exudation, which is thrown out in consequence of the continual irritation of the atmosphere, or of foreign bodies floating in it, and especially of the friction of the eyelids. This fibro-albuminous matter unites first the circumference of the prolapsed iris to the edges of the ulcer in the cornea; it then covers the whole surface of the prolapsed membrane with a layer of plastic matter, which is transformed into false membrane. If this false membrane does not become sufficiently firm to present an obstacle to the distensive action which is kept up on the tumour by the contents of the globe being continually pushed forwards by the contraction of the muscles, the staphyloma goes on increasing in size; but although it does not cease to be distended, it does not become any thinner. On the contrary, except in some rare exceptions, it becomes more and more thick by the deposit of successive new layers of fibro-albumen, so that its size and thickness are in general in direct proportion the one to the other.

The treatment of staphyloma M. Sichel divides into the prophylactic, the pharmaceutical, and the surgical.

The prophylactic consists in opposing the ulceration by a strictly antiphlogistic treatment, which ought to be continued even when there is a fibro-albuminous or purulent infiltration into the layers of the cornea. He condemns all astringent and irritating collyria, especially the nitrate of silver, which, he says, ought never to be used except in the form of pencil, and which ought only to be passed very lightly over the ulceration, so as to produce a very thin eschar, capable of protecting the surface from the friction of the lids and other sources of irritation; but not to cause any further loss of substance on the falling off of this eschar. As soon as the ulceration becomes so deep as to give rise to the fear that the cornea will be perforated at some point, it is of importance to dilate the pupil as much as possible by means of some mydriatic, so as to withdraw the free margin of the iris from the point, which is either perforated, or which will soon be so. This is the only way of preventing its escape by the accidental opening, or from contracting adhesions when the aqueous humour flows out. The only exception is, when the opening takes place, or threatens to do so near the circumference of the cornea. In this case, it is evident that the retraction of the iris towards its adherent margin has no other result than that of augmenting the chances of a prolapse, by drawing the pupillary margin towards the point where there is loss of substance. The mydriatic which M. Sichel recommends for this purpose, is a solution of belladonna, which, he says, he has found less irritating than atropine.

As to the pharamaceutical treatment, M. Sichel states, that to cure the staphyloma when it is not too large, all that is necessary is to follow the plan which nature itself indicates; and which is to irritate slightly the surface of the tumour, so as to produce an exudation of fibro-albuminous matter, and to transform this matter into a dense and firm false membrane. For this purpose, he uses remedies which possess an irritating and sedative action at the same time. The laudanum of Sydenham is that which he uses at first, diluted with water, and gradually increased in strength as the patient is able to bear it. Sometimes he employs the pencil of the nitrate of silver, passed very lightly over the surface of the tumour, once or twice a-week, to cause an exudation of fibro-albumen. When, by the means mentioned, the false membrane has become firm, contracted, and flattens the staphyloma, the nitrate of silver may be given up, and the laudanum only used, alternating it occasionally with an ointment of the red oxide of mercury, used very weak, and rubbed on the edges of the lids at bed-time.

The surgical treatment is employed when the staphyloma is so large as to prevent closure of the eyelids, and when it keeps up a constant degree of irritation in the eye and its dependencies; or when the use of the pharmaceutical remedies have not succeeded in arresting its development. Cauterization M. Sichel condemns; he recommends rather the removal of the tumour by means of the knife. This is to be done either after the manner of Beer or Scarpa. The former, which is the best, consists in removing either the whole, or at least two-thirds, of the staphyloma by means of a cataract knife and scissors; in the latter, and which has also been adopted by M. Walther, the central and lenticular portion only of the staphyloma is removed. M. Sichel describes the manner of performing these two operations; he then mentions the accidents which occur during and after the opera-

tion, and which seem generally to rise from one of two causes; the first being, the removing of the staphyloma either too near the edge of the sclerotic, or taking away a portion of that membrane itself; the other being the stopping too suddenly the flow of blood which takes place during the operation. Lastly, he describes the manner in which cicatrization of the wound takes place after the operation for the removal of the staphyloma.—*Archives Générales de Medicine*, July and Aug. 1847.

69.—*Method of arresting Bleeding after the Excision of Internal Hemorrhoids.* By Mr Vincent.—"Surgeons have, for the most part, been deterred, on account of the bleeding that has often followed, from cutting them off. But it must be remembered, that if there be any coagulum left in the tumour after the incision, it will go on bleeding: and I believe that very generally this is the way by which the bleeding is kept up after the pile has been excised, which may have given rise to the great apprehension of hemorrhage in these operations. I have, with few exceptions, adopted the operation of excising internal piles, and with the precaution and the use of an expedient I have now to mention, I have never been troubled with any serious extent of bleeding. This remedy is simply a solution of sulphate of iron in water; a grain to an ounce seems quite strong enough. If this be injected in small quantity, so that it may be retained after the operation, I believe it will hardly ever fail of preventing bleeding. I consider the advantages of excision over tying to be, that the operation is completed at one suffering, and is almost instantaneously executed. That the wounds being simple, when the membrane is restored to its proper place, there is the better chance of the adhesive process being so far carried out as ultimately to retain the membrane in its place, and prevent the continuation of the protrusion, if straining on the parts can be prevented for three days. Indeed, I have seen the prolapse quite cured by the excision. In either case the operation should be restricted to the mere pile, and not include any part of the membrane around it. I have occasionally, at the instance of patients, tied piles, but have found the pain more severe, and the swelling and soreness in the succeeding days after the operation have produced greater suffering, and the parts have seemed more readily to be protruded by the dejections than after the excision."—*Observations on some parts of Surgical Practice.*

70.—*On the treatment of Prolapsus Ani.* By Mr Vincent.—"Of late I have found such great advantage in employing the sulphate of iron in prolapsed bowel, that the operation may very often be dispensed with, and the patient quite cured merely with the use of this remedy. Very lately I had in the hospital two cases of the worst sort,—the one of twenty years' standing, with a great protrusion and abundance of bleeding piles, who in about three weeks left without any protrusion or bleeding: declaring himself to be in a state of comfort that he had not known for so long a time. The other came from one of the institutions that offer great pretensions in the treatment of this class of cases. He was very bad, having both internal and external piles, and the bowel descending largely and most readily: he was completely relieved in about a month. Other cases of a slighter kind have been set to rights in not much more than a week. The patient should be kept in bed of course, so that there should be every facility for the repose of the bowel; and after it is cleansed out, a small quantity of the injection should be daily thrown up, and retained. If the stomach can take balsams, they seem well adapted for this disease."—*Observations on some parts of Surgical Practice.*

71.—*Extraction of a Needle from the Substance of the Heart.* By J. G. Graves.—The author, in a letter to the New York Annalist, relates a singular case of suicide which occurred under his observation in Nashua. He was called to a young man, whom he found nearly lifeless from loss of blood, which proceeded from three cuts in the neck so deep as to divide entirely the larynx, and one in the situation of the fifth left rib, extending down to the bone. On the patient rallying after the vessels had been secured, he said that, before using the razor which effected the cuts, he had put a needle into his side between the fifth and sixth ribs; but that, fearing it would not effect his purpose, he had recourse to the razor. On examination, there was discovered between the 5th and 6th ribs on the left side, a puncture of the skin. The breathing was exceedingly difficult and painful, forcing him to cry out: the pulse was rapid and strong. Dr Graves then made an incision at the site of the puncture down to the intercostal muscles, but without finding any thing. He next dissected down to the pleura, and, on pressing gently with his finger, he thought he felt the end of the needle. This encour-

aged him to incise the pleura, after which, by dilating the external wound with retractors, he could distinctly see the heart act with the needle in it. He extracted the needle by means of a pair of forceps, and a forcible stream of blood followed. After this operation the patient became more quiet, and the breathing comparatively easy. He improved daily up to the sixth day from the operation, when he was attacked with pains of the side, and died on the 8th day after the operation. On examination, the pleura was slightly inflamed round the wound. On the inner surface of the pericardium, there was a puncture resembling a leech-bite. The pericardium contained no blood. Where the needle had entered the left ventricle, there was a small membranous sac formed, which contained pus. Otherwise the heart was natural.—*The British American Journal of Medical Science*, December 1847. [The information contained in the above report, is by no means satisfactory as to the cause of death in this case. Was it owing to the wound in the throat, or to the thoracic lesion? The symptoms would seem rather to point to the latter; but a pleura "slightly inflamed," and a small abscess in connexion with the left ventricle, do not seem adequate causes for the fatal result.]

72.—*Successful Amputation at the Hip-joint; Employment of Ether.* By M. HÉNOT of Metz.—In a memoir presented to the Academy of Medicine of Paris, on the amputation at the hip-joint, M. Hénot relates the case of an hospital-servant (male) twenty-six years of age, who had a large exostosis of the right femur, involving the bone as high as the trochanters. There was also disease of the medullary cavity with perforating fistulas of the bone, abscesses of the thigh, and hectic fever; under which circumstances, amputation at the hip-joint was proposed as the only means of saving life. The operation chosen was that of Beclard, by anterior and posterior flaps, but the posterior flap was prolonged by a third, and the anterior shortened, so as to bring the cicatrix more in front. Ether was inhaled by the patient previous to the operation, which, with the ligature of the arteries, was accomplished in 5½ minutes, and was quite unattended by pain. The wound was brought together by six points of interrupted suture; it was ten inches in length. Four-fifths of it healed by the first intention; the remainder was kept open by a moderate suppuration from the glenoid cavity, which continued six weeks, and then declined insensibly, permitting of the complete cicatrization of the wound on the 90th day from the operation. The ligatures came away from the 18th to the 44th day. The process of cure was entirely satisfactory, and the result was an excellent cushion of flesh for the application of artificial means of support.—*Archives Générales de Médicine*, Dec. 1847.

73.—*Aneurism of the Carotid Artery, simulating Cynanche Tonsillaris.* By Dr DUKE.—A married man, aged thirty-two, about twelve months after a severe blow on the head, was attacked with symptoms of ordinary catarrh and sore throat. He had, since the accident, which he considered as the cause of his symptoms, been subject to occasional headache, and a rushing noise in his head, as of wind. When seen, there was quick pulse, cough, and fever; the right tonsil and side of the fauces appeared inflamed. During the next two days the swelling extended, causing little pain, but considerable difficulty of deglutition. On passing the finger into the mouth with a view to detecting fluctuation, it was discovered that a strong pulsation existed in every part of the tumour, which was soft and elastic to the touch. The stethoscope, applied behind the angle of the jaw, detected a loud bruit. This revealed the true nature of the case, but next day, the patient being in considerable pain, requested relief from another medical man who happened to be present. The tumour was punctured with a bistoury, and a jet of arterial blood followed; this, however, was commanded by pressure, which was kept up till the following day without more than a few ounces of blood being lost.

Dr Duke then tied the common carotid artery in the usual manner; pulsation immediately ceased in the tumour. There was no subsequent hemorrhage; but the power of deglutition was completely lost for five days after the operation, and then suddenly restored. At the end of five weeks, being apparently quite well, he went to visit some friends, and was induced to drink spirits. During the night smart hemorrhage occurred from the mouth, which proved fatal before assistance could be obtained. No *post-mortem* examination was allowed.

Dr Duke considers this a case of diffused or false aneurism from a wounded or diseased condition of the vessel, the result of the blow. He thinks that the vessel was probably injured by a spiculum of bone, which had caused disease and soft-

ening of its coats; and that, during one of the fits of coughing to which he was subject, the artery had been ruptured and the blood extravasated into the cellular tissue, causing the swelling visible in the throat. This was entirely destitute of visible pulsation, although to the touch the evidences of aneurism were very evident. —*Surgical Society of Ireland, from the Dublin Medical Press.* Feb. 2, 1848.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

74.—*Vomiting during Pregnancy.* By Dr Churchill of Dublin.—In regard to this affection, which, in the mild form of "morning sickness," so frequently attends upon pregnancy, commencing generally about the fifth or sixth week, and continuing for one or two months, Dr Churchill lays down the following propositions:—1. In some cases vomiting never comes on. 2. In other cases it commences very soon after conception; sometimes on the very day of conception. 3. It may not begin till the two or three later months of gestation. 4. In some cases it does not happen in the morning, but is delayed till after a meal, or even till bed-time, and then it may continue all night. 5. It may continue during the whole period of gestation. 6. It may commence in the morning and continue during the entire day, and beyond the usual period of its cessation. It is to the consideration of this last condition that the present paper is devoted. Patients the subjects of it, become extremely exhausted and depressed; and if the vomiting do not cease spontaneously, or in consequence of treatment, the results may be even fatal, and that before gestation is completed.

Dr Davis (*Obstetric Medicine*, Vol. II. p. 87) relates a case that proved fatal at the eighth month. Dr Ashwell relates a case fatal at the seventh month, (*On Parturition*, p. 194). M. Dance relates two fatal cases, (*Med. Chir. Rev.* 1829, Vol. VIII. p. 149.) Dr Johnson relates a case fatal at the fourth month, (*Lancet*, March 3, 1839, p. 825.)

To avert the fatal result of some cases of obstinate vomiting during pregnancy, Dr Denman proposed the induction of premature labour. Of this practice Merriman records a successful case, (*Med. Chir. Trans.* Vol. III. p. 139). Dr Burns relates one case where it was twice performed, (*Principles of Midwifery*, p, 254). Dr Davis states he has resorted to the practice with success three times, (*Obstetric Medicine*, Vol. II. p. 871).

Dr Churchill relates two cases in which he followed this practice. The patients were aged twenty-six and forty respectively; in the one abortion was induced in the fourth, in the other, in the third month. In both the vomiting was so severe and incessant as to threaten life, and was quickly and completely relieved by delivery. The first made a good recovery. The second, however, who had been affected with severe diarrhœa before the vomiting commenced, was seized two days after delivery, with a violent return of the same complaint under which she sank in six days.—*British Record of Obstetric Medicine*, Nos. I. and III.

75.—*Induction of Premature Labour.* By Dr Van Hengel.—In the following cases premature labour was induced by puncturing the membranes. Details sufficient to allow us to judge of the precise mode in which the various operations were performed, have been unfortunately neglected by the author. But, judging from the instruments specified, and other points in the history of the cases, it appears that puncturing the membranes in such a manner as to draw off only a small quantity of the waters was the plan resorted to.

Case I.—A healthy female, twenty-four years of age. Contraction of the brim of the pelvis. At the beginning of the ninth month the os uteri was opened up by means of the finger, and the membranes pierced by Reissinger's instrument. After twelve hours pains supervened. In consequence of the shoulder presenting, the child was turned and delivered. It was born dead.

Case II.—A strong robust woman—had already been delivered of five children. The first was born naturally in the eighth month of pregnancy; the four others at the full time, by means of the forceps. All the infants were still-born. In the sixth pregnancy, the membranes were pierced by Fried's instrument at the end of the eighth month. After twelve hours pains commenced. A bag of membranes was protruded, and on bursting gave issue to a considerable quantity of water. The breech presented and the infant was soon delivered, but was dead.

Case III.—A strong woman—had twice

previously been delivered with difficulty, of dead infants by means of the forceps. In the third pregnancy labour was induced at the end of the eighth month, by piercing the membranes with a silver male catheter, which evacuated at least two ounces of the waters. After two hours, pains supervened, and ceased entirely after nine hours' duration. The child's head becoming impacted, the forceps were applied, and a living child delivered. It died in three days.

Case IV.—A nervous delicate woman—had had three abortions, and one premature labour at the beginning of the eighth month. At the end of the seventh month of her fifth pregnancy, such symptoms supervened as to cause apprehension for the life of the fœtus. On the first day of the eighth month, the pulsations of the fœtal heart were but indistinctly heard. The membranes were pierced, first in the forenoon and afterwards in the evening of the same day, and a pretty large quantity of the waters was evacuated. Next day at noon pains began. Delivery was completed by the forceps. The child was dead.

Case V.—A healthy woman of small stature—had already borne, with great difficulty, three dead infants of large size. At the end of the eighth month of her fourth pregnancy the membranes were pierced with a large male catheter, and a half quart of the waters drawn off. After forty hours pains commenced, and a lively child was born without assistance.

Case VI.—A healthy youug woman—had already been delivered by the forceps of a dead child. At the beginning of the ninth month of her second pregnancy, the membranes were pierced with a male catheter, at which time the mother and operator both felt strong movements of the child. Pains commenced after twenty-four hours. The arm presented. A child apparently still was delivered by turning.

Case VII.—A small but healthy woman—had already borne five children, three of which were dead, after severe labours. Four weeks before the end of her sixth pregnancy the membranes were pierced by the catheter, and at least two quarts of the liquor amnii drawn off. The labour was easily terminated in thirty-one hours. A scrofulous and diseased child was born with some signs of life, but died very soon afterwards.

Case VIII.—The same woman as *Case* V. was, fourteen months afterwards, again in the same condition as before, and at the end of the eighth month the membranes were pierced. After twenty-seven hours, pains began, and the child presenting by the breech, was born with some signs of life, but soon died.

Case IX.—In this patient the first labour was terminated by perforation. In her second labour she was delivered with great difficulty, by means of the forceps, of a living child. The brim of the pelvis was found contracted. At the beginning of the ninth month of her third pregnancy, the membranes were pierced with a catheter. Thirty hours afterwards pains began, and a living child was born.

Case X.—Twenty months after a previous premature labour (*see Case* III.), this woman was again at the commencement of the ninth month of pregnancy. The membranes were pierced high up. After upwards of twenty-four hours, pains set in, and the child was born apparently still, but soon completely recovered.

Case XI.—This woman had been delivered by craniotomy when thirty-two years old. In this pregnancy the membranes were opened with Meissner's instrument. After thirty-four hours the pains began, and a fine female child, presenting by the breech, was presently born dead.

Case XII.—This woman, now in her sixth pregnancy (see *Cases* V. and VIII.), had the membranes perforated by Meissner's instrument, and at least one quart of the waters escaped. After two days pains set in, and a small female child was born alive.

Case XIII.—At the end of the eighth month of her fourth pregnancy, this woman (see *Case* IX.) had the membranes perforated by Meissner's instrument, and about a half quart of the waters was evacuated through the canula. In thirty-seven hours pains commenced. The child was born alive, but died on the third day.

Case XIV.—This woman, with the pelvis deformed by malacosteon, was, in her first labour, delivered with difficulty of a dead child by the forceps. Six weeks before the end of her second pregnancy, the membranes were pierced with Meissner's instrument, and a half quart of waters evacuated. No pains having supervened after twenty-four hours, the membranes were pierced at the os uteri. Pains commenced early

on the third day after the first perforation. The forceps were required to deliver the child, which was born alive.

Case XV.—In the woman mentioned in Cases IX. and XIII., premature labour was again induced at the end of the eighth month of pregnancy. The membranes were pierced three times. Very little water escaped, and was followed by some blood. After thirty-one hours pains set in, and in an hour a fine child was born alive. Three depressions were found on the right breast of the child, evidently made by the instrument after traversing the membranes. There were also two little holes in the placenta produced in the same way, and manifestly the source of the blood which flowed at the time of operation.

Five of these women, our author remarks, who had never before borne but dead infants, have now, in all, nine living children among them. In the other cases the six children were dead-born. Of these one was dead before labour; the fatal result to other four of them arose from malposition; one being a shoulder, and three being breech presentations. Thus it appears that the lives of eight children were preserved, which would probably otherwise have been lost. Our author believes, that of all the methods of inducing premature labour, the piercing of the membranes is at once the simplest and the surest.—*Schmidt's Jahrbucher*, 1847.

76.—*Prolapsus of the Uterus during Labour—Subsequent Reduction and Cure.* By M. Naudin.—This woman was in labour with her third child. After the pains had continued for forty-eight hours, the waters having been prematurely evacuated, and the os uteri remaining rigid and undilated,—the uterus was suddenly precipitated outside the vulva. M. Gassail dilated the rigid os uteri with the hand, and presently the child was born, and soon followed by the placenta.

The uterus was replaced, but was again protruded during an effort in making water. It was again reduced, and retained by a T bandage. In ten days this woman was able to walk about, and, on examination, the os uteri was found at its usual height in the pelvis.—*Gazette Médicale*, Dec. 18, 1847.

77.—*Simple Metritis after Delivery.* By Dr Willemin.—M. Willemin maintains that this affection is most frequently produced by deep laceration of the neck of the uterus, an accident which he believes to happen in most deliveries, although generally not to a serious degree. In regard to the symptoms of metritis, he denies entirely the existence of morbid sensibility in the vaginal portion of the neck of the uterus, a symptom which M. Chomel particularly points out. The state of the lochiæ varies extremely; but the most important change on them is an unusual persistence or even increase of their sanguinolent character after the first week, whilst in the malignant puerperal metritis the lochiæ are generally suppressed. Contrary to the statement of Duges and Chomel, M. Willemin asserts that the urinary functions are very rarely disturbed.—*Archives Générales de Médecine.* Dec. 1847.

78.—*Intestinal Hernia protruded through the Uterus.* By M. Le Chaptois.—This woman, æt. sixty, mother of seven children, had had, for a long period, a vaginal hernia, for which she had never sought advice. In consequence of incessant suffering from dysuria, tenesmus and dragging pain in the hypogastrium, she lost the erectness of her attitude, and was very much bent. M. Le Chaptois, on being called to her aid, found an enormous mass of the small intestines and colon protruded through the lacerated uterus. A tumour, larger than the fist, lay between the thighs. It consisted of the extremely attenuated walls of the inverted uterus. Towards its right side there was a laceration giving issue to the intestines. Her pulse was small, she had hiccup, cold sweats, and frequent faintings. The hernia was successfully and completely reduced. Subsequently vomiting and severe convulsions appeared; but after free evacuations of the bowels, her recovery proceeded steadily till the third month, when a peripneumony seized her, and proved fatal in fifteen days.—*Gazette Médicale*, Dec. 18, 1847.

79.—*Placentitis occurring twice in the same woman.* By Dr Van Hengel.—In February 1844, a woman, thirty-three years of age, having arrived at the exact time when her tenth menstruation would have taken place, was delivered of a child, of whose death there had been distinct signs three weeks previously. The fœtal portion of the placenta had degenerated into a substance resembling cartilage, of a greyish-white colour; on the uterine surface it was still spongy and porous in several spots. In February 1846, the same woman was

again arrived near the time of her delivery. She stated, that a month previously she had had a slight attack of fever, after which she was seized with severe pain in the right side of the belly, in which part she felt as if there were a weighty stone lying within her; at the same time she suffered from thirst, sleeplessness, headache, and loss of appetite. Subsequently she was troubled at various times with bloody, watery, and purulent discharges from the vagina.

On the 26th February the pulsation of the fœtal heart could not be heard, nor could any movements of the child be felt by the mother or her medical attendant; and at the same time she complained of nausea and a sensation of cold in the belly. Some days after, she was delivered very quickly of a child which appeared to have been long dead. The placenta was circular, curled inwards at the edges, greyish-yellow in colour. On the fœtal surface it was dark brown or almost black; and it was so indurated as not to bend when held out by one point.—*Schmidt's Jahrbucher*, 1847.

80.—*Mortality of Ovariotomy.* By M. VELPEAU.—The mortality of this operation is frightful, involving more than a half of the patients subjected to it, and carrying off, in a few days, young and robust women. Hardihood like this (says M. Velpeau) must be opposed to the utmost.—*Gazette des Hopitaux*, No. XLIX.

[It is curious to observe how the mind of such an enlightened surgeon may be so pre-occupied as not to detect the obvious fallacy of the argument brought forward in the passage quoted above. The amputation of the thigh, an operation occurring every day, and on the propriety and utility of which the profession is agreed, carries off a *greater* proportional number of patients than ovariotomy. "Out of sixty-five cases, in which it (ovariotomy) had been perfected, twenty-five died, or between three and four out of every ten patients were lost." (*Monthly Journal*, January 1848.) Of 201 cases of amputation of the thigh recorded by Malgaigne, six in every ten perished.]

81.—*Duration of Pregnancy in the Human Female and the Cow.* By Dr LOCKWOOD.

I.—IN WOMAN.

Age.	No. of Pregnancy.	Duration of Pregnancy.
17 years.	...	270 days.
19 ..	1st.	272 ...
30 ...	1st.	276 ...
44 ...	7th.	284 ...

II.—IN THE COW.

No. of Cases.	Duration of Pregnancy.
50	Between 260 and 270 days.
556	... 270 and 280 ...
14	... 280 and 286 ...
1	... 290 ...

—*Buffalo Medical Journal.*

VI.—PSYCHOLOGICAL MEDICINE.

82. — FEUCHTERSLEBEN *on Mental Pathology.*—Body and mind are most intimately blended in every part of the structure of the living individual; and as the disorders of the mind are often removed by pharmaceutical remedies, so, on the other hand, the diseases of the body as frequently require the aid of the psychological physician. In disorders of the nerves especially, the physician can often effect nothing, if he do not, in the first place, direct his treatment to the mind. The numerous varying symptoms which, under the name of spasms, act so conspicuous a part in pathology, and, unhappily, as still more conspicuous a part in real life, are often removed most successfully and effectually by judiciously directing, controlling, and taking advantage of the state of the mind; and how few disorders are there of any organic system in which the nerves do not at least symptomatically suffer? We see, therefore, how extensive is the application of psychical methods of cure throughout the whole domain of the healing art. Numerous examples in proof of what has been advanced, may be found in the writings of psychological physicians, and especially in the admirable work of Marcus Herz, on Vertigo (1791, pp. 6—22); but our present business is to point out the use of psychological medicine in general, and to confirm the words of Schiller, "A physician whose horizon is bounded by an historical knowledge of the human machine, and who can only

distinguish terminologically and locally, the coarser wheels of this piece of intellectual clockwork, may perhaps be idolized by the mob; but he will never raise the Hippocratic art above the narrow sphere of a mere bread-earning craft."

Excursions for pleasure, rather than voyages of discovery, have been made in the domain of medical psychology; and a department of our science, which is as real and practically important as any other, has been treated as an amusement, and as if it had no connexion with the rest.

We cannot refrain, on this occasion, from warning you against an error so dangerous in all serious researches, and especially in ours,—I mean that dilettante spirit, unhappily so common, which loves to prate without an object, to confuse without improving, and to flatter with an appearance of knowledge. In what department has it more ample opportunity to practise its pernicious arts than here, where so much is still unexplored, so much inscrutable; and where the endless variety of intellectual energies so easily tempts us to pass the boundary of ascertained truth? Yet there are some meritorious inquirers who have been eminently successful in this branch; and it is our present business to appropriate to ourselves the fruits of their researches and meditations. Let us then set about it with earnestness and perseverance, deeply impressed with a sense of its great importance.—*Sydenham Society Translation*, pp. 9-12.

83.—*The Journal of Psychological Medicine, and Mental Pathology.* Edited by Forbes Winslow, M.D. No. I.—January 1848.—We hail with pleasure the publication of such a Journal, although we fear that, in the present state of such studies in this country, there may be found both a want of readers and a want of writers to support a separate periodical on this interesting branch of medical science. No. I., however, is a formidable enough brochure of 192 pages. We have gone over it with some degree of care, and with some interest too. It contains some good articles, but little, we fear, that will add to the present stock of knowledge possessed by all those who have devoted any attention to the treatment of the insane. Reviews of Dr Seymour's "Thoughts;" Dr Solly on the Brain; the Commissioners' Report; Dr Conolly on Asylums; Dr Thurnam's Statistics;—are, we think, already familiar to most readers of medical periodicals. And of the so-called "Original Communications," we think we recognise one as very familiar to our eyes, and one which must have been seen by the eyes of *our* "constant readers" also. The others contain nothing new; accounts of asylums already well known by the descriptions of Conolly and others; notices of a ball in an asylum all the way at Vienna, while we have them every week in our own asylums; of the influence of music on the insane; and the use of ether, while we have, long ago, passed from ether to chloroform! There is, however, one very excellent original paper on Puerperal Insanity of some length, and "to be continued," to which we may perhaps return when it is completed.

Under the head of "Medical Jurisprudence," we have an analysis of the case of Ovenston, and a defence by the editor, who was a witness in the case, of the medical evidence given. We confess that, in spite of *The Times*, it goes far to satisfy our minds of the justice of the verdict which led to Ovenston's acquittal.

84.—*The Consciousness of Right and Wrong; a Just Test of the Plea of Insanity in Criminal Cases.* By C. L. Robertson, M.D., &c. Edinburgh, 1847.—An interesting contribution to an interesting question; but one in which we think the author fails to make out his case. To make *the test* a just one, he endeavours to prove, that in all, or nearly all, cases of monomania, there is derangement, or disease of the moral principle. This would never be admitted in a court of justice. The plea of insanity would fail, therefore, and frequently does fail, in cases of monomania; and it fails, too, sometimes in cases where it should be sustained. It is an imperfect test, often departed from in our courts of law. It is the *imperfect appreciation* of the *motives* to right or against wrong action, which leads to crime among the insane, not the ignorance of right and wrong.

85.—*Localization of the Faculty of Language in the Anterior Lobes of the Brain.* By M. Bonnafont.—The author adopts the opinion of Bouillaud, that the faculty of speech is peculiarly dependent on the integrity of the anterior lobes of the brain. He adduces six observations in support of this view.

The first is that of a huntsman who received a wound from a ball, which entered the anterior part of the left temple, traversed the anterior lobes, and came out at the right temple. The substance of the brain protruded at the two openings. This man was conscious and intelligent, knew his companions, and remembered both recent and old-standing occurrences.

He had, however, lost the sense of smell, and was totally unable to articulate, although the voice remained entire.

The second case was a soldier who received a bullet wound above the right eye, the ball emerging above the left frontal eminence. He was only a short time under observation, but appeared to hear every thing said to him, and, on attempting to answer, produced only inarticulate tones.

The third case was that of a lunatic in the hospital of Nantes. When he first came under observation, he was able to express himself well, with the exception of a stammer in his speech. As the disease advanced, articulation became more and more difficult, till, at last, he could only speak three words, and was obliged to use signs almost entirely. On dissection, an osseous tumour, of the size of a walnut, was found pressing on the anterior lobes. the left of which had almost disappeared.

The fourth observation is unimportant.

The fifth case was of a sergeant who received a wound from a ball above the right ear. The ball appeared to have entered the brain, but was not found. A sound passed four inches deep into the cranial cavity. He remained conscious, knew his comrades, and answered various questions, but appeared to have lost, in great part, his memory of facts, and frequently expressed himself surprised at his own forgetfulness. He died in twenty hours. There was no dissection.

The last observation was in the case of an engineer in whom the left temporal bone above the ear was shattered, and several fragments driven into the brain, by a blow from a stone. The splinters of bone were extracted by operation. The memory was much diminished, but not altogether lost; the power of speech remained, although there was stuttering and difficult articulation, with loss of some words. He could write perfectly well the words which he was unable to pronounce. —*Recueil de Mém. de Med., Chirurg., &c.* lx. 1846.

[There are few departments of physiology of such extreme difficulty to the rational physiologist, as that of the determination of the value of observations on the separate portions of the cerebral hemispheres. This arises, in part, from the very complicated nature of the functions involved, and partly from the very limited application of direct experimental research to the investigation in question. The present observations, and the result which their author has deduced from them, show strongly the necessity of extreme care in drawing any inference from isolated facts in such cases.

Andral (*Clinique Medicale*, tom. v. p. 382) has recorded 37 cases where disease or injury existed in the anterior lobes, with or without a lesion elsewhere. In 25, speech was lost; in 16, it remained. Further, he has seen 14 cases where the loss of speech concurred with a lesion of the brain, without the anterior lobes being at all involved.

Cruveilhier also (*Anat. Pathol., Livraison* 8) relates the case of an idiot in whom the power of distinct articulation was one of the few human faculties remaining, and in whom the anterior cerebral lobes were absent. This observation, if correct, clearly goes the length of neutralizing every fact adduced in support of Bouillaud's position.

We remember to have seen, last winter, in the Edinburgh Royal Infirmary, a case in which the articulation was affected in much the same way as in M. Bonnafont's third case. There was, for several days, impaired power of speech, and the loss of particular words. Latterly, there was strabismus, succeeded by coma and death. The cause of the symptoms was likewise a tumour, which, however, occupied the place of the left lobe of the cerebellum.]

86.—*On the Influence of the Penitentiary Regimen in producing Insanity. Academy of Medicine*, Paris, 3d January 1848.—M. Collineau read a report on a memoir by M. Joret, on insanity in the penitentaries since the execution of the ministerial ordonnance of 10th May 1839, which prescribes absolute silence by day and by night. M. Joret, after pointing out the causes predisposing to insanity, which affected the inmates of penitentiaries, referred the exciting causes to three principles,—1. The absolute silence enjoined; 2. Chagrin increased by the enforcement of this rule; and 3. The want of exercise. M. Joret reported nearly eight cases of insanity as occurring per annum in a population of about 300. Out of 30 cases, he ascribed 6 of maniacal delirium, and 8 of monomania, to the first cause; to the second, 2 of maniacal delirium, 1 of mania, and 7 of monomania; and to the third, 1 case of acute mania, and 7 of monomania. Out of these cases, there were only 7 cured.—*Gazette Médicale*, 8th January 1848.

VII.—MATERIA MEDICA AND THERAPEUTICS.

87.—*Chloroform—Chemistry.*—A new test of the presence of alcohol has been proposed by Dr Cattel. To about two drachms of chloroform he added a crystal or two of chromic acid, which, after a few moments' agitation, became changed into the green oxide of chrome, a result (according to Dr C.) positively indicative of the presence of alcohol. To the same proportion of chloroform was added a small proportion of bichromate of potash and sulphuric acid, the green oxide of chrome being produced in this as in the other instance.

Physiological action (a) *on Animals.*—M. Plouviez de Lille has performed a number of experiments on animals (fowls, dogs, and rabbits), with the view of ascertaining the most effectual means of counteracting the effects of an excessive dose of chloroform. We may state briefly, that artificial respiration succeeded in restoring animals in whom life was evidently nearly extinct. In several of the experiments, the inhalation of the chloroform was continued until the breathing had entirely ceased; yet, by the diligent use of artificial respiration, the animals were recovered.—*L'Union Médicale*, January 1848. M. Blanchet has, also by experiments on animals, established the efficacy of oxygen gas, when introduced into the lungs, in recovering animals poisoned by chloroform.—*Comptes Rendus*, 20th December 1847. MM. Girardin and Verrier detail several very carefully performed experiments on animals (horse, dog, cat), in some of which the chloroform vapour was inhaled, and in others the fluid was injected into the jugular vein. The results do not differ from those already recorded in this Journal. They directed particular attention to the state of the arterial blood, and conclude that complete insensibility may be induced without its undergoing any change of colour. It is only when the narcotism has been so intense as to produce (secondarily) asphyxia, that the arterial blood assumes a venous tint.—*Comptes Rendus*, 27th December 1847. [To obtain these results, care must be taken, in administering the chloroform by inhalation, to permit of a certain amount of atmospheric air entering the lungs, otherwise asphyxia will be induced as a primary phenomenon, as it would be by the respiration of nitrogen or other irrespirable gas. The anæsthetic property of chloroform is, however, quite independent of the asphyxia so produced, as is shown by its action when injected into the veins.]

(b) *On Man.*—M. Sédillot has observed, that individuals enfeebled by age or disease, and those of temperate habits, are readily affected, and the insensibility is in them persistent. In strong and healthy individuals, and in those habituated to the use of alcoholic drinks, the anæsthesia is slowly produced, and endures for a short period. In comparing the merits of ether and chloroform, he states, that when the inhalation of ether is suspended, the degree of narcotism produced does not afterwards become more intense. Not so with chloroform, the depressing action of which may display itself to an alarming extent after removal of the inhaler. "Twice," observes M. S., "I was seriously frightened by this approaching annihilation of life, and my experiments on animals show that my fears were well founded."—*L'Union Médicale*, January 13, 1848. The *nausea* and *vomiting* which occasionally accompany the action of chloroform, may be rendered less frequent by avoiding its exhibition after a full meal, or while the patient is under the influence of artifical stimulus.—Robinson, *Med. Gaz.*, February 4, 1848.

Poisonous Action. — An inquest was held on Tuesday, the 1st February, at Winlaton, near Newcastle-upon-Tyne, on the body of Hannah Greener, a girl of fifteen years of age, who died on the Friday previous, under the influence of chloroform. Mr Meggison, surgeon, said, "Hannah Greener died under my hands on Friday, while under the influence of chloroform, which I had given her for the purpose of producing insensibility during the operation of removing one of her toe-nails. I seated her on a chair, and put about a teaspoonful of chloroform into a table-cloth and held it to her nose. After she had drawn her breath twice, she pulled my hand down. I told her to draw her breath naturally, which she did, and in about half a minute the muscles of the arm became rigid, and her breathing a little quickened, but not stertorous. Her pulse was natural until the muscles became rigid. It then appeared somewhat

weaker, not altered in frequency. My assistant, Mr Loyd, then took the nail off. When the semicircular incision was made she gave a struggle or jerk, which I thought was from the chloroform not having taken sufficient effect. I did not apply any more. Her eyes were closed, and I opened them, and they remained open. Her mouth was open, and her lips and face blanched. I dashed some water in her face, but it had no effect. Some brandy was now given, a little of which she swallowed with difficulty. I then laid her down on the floor, and attempted to bleed her in the arm and jugular vein, but only obtained about a spoonful of blood. She was dead, I believe, at the time I attempted to bleed her. The last time I felt her pulse was immediately previous to the blanched appearance coming on, and when she gave the jerk. The time would not be more than three minutes from her first inhaling the chloroform till her death."

A post-mortem examination was made by Sir John Fife and Dr Glover. There was the ordinary degree of rigidity. The lungs are described as having been highly congested, crepitant, and mottled with patches of a deep purple or scarlet hue. They were not collapsed. Along the outer and anterior border of both lungs were several emphysematous bullæ of small size. The pulmonary tissue is described as having been filled with bloody froth, which was also found in the interior of the bronchi, mixed with mucus. The epiglottis was found reddened at the summit, and the mucous membrane of the larynx was redder than natural, and mottled with vascular patches. The sinuses of the larynx contained a quantity of dark mucus. The œsophagus was healthy, and the stomach was distended with food. The heart contained dark fluid blood in both its cavities, very little in the left. Its structure was healthy. The brain was congested, both externally and internally, and the ventricles contained more than the usual quantity of serum.

Sir John Fife and Dr Glover gave it as their opinion, that death was occasioned by congestion of the lungs, and that congestion they ascribed to the inhalation of chloroform. The verdict of the jury was in accordance with this opinion. No blame was attached to Mr Meggison or his assistant.

Dr Simpson, in commenting upon the above case, has declared his opinion, that, although the unfortunate patient certainly died when under the influence of chloroform, "the death resulted, not from its effects, but from the effects of the means used to revive her." He believes that, as the patient was in a state of syncope, and consequently unable to swallow when the brandy and water were administered, the fluid filled the cavity of the pharynx, and, covering the aperture of the glottis, presented an obstacle to the breathing, which, in the weak condition of the girl, was sufficient to produce suffocation. In support of this view, Dr S. points out, first, the close resemblance between the morbid appearances observed, and those produced by simple asphyxia; and, second, the differences existing between the morbid appearances in the case of the girl and those observed in the bodies of animals killed by the inhalation of chloroform. In Mr Meggison's patient, the blood found in the heart is described as having been dark and fluid. On the contrary, in the fatal experiments with animals, "firm coagula of blood were found in the heart in every case where chloroform was inhaled."[1] In some of the animals the lungs were engorged with venous blood; in others, healthy.—*Lancet*, February 12, 1848.

Another instance of death from the use of chloroform has occurred at Aberdeen, in the person of a druggist's apprentice named Arthur Walker. No correct description of the case has yet appeared. The following is derived from a newspaper:—The unfortunate youth had been in the habit of inhaling the vapour, to enjoy the pleasurable sensations which it excites, and apparently without inconvenience. On the fatal occasion, after inhaling it some time, he fell forwards on the shop counter, with his face resting on his arms. After some time his father, who had been sent for, raised the lad's head, when he immediately fell back, apparently lifeless. Medical assistance was obtained, the jugular vein was opened, but life was extinct.

[*By what Means are the Effects of an Overdose to be counteracted?*—The patient should be laid on the floor, with his head, if possible, near a current of fresh air. The breathing may be assisted by compressing the chest, and a little cold water ought to be thrown on the face and chest. If the symptoms continue notwith-

[1] See Dr Bennett's report of the Medico-Chirurgical Society's Committee on the Properties of Chloroform, in the Number for January of this Journal.

standing these means, artificial respiration should be diligently practised, and the extremities briskly rubbed with hot cloths. The friction promotes the capillary circulation, and in this manner, undoubtedly contributes powerfully to restore the action of the heart and lungs. In extreme cases electro-galvanism should not be neglected; shocks may be transmitted through the chest, so as to assist the efforts at artificial respiration, and, in the case of syncope, a powerful galvanic current should be transmitted through the heart. A very powerful and rapid means of rousing the sinking powers of life, and one readily obtained, is found in the application of boiling water to the chest. This is effected by filling a glass or cup with boiling water, over the top of which a towel is placed, and then inverting the vessel on the breast of the patient. The efficacy of this application has been repeatedly displayed in the practice of M. Rayer of Paris. Individuals who, from disease, were so near death as to be completely insensible and speechless, have thus had intelligence and speech restored, while life was prolonged for a considerable time. Of course, it is understood that we only suggest its use in extreme cases. Dr Simpson directs attention to the impropriety of administering stimulant liquids by the mouth, when, from the state of insensibility, the power of swallowing is lost. The danger of their covering the aperture of the glottis or entering the larynx, and so hastening death by suffocation, is indeed imminent.[1] When the saliva is secreted in large quantity, it will be advisable to place the patient on his side, to prevent it acting injuriously in the same way. The loss of the stimulants is scarcely to be regretted, as the other means above proposed are infinitely more efficacious.

The procedure here indicated is equally applicable, whatever view may be entertained as to the immediate cause or mode of death. This point is not yet satisfactorily determined. As with other cerebro-spinants, the death seems to be of a mixed kind, partaking both of the characters of asphyxia and syncope, the one or other predominating according to the dose, mode of exhibition, idiosyncrasy, &c. Experiment has shown that, when a small proportion of air is inhaled with the chloroform, asphyxia plays a prominent part in the symptoms.]

Administration.—Dr Snow prefers the use of an inhaler, which enables him first, to regulate with more certainty the quantity of chloroform inhaled; and, second, to secure more effectually the requisite admixture of atmospheric air. He disapproves of the rapid induction of insensibility (as in a quarter or half a minute), from the fear that the narcotism may increase to an uncertain and perhaps alarming extent after the removal of the inhaler. This danger is, he thinks, much diminished, when the narcotism is effected slowly, as in two or three minutes. Dr Snow's inhaler appears to be better adapted for the purpose than any that we have seen. For a description and drawing of it, we refer to the *Lancet* of February 12.

Therapeutic Action.—In midwifery and operative surgery it is still extensively used. Several cases have been published, showing its value in facilitating the reduction of dislocations.

As a calmative to procure sleep and allay excitement, it has been found serviceable in typhus fever.—(Fairbrother, *Medical Times*, January 1848), and in delirium tremens.—*Lancet*, January 15, 1848.

One case of its successful application in traumatic tetanus has occurred, verifying the hopes of its utility in this disease that we formerly expressed.

[In concluding the remarks on chloroform, we desire to express our conviction, that the occurrence of the two fatal cases above noticed, will not limit the application of this most useful remedy, the experience of its safety and usefulness being already so widely extended and firmly established. Like other valuable agents, as Dr Simpson observes, "it may be powerful for evil as well as for good." And we could point to several drugs in daily use, that, in proportion to the extent of their application, have more of evil to answer for. With proper caution, and *an improved method of administration*, we believe that serious accidents may be almost if not altogether prevented. It is to be hoped that the publication of the fatal cases will frighten the non-professional public from the use of chloroform, for the purpose of amusement or of exciting pleasurable sensations. Independently of the danger which the individuals themselves incur, the practice familiarizes the public with the powers of an agent which

[1] As in apoplexy, syncope and narcotism, so in spasmodic diseases, as tetanus and hydrophobia, the exhibition of liquids by the mouth is often fraught with danger. In the hospital of Vienna, while a nurse was giving some soup to a tetanic patient, a severe spasm supervened; he was unable to swallow the liquid, a quantity of which passed into the larynx, and suffocation was the consequence.

presents a ready instrument for the accomplishment of the worst purposes. The public safety requires that apothecaries should be allowed to sell it only when ordered by a physician.]

88.—*Vapour of Benzin as an Anæsthetic Agent.* By Dr SNOW.—This substance is prepared by distilling benzoic acid with slaked lime. It succeeded very well in four cases of tooth drawing, producing no disagreeable effects, and, in an amputation of the leg, it completely removed the pain; but the patient had some convulsive tremors for about a minute, a result which Dr Snow considers peculiar to the benzin, as he has seen the same in several animals. Dr Snow concludes that benzin does not seem suited for severe operations. It has an aromatic odour, and from one to two drachms form a dose.—*Lancet*, Feb. 12, 1848.

89.—*Datura Sanguinea*, (R. Pav.)—To this, the natives give the names *Huacacahu*, *Yerba de Huaca* or *Borachero*, and they prepare from its fruit a very powerful narcotic drink called *tonga*. The Indians believe that by drinking the tonga they are brought into communication with the spirits of their forefathers. I once had an opportunity of observing an Indian under the influence of this drink. Shortly after having swallowed the beverage he fell into a heavy stupor; he sat with his eyes vacantly fixed on the ground, his mouth convulsively closed, and his nostrils dilated. In the course of about a quarter of an hour his eyes began to roll, foam issued from his half-opened lips, and his whole body was agitated by frightful convulsions. These violent symptoms having subsided, a profound sleep of several hours succeeded. In the evening I again saw this Indian. He was relating to a circle of attentive listeners the particulars of his vision during which, he alleged, he had held communication with the spirit of his forefathers. He appeared very weak and exhausted.—*American Journal of Medical Sciences, from Tschudi's Travels in Peru.*

90. *Case of Traumatic Tetanus cured by Donovan's Tincture of the Resin of Indian Hemp.* By MATTHEW M'GARVEY, Surgeon.—A man, aged twenty-three, sustained a slight wound by a reaping-hook in the first joint of the two forefingers of the right hand. No danger was apprehended until the seventeenth day, when symptoms of tetanus presented themselves; and on the twenty-first day, when Mr M'Garvey first saw him, the tetanic spasms were frequent and very severe. At seven P.M., and every hour afterwards, until twelve P.M., he was given a dose of from twenty-five to thirty drops of the tincture. After every draught, the frequency and severity of the spasms were diminished. He passed a good night, and next day was much better. The same dose was continued every two hours for three days with steady improvement; and, on the fourth day of treatment, he was able to get out of bed without assistance.—*Dublin Quarterly Journal of Medical Science*, February 1848.

91. *Pharmacy.—Tartrate of Magnesia.* By M. AVIAT.—In our last we noticed the introduction of the citrate of magnesia by the French pharmaceutists as a substitute for the sulphate of the same base. The tartrate of magnesia is also soluble, and, according to M. Aviat, has likewise very little taste. It may, like the other, be made into a lemonade by the aid of lemon syrup. Moreover, this salt is equally active as a purgative, and possesses a great advantage over the citrate in its cheaper price and easier preparation. By adding together 15¼ oz. of tartaric acid, dissolved in 20 lbs. of distilled water, and 3 oz. 1 drachm of freshly calcined magnesia, held in suspension by 15½ oz. of distilled water, a solution of tartrate of magnesia may be obtained, sufficiently concentrated that a dose of 15 oz. of the liquid acts as a certain and easy purgative.—*Journal de Chimie Méd.*, August 1847.

92.—*Oil of Male Shield Fern for Tænia.*—This oil well merits the attention of the profession, so many have now borne testimony to its efficacy as a vermifuge. A woman was admitted into La Charité, having had symptoms of tape-worm for many years. The characters of the worm having been well ascertained, by the exhibition of a dose of castor oil, M. Rayer prescribed seventy-two drops of the ethereal oil of male fern, to be made up into twelve pills, six of which were taken in the morning and six in the evening; two hours after the exhibition of the last pill, 1½ oz. of castor oil were given to the patient, who expelled in numerous fragments sixty-six centimetres of tœnia. The accidents have since completely ceased, and no return of the parasite in the motions has been noticed.—*Braithwaite's Retrospect, from Medical Times*, June 1847.

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

93.— *Observations on the peculiar Diseases to which the Famine of last year gave origin, and on the Morbid Effects of insufficient Nourishment.* By Daniel Donovan, M.D., Skibbereen.—In the above district, whose name has become familiar to every one, famine and pestilence broke out earlier, raged more severely, and committed greater ravages than in any other part of the kingdom. Dr Donovan's ample opportunities of observation here brought him in contact with many forms of disease new to him, and undescribed by medical authors. These he proposes to designate famine cachexia, or lingering starvation; famine fever; famine dysentery; land scurvy; anemic dropsy; stomatitis and pemphigus malignus; abortion and asthenic sterility. Although at all times cases of death occur in Ireland which are traceable to insufficient nourishment, few persons previous to last year had seen human beings die from absolute want of food. In most cases, even those who died of starvation could procure some food, which preserved life until exposure to cold or some other accidental cause extinguished the feeble spark. In many instances diarrhœa, asphyxia, or syncope preceded death, and thus in many cases the death may have been attributed to disease, although it was, in reality, the result of imperfect alimentation.

Symptoms of Starvation.—The persons who have suffered from starvation describe the pain of hunger as at first being very acute, but after want of food for twenty-four hours, the pain subsides, and is succeeded by a feeling of weakness and sinking, especially felt in the epigastric region, with insatiable thirst and distressing feeling of coldness over the whole body. In a short time the face and limbs become frightfully emaciated; the eyes acquire a most peculiar stare; the skin exhaled a peculiar and offensive fetor; and is covered with a brownish filthy looking coating, almost as indelible as varnish. Dr Donovan first supposed this to be encrusted filth, but was subsequently convinced that it was a peculiar secretion poured out by the exhalants of the surface. The sufferer tottered in walking like a drunken man, his voice became weak as in cholera, he whined like a child, and burst into tears on the slightest occasion. Prostration of the mental faculties kept pace with the physical debility. Imbecility, and sometimes complete idiotism were observed; but in no case the mania or delirium described in many instances of starvation in shipwrecks.

The case of a boy aged fourteen is described, who cut the throats of two other children to get possession of some Indian meal, and who, when subsequently seen by Dr Donovan, appeared like a congenital idiot. His faculties have again brightened since he was committed to jail, and has been supplied with food. [It would be interesting, in a medico-legal point of view, to know whether the boy was tried for this crime.] In the young and infant population the natural instincts seemed to be sharpened by the same causes which paralysed the faculties of the adult—babes scarcely able to speak became expert beggars, and infants a few weeks old would drink greedily from any vessel, and attempt to feed themselves.

Post-mortem appearances.—According to Dr Donovan the post-mortem appearances are in no respect peculiar or characteristic. They are in kind similar to those which may accompany various lingering diseases; and their true cause is to be inferred rather from the absence of any pathological indications of other diseases, than from any characteristic peculiarities. Dr Donovan never met with inflammation or erosion of the stomach, described as common in cases of starvation. He supposes that these may occur in persons in health who have been suddenly deprived of food, and he is induced to ascribe it to the action of the gastric juice.—[We doubt this. Erosion by the gastric juice takes place where food has been taken shortly before death. It is not secreted in fasting animals.]

The appearances witnessed were excessive emaciation, total absorption of the fat on the surface of the body, total disappearance of the omentum, and a peculiarly thin condition of the small intestines, which, in such cases, were so transparent, that if the deceased had swallowed food immediately before death, the contents could be seen through the coats of the bowel. In one case Dr Donovan was able to recognise a piece of raw green cabbage in the duodenum of a man who had died of want. Dr Donovan regards this condition of the intestines as the strongest proof of starvation. The gall-bladder was commonly full. The urinary bladder contracted and empty. The heart pale, soft, and flabby. The brain and lungs normal.

Treatment.—Dr Donovan very properly points out the importance of a cautious

return to the use of food. Too much given at once induces vomiting and exhaustion; a stimulating diet, too long-continued, is apt to produce reaction terminating in fever. He found bread and milk, given frequently in small quantities, to answer best. Rice and soups aggravated the diarrhœa which is the most harassing symptom. It was best combated by opium, decoction of logwood, and chalybeates. — *Dublin Medical Press*, Feb. 2, 1848.

94.—*On the Sifting of Flour, and the Composition of Ration Bread.* By M. HAUSSMANN, of the Commissary Department at Metz.—M. Haussmann, among other matters, calls attention to the effect of using coarse flour for ration bread. The flour for ration bread in France, is ordered by law to have ten per cent. of bran, on an average, removed from it by sifting; five per cent. from hard wheat, and fifteen per cent. from soft wheat. Bran absorbs 1·24 of its own weight of water; consequently, bread containing too large a proportion is not only inferior in appearance and nourishing quality, but from its moisture keeps worse, and is apt to become mouldy. Parmentier, in 1779, pointed out the bad qualities of bran bread for rations. M. Haussmann quotes an experiment which shows the advantage that would follow from using finer flour for ration bread. In a small garrison it was found, that when 620 grammes (about 1lb 5 oz.) of bread, made of flour from which twenty-two per cent. of bran was removed, was substituted for the 750 grammes (1lb 9 oz.) of bread made of flour from which fifteen per cent. was removed, which is the ration allowance, the health of the troops was improved by its use. The expense is the same. For some unexplained reason this successful experiment was stopped.—*Annales de Hygiène publique.* Janvier 1848, *in L'Union Médicale*, 22 Janvier 1848. [This is a subject well worthy of the attention of medical officers, especially in stations where intestinal affections are common.]

95.—*Influence of Tobacco on Health.* By Dr BURETTI of Turin.—Dr B., in a paper published in the transactions of the Medico-Chirurgical Academy of Turin, maintains, that all the statements which have been made respecting the pernicious influence of tobacco on the health, either of those who manufacture or those who use it, are mere fables, and that the bad effects ascribed to the tobacco are due to other causes. He in no respect extends these remarks to the poisonous action of tobacco in larger doses. The observations on which these conclusions are founded, were made in a large manufactory at Turin, which employs 600 work-people, of whom 400 are women and 200 men. The work-people sleep in a part of the establishment. Children are not admitted to the work till from twelve to fourteen years old. Dr Buretti gives a detailed account of the mode of manufacture, from which it appears that the work is much less injurious than was supposed, and that the maladies from which the workers do suffer, depend less upon the nature of the substance with which they work than upon other causes; such as excessive fatigue, sudden alterations of temperature, the action of cold and moisture, and the want of ventilation in the work-rooms. Special attention is directed to the effluvia and gases evolved during the fermentation of the tobacco. M. Mellier has supposed, that the workmen absorb nicotine from the air, and undergo a process of slow poisoning. But that is a mere hypothesis; for all the analyses hitherto made of the atmosphere of tobacco manufactories have failed to detect any nicotine in the air. Nicotine is a formidable poison, and would produce rapid effects if absorbed in this way. On the other hand, the diseases which have been treated in these manufactories, have been generally acute inflammations, accompanied by buffy blood, &c., but not of great intensity. The lean condition and yellow complexion observed in tobacco workers are not peculiar to them, but are met with in other artisans. This tint is not met with so much among those who work with the fermenting tobacco, where, if any where, nicotine would be diffused, but occurs chiefly among those who are exposed to the dust of the leaves when they are spread on the ground for the purpose of moistening them. This powder, being dry, contains no nicotine.—[This statement proceeds on the supposition, by no means established, that nicotine does not exist ready formed in tobacco, but is a product of fermentation.]—The yellow tint observed in those who grind tobacco, is owing to dust adhering to the exposed portions of their bodies, and is removable by washing. The females and children are lean, but this is owing to defective food. Those who can afford to support themselves well, are healthy and fat. Acute rheumatisms are frequent among the tobacco workers; they are cured by repeated bleedings. Phthisis is rare among them. Epidemics of typhus and other disorders, when prevailing around,

have been remarked to be less prevalent among the tobacco workers.

The duration of life among them is as great as in other classes of the population. Some of them live to a good old age. Near the manufactory in Turin, at the confluence of the Dora and Stura with the Po, is a paper factory. The proportion of sick is always greater in the latter, owing, no doubt, to the greater humidity to which the paper-makers are exposed. In the tobacco manufactory there is a department for making sheet lead cases for the packages of tobacco. Colic, spasms, convulsions, and other affections caused by lead, having been observed there; but such symptoms are never seen among the tobacco-workers. Further, Dr Buretti does not think that the use of tobacco, either by smoking, snuffing, or chewing, is in the least degree hurtful.—*Annales de Thérapeutique*. Janvier 1848. [No doubt, as is remarked by the *Annales*, there is exaggeration on both sides in the controversy which has been maintained as to the pernicious or innocuous qualities of the *weed*.]

96. *Delirium Tremens connected with Tobacco Smoking.* By Dr Gordon.—The patient, aged seventy-one, had been smoking tobacco to great excess for a number of years. At length, a short time before he was seized—he resolved to abandon the use of it altogether. The day on which he formed this resolution, he smoked in quick succession nine cigars, which was followed by considerable nausea and giddiness for three days. These symptoms now passed off, and his health for a short time felt better than usual; but after this brief interval, he fell into a lethargic state, from which he was with difficulty aroused. This condition was succeeded by the symptoms of a true delirium tremens. He was wakeful, agitated, talkative, and alarmed at imaginary objects around his bed. His pulse was about 85, full, but soft; countenance dejected, with a wild confused look; skin cold and moist; bowels constipated; tongue moist, and slightly coated. Dr Gordon was not able to report the termination of this singular case, as he left the neighbourhood soon after he saw the patient; but, as having a physiological interest, he mentions two phenomena which were reported to him in connexion with it. 1st, The patient previous to this attack had been hard of hearing, while labouring under it his hearing became excellent. 2d, He had also laboured under some difficulty of speech for a number of years, owing to what seemed a partial paralysis of the tongue. When the derangement of the cerebral system came on, he recovered the use of his tongue, and was able to speak distinctly and rapidly.—*American (Western) Journal of Medicine and Surgery*, quoted in *Lancet*, January 29, 1848.

97.—*Wet Nurses and Lactation.* By Dr Schneider of Fulda.—Dr Schneider inveighs strongly against corsets and other pectoral portions of female dress, as a great means of preventing females from making good nurses. The pressure on the breasts of young women weakens these organs, depresses and hardens the nipples, and obstructs the lactiferous ducts. It is, according to Dr S., a very rare thing to find a perfect nurse. If we cannot be sure of finding an unexceptionable nurse, Dr S. recommends Zwierlein's plan of taking a goat as a substitute. He has himself made upwards of thirty trials with children, whose mothers were unfit to suckle their offspring, and has in all of them obtained successful results by making the children draw the milk directly from the teats of the goat. No animal is so well fitted for this purpose as the goat. We are to select a young tame healthy animal, take care not to feed it too well, especially if the child is strong and plethoric, have it carefully rubbed down and cleaned, and give it frequently salt with its meat. A small wooden platform, to which one or two steps lead, is to be erected close to the wall of the room; it must not be polished, that the animal's feet may not slide. To the wall, or a beam of wood, a leather strap is fastened, which, when the goat has mounted on the stage, can be easily secured round its neck, and to prevent it disturbing the child by moving backwards or forwards, its hind legs are to be secured in like manner. Lastly, at the end of the stage there is to be placed a tin dish with a cover, to catch any discharges from the animal.—*Präger Viertel-jahrschrift*, No. 6, 1847.

98.—*Poisoning with Pepper.* Dr Ritter.—A miller, suffering from diarrhœa, took at mid-day a handful of pepper in a glass of brandy, and as the disease persisted, repeated the dose at night, and ate at the same time two salt herrings. The diarrhœa ceased. In the morning after breakfast, he was seized with severe tormina, especially in the umbilical region, with occasional vomiting of green matters. At mid-day the pain was constant, with occasional aggravations, the belly not distended, and moderately tender on pressure. The pulse strong, full, and slow. Face, eyes, and tongue, highly in-

jected. After a full bleeding, the pulse became soft and free. He got almond emulsion with extract of hyoscyamus, milk for drink, and two enemata of gruel and oil. Next day the countenance was collapsed, the belly very painful and distended, and in the right iliac region a red hard painful swelling as large as a fist; the pulse, small, sharp, and very frequent, and severe pain in making water. He was again bled and leeched, anointed with mercurial ointment and the *oleum coctum hyoscyami*, cataplasms applied, and two grains of calomel given every hour. Next day his condition was worse; the eyes sunk and surrounded by a blue circle; the nose sharp; pulse very frequent and small; the vomiting more urgent, and hiccup for some hours; the tumour softer and less tender; but the inflammation obviously extended upwards to the stomach. At night the extremities were cold; the pulse uncountable; hiccup and vomiting, and severe pain in the belly, which lasted till next morning, when he died. A dissection was not allowed. The inflammation proceeded from below upwards, from the pepper not acting powerfully, till it descended to that part of the canal irritated by the diarrhœa.—*Med. Zeitung vom Vereine für Heilkunde in Preussen*, quoted by *Œsterreichische Wochenschrift*, No. 38.

99.—*Overcrowding of the Metropolitan Grave-yards.* By Mr Walker.—Accurate returns have been made of the superficial extent of the parochial and some other burial-grounds of the metropolis, and of the numbers of bodies annually interred in each. The *annual* average number of burials per acre, for the seven descriptions of burial-places comprised in the intra-mural grounds, is stated by these official returns to be 2271. Now, if we divide this by 7, we have the average for each, which gives 324 burials annually to the acre. From the total, we may fairly abstract the burial-places of the Jews, and those of the Society of Friends, which are well conducted. This will give us five species of grounds, with an annual average of 2130 burials to the acre, or an average of 426 for each. The proper number may be estimated as 136 to the acre; in Germany, the average is only 110 burials per acre per annum. Thus, at the first glance, it is evident that our parish grave-yards are made to receive every year three times as many bodies as they ought, and four times as many as are permitted by the laws of well-regulated continental states. The inevitable crowding of our grave-yards may be illustrated in another way. The annual mortality of the metropolis, at a low computation, is 50,000. Now, supposing the burials to be renewed every ten years (and this is the shortest period that should be allowed for the decomposition of the human body), 444 acres would be required, whereas we have only 209. But this is not all. There are 182 parochial grave-yards in London. Of these ony 48 are confined within the proper limit of 136 burials to the acre; the rest exhibit various degrees of saturation, from 200 up to 3000 per acre *annually*. This is scarcely credible, but official returns confirm the truth of the assertion. In very many the annual average per acre exceeds 1000.

It is humiliating to think that a metropolitan parochial ground, St John's, Clerkenwell, stands at the head of these abominations,—indecent, pestiferous in every respect, because when a proportion of 3073 corpses are annually interred in an acre of land, it follows as an invitable consequence that the bodies of the deceased can remain in the ground only five months instead of ten years. Hence the stacking of coffins in deep pits, the brutal dismemberment of bodies, the consumption of coffin wood in many localities, the absolute super-saturation of the soil, which can neither retain nor dissolve the putrescent matters with which it is loaded. Hence the daily scenes which outrage every moral and religious sentiment,—hence the danger to mourners from attending funerals in such places,—hence the insidious infection which (more especially in the warm season) poisons the atmosphere; and thus, by undermining health, or begetting disease, hurries thousands to an untimely end, again to become the subjects of fresh indignities, the centres of infection to survivors, the distributors of pestilential emanations, and the centralizers of disease.—*From Mr G. A. Walker's Fourth Lecture on the Metropolitan Grave-Yards.*

[We are happy to say, that much of the nuisance of which Mr Walker complains, has been obviated in Edinburgh, by the formation of several cemeteries in the outskirts of the city, which serve the double purpose of being both useful and ornamental. In a few instances, however, more especially in the West Church and Greyfriars burying-grounds, the evils pointed out by Mr Walker still prevail.]

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

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I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

100.—*On the Identity of certain Vital and Electro-Magnetic Laws.* By Dr JOSEPH BULLAR.—Dr Bullar points out, from Faraday's experiments, that if a spiral galvanic coil be placed on iron filings, they arrange themselves in lines, passing through the centre parallel to its axis, and then folding up on either side as radii round the edge where they meet. Such a spiral coil, through which galvanic force circulates, he considered to represent the disc around the embryo ; and the iron filings to represent the direction of the capillary vessels, arranged circularly in a plane, at right angles to the disc, by the magnetic force accompanying the galvanic. From comparing the two he draws the conclusion, that in both cases the force at work obeys the same laws ; that the formation of a circular lining disc, by a central force constantly acting, proves the existence of a circular force around that centre, and is analogous to a flat spiral or disc, through which the galvanic force is circulating ; and that this vital force in the disc is necessarily attended by a second circulating force in the direction of radii to it, such as is indicated by the vessels. The actual movements of the cells in this lining process are invisible, as it is one of growth ; but the *forms* produced are explicable on the hypothesis, that the lining force acts in accordance with the laws of a force the direction and relation of which have been ascertained.

If the galvanic arrangement of the wire be that of a spiral tube or helix, iron filings would arrange themselves in a circular line, going through the helix, round on the outside, returning into itself. The steps in the formation of vessels are, that blood is first formed, and when it circulates a tube is formed round it. The current of blood indicates a force through the axis of the tube ; the tube itself indicates a circumferential force around the current, to arrange its materials as a tube. The tubes are arranged circularly, meeting at the heart in the centre, and at the capillaries in the circumference. The lining tube, if it followed electro-magnetic laws, would have (like the helix of wire through which the galvanic force was circulating) a circular force through its axis ; and, conversely, this current would tend to form a tube around itself—supposing always proper materials. The vital force has evidently appropriate materials in the form of cells. Those cells, which, exposed to oxygen, become converted into red globules, are moved in a current ; thus showing that they are fit matter for the influence of vital force in one direction, and that such a force is moving them ; whereas the smaller cells are arranged round the current as a tube, thus showing a second force at work around the first. There is a current in one direction, and a tube around it ; neither tube nor current can be explained without the assumption of a moving power ; both are readily explained by two circular forces having the same relation to each other as the electro-magnetic. What Goodsir calls centres of nutrition, the author denominates centres of force ; and, according to the laws of this force, there would be a common centre, bringing all these isolated and secondary centres into one comprehensive whole. The blood corpuscles are also nucleated centres, each having its own central living force ; and thus their relation to the vital force whilst circulating, is analagous to that which a magnet holds to the electro-magnetic force moving it. Both are bodies containing within themselves these forces.

The author shows the application of his views to other facts in physiology—such as, the formation of new bloodvessels ; the tubular form of vessels and ducts

among cells ; the circulation through capillaries, independently of the contraction of their coats, or of the propulsive power of the heart, &c. &c. The law proposed as the solution of these lining processes is, that, whenever there is a central moving force, there is a power at work around, and to and from that centre, capable of arranging fit matter as tubes, and of circulating fluid to a certain extent through them, and that the tubular formation is owing to a vital power identical in its direction with the galvanic ; and the radiated arrangement of these vessels, and the circulation of fluid through them, are dependent on a power accompanying the former, and identical in its direction with the magnetic force. The conclusion was not drawn, that the vital and electro-magnetic forces were the same, but that the direction and relation of both forces were identical.—*Report of the Brit. Association*, 1846.

101.— *Ozon, a probable Atmospheric Cause of certain Diseases.* By M. SCHÖNBEIN.—M. Schönbein has for some years directed attention to a substance which is disengaged from the points of electric conductors, and also from the wires of galvanic batteries. This substance he believes to be identical with that which is formed when phosphorus is in contact with moist air. He has named it *ozon*, on account of its penetrating odour. It is a powerful oxydizing agent, and acts upon silver at ordinary temperatures. It has a power, like that of chlorine and bromine, of irritating the respiratory mucous membrane, and producing catarrh. M. Schönbein thinks that it is constantly liberated in greater or less quantity in the atmosphere, according to the development of electricity. He has ascertained it to be generally most abundantly developed during winter while there is snow, or during stormy weather in summer. From these circumstances, and from its properties in respect to the respiratory functions, M. Schönbein is disposed to attribute to this substance the production of some of those epidemic catarrhs which so evidently depend on atmospheric causes. He has made observations on several epidemics occurring at Basle, and has found their development and decline to present a distinct relation to the quantity of this substance present in the atmosphere.

The means which M. Schönbein employs to test approximatively the amount of ozon in the atmosphere are very simple. He suspends a few sheets of paper, which have been dipped in a solution of starch and iodide of potassium, in the air which is to be tested. In an atmosphere where no ozon is developed, as is the case under a bell-glass, these will remain unchanged for an indefinite length of time ; but whenever this substance is present, a blue colour is developed in a moist, and a brown colour in a dry atmosphere. The time required for the coloration varies from a few hours to as many days, being dependent on the quantity of ozon present ; in a chamber well secured from drafts, the coloration is very slow ; whereas in a free current of air, and in certain states of the weather, it is very rapid. Sulphurous acid and sulphuretted hydrogen gas have the property of destroying ozon ; so that in the neighbourhood of public necessaries, and other places where the air contains much of these substances, M. Schönbein finds the papers to retain their colour permanently. It would be interesting to know if workmen, or others who are much exposed to the influence of sulphurous vapours, or mephitic emanations containing sulphur, enjoy any peculiar immunity from epidemic catarrh. — *Gazette Médicale de Paris*, No. 7, 1848, *from Zeitschrift für Rationelle Medizin.*

[As ozon has been little attended to in this country, it may not be out of place to give our readers an account of it in a very few words. It has been long familiar to persons engaged in electrical experiments, that a peculiar smell is given off by the machine in operation, which somewhat resembles, and is identical with that pervading buildings which have been struck by the electric fluid. Schönbein some time since published some experiments, in which he showed that the same smell could be communicated to water by a strong galvanic current, and by a variety of chemical processes, and he supposed it to be caused by the presence in the water of an extremely minute quantity of a new element, to which he gave the name of ozon. In this opinion he was decidedly in error ; but his observations have led to more extended experiments by Fisher, Williamson, De la Rive, and Marignac, and the conclusion to be drawn from their researches is, that ozon is in reality oxygen in an allotropic[1] condition different from that in which it usually exists. When in its ordinary condition, oxygen shows no

[1] Allotropism is a term introduced by Berzelius to express the fact, that certain elements are capable of existing in two or more conditions, in which they possess different physical and chemical properties. A familiar example of it is seen when sulphur is melted at a high temperature ; it then becomes dark brown and tenacious, and may be drawn out into threads like Indian rubber. It has then passed into a different allotropic condition.

disposition to react on a great variety of substances ; but when converted into ozon its affinities are extraordinarily intensified. It then rapidly decomposes iodide of potassium, separates its iodine, and finally, if the action be sustained for a sufficient length of time, converts it into iodic acid, which unites with the potash. It also combines directly with silver, and raises it to the state of *peroxide*, combines rapidly with many other metals, and possesses bleaching powers comparable to those of chlorine. We doubt much whether oxygen in the allotropic condition, which constitutes ozon, is likely to produce the effects which Schönbein attributes to it in the above paper. Its discovery, however, is of the highest importance in theoretical chemistry, and seems even likely to become of practical importance, as it would appear from the experiments of Leuchs that it may be economically substituted for chlorine as a bleaching agent.]

102.—*On a Peculiarity in the Growth of Firs.* By Professor Rossmässler.—Professor A. E. Rossmässler has lately pointed out the curious fact, that firs are subject to a peculiarity in the growth of their wood, which causes them to split obliquely instead of perpendicularly, and that this occurs for instance in Pinus Sylvestris, throughout whole estates, in Bavaria, and it is necessary to raise young plants from foreign healthy seed, since the seeds of these twisted firs inherit the peculiarity of the wood.—*Annals of Natural History.* Feb. 1848.

[The above fact is interesting as an example of hereditary peculiarities of the nutritive process in plants.]

103.—*On Reparation of Injuries in the Planariæ.* By Dr Leidz.—Some experiments which I performed upon *Phagocata*, confirm the statements that the Planariæ are capable of repairing injuries. When an individual is cut in two, both parts after a time become distinct and perfect animals. Division carried to a greater extent in some instances, results in as many perfect animals as there are parts; but generally I have found that, when cut into more than three or four pieces, the intermediate pieces are apt to die, and sometimes the extremities do not survive.—*Dr Leidz in Prac. Acad. Med. Scien. Philadelphia.*

104.—*On the Vertebral Column of the Hydrarchus.* By Müller.—Müller in describing the hydrarchus, a fossil mammal belonging to a peculiar extinct family, and found in the tertiary formation in Alabama, says, "the vertebral column is very peculiar in its structure. The cervical vertebræ, probably more numerous than in any other mammal, are without perforations in their transverse processes ; the ribs are only attached to the transverse processes of the vertebræ ; at the central and posterior part of the column, the bodies of the vertebræ are unusually long, and must, both at the anterior and posterior part of the extremities, have been cartilaginous, inasmuch as we find here beneath the bony shell a mass of pure stone, while the central part of these vertebræ consist wholly of bone."—*Silliman's Journal for* Nov. 1847.

[The above fact is interesting, as bearing upon some theoretical questions in osteology, especially upon the nature of the cervical ribs, and upon the principles on which the enumeration of the cervical vertebræ should be founded.]

105.—*Occurrence of Blind Insects in the Styrian Caves.* By Mr Spence.—At a recent meeting of the Entomological Society, a letter was read from Mr R. Spence announcing the discovery by Professor Schiodte of as many as twenty species of blind insects of different orders and genera, and all new, in the caves of Styria; so that it would appear that there exists a subterranean fauna of blind animals. Ten of these are coleopterous. It was mentioned that a carabideous genus without eyes has lately been described by the German naturalists, and that various blind insects and spiders have been found in the mammoth caves of Kentucky.—*Annals of Nat. History.* Feb. 1848.

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

106.—*New Description of the Sphenopalatine Ganglion.* By M. Gros.—Meckel considers this ganglion to be a swelling of the fifth pair, analogous to the Gasserian ganglion, and similar to those on the posterior roots of the spinal nerves, while, at the same time, he proclaims it to be a type of the sympathetic system. A degree of confusion has thus been introduced, which succeeding anatomists have not completely removed. M. Gros, in a memoir lately read to the Academy of Sciences in Paris,

clearly describes the differences between these two orders of ganglions. He points out that Meckel adhered to a simple appearance, and that his ganglion is united at one point to the naso-palatine radiations of the fifth pair, which are always distinct to the naked eye. Comparative anatomy leaves little doubt on this subject. The error of Meckel and other anatomists originates in their having sacrificed a portion of the organ, the *free portion*, unknown until now, and which M. Gros denominates the orbital, or orbito-cavernous portion. Rising towards the summit of the orbit, internal to the superior maxillary nerve, this portion sends out a crowd of nervous branches, distributed within the orbit and cavernous sinus. Of these, not less than sixty may be counted in the horse, thirty in ruminants, fifteen in man, ten in monkeys, eight in the dog, and four or five in the rodentia. It is this portion which especially communicates to the ganglion its character of individuality and independence. The other portion, which embraces the naso and palatine nervous trunk, or which surmounts it, is the ganglion of Meckel, properly so called, and may be denominated *naso-palatine*. The gray branches which are detached from it, communicate immediately with the white radiations of the fifth pair, or are lost in the nostrils and velum palati. The author then enters into a minute description of the relation of this ganglion to the different nervous plexuses of the region, and points out the errors which Meckel, from his imperfect notion of this structure, was led to entertain with respect to the sympathetic system. But we must refer anatomists interested in this subject to the memoir itself.—*L'Union Médicale*, Mars 11, 1848.

107.—*Experiments on Animal Heat.* By Dr DEMARQUAY.—The author has made numerous experiments on animals, with the view of ascertaining the modifications of the animal heat—1*st*, by pain; 2*d*, by loss of blood; 3*d*, by the ligature of certain vessels; 4*th*, by inflammations; 5*th*, by strangulation of the intestines; 6*th*, by the administration of various poisons. He arrives at the following conclusions:—Pain is attended by an increase of temperature: hemorrhage, when rapidly fatal, produces little or no change in this respect.

The ligature of the abdominal aorta causes, in a few hours, a diminution of temperature, of 8° to 10° (18° to 22·5° F.); that of the femoral artery caused, in the thigh, a fall of temperature of only 2°—5° F. As a general result, the ligature of veins causes less diminution of heat than that of arteries.

Every external inflammation is attended by an increase of temperature, both general and local: but the local temperature, in a part far from the centre of the circulation, never equals the internal temperature, *i. e.*, of the rectum. The ligature of the vessels of a part, either before the excitement of an artificial inflammation, or during its presence, does not prevent or modify the increase of temperature in the inflamed part.

Strangulation of an intestine produces a rapid and general fall of temperature. The reduction is greater when a loop of intestine is included in the ligature, than when this is passed circularly round any portion of it. The fall of temperature is also greater in proportion as the ligature is placed near the stomach.

Among poisonous agents—digitalis, belladonna, croton oil, and strychnine, produce a pretty rapid increase of temperature; while a contrary effect is produced by cyanide of potassium, corrosive sublimate, arsenic, tartar emetic, muriate of morphia, and ammonia. The inhalation of ether produces a fall of temperature, which begins with insensibility, and goes on progressively when the inhalation is continued, so as to produce death of the animal.—*Archives Générales de Médecine*, Dec. 1847. *From the Theses of Paris for* 1847.

108.—*On the Channels by which Urea is eliminated after the extirpation of the Kidneys.* By M.M. BERNARD and BARRESWIL.—When the kidneys are extirpated in animals, urea accumulates in the blood: but several days pass over before any appreciable quantity is present. The authors, supposing that during this period the urea must have some other channel of excretion, have analysed the biliary and intestinal secretions at different periods after extirpation of the kidneys in animals. They find that, so long as the animal remains lively, the intestinal, and more especially the gastric, secretions are increased in quantity, and, instead of periodic, become continuous; acquiring at the same time a considerable impregnation of ammoniacal salts. The subsequent diminution of the intestinal secretions, and of their ammoniacal ingredients, is accompanied by the first presence of urea in the blood, and the first symptoms of its poisonous effects. As the salts of ammonia are not normally constituents of the intestinal secretions, it is clear that this is a vicarious elimination of nitrogenous effete matter: and

that the urea is secreted in substance by the intestinal mucous membrane, and afterwards transformed into ammonia, is rendered highly probable by the fact, that chemically these substances are interchangeable, and that urea, when introduced into the stomach of a living dog, is always replaced by ammoniacal salts. *Journal de Pharmacie*, Feb. 1848. *From Archives Générales de Médecine.*

109.—*On the Effects of the Introduction of Common Salt directly into the Stomach.* By M. Bardeleben of Giessen.—On introducing, by a fistulous opening through the abdominal parietes, a small quantity (45 grs.) of domestic salt into the empty stomach of a dog, a series of phenomena was constantly observed, which does not take place when the same quantity is taken by the mouth. Every part of the membrane in contact with the dry salt secretes very rapidly a nearly colourless mucus, varying in quantity. The stomach is then thrown into brisk contraction; the animal is agitated and uneasy, and is seen to swallow large quantities of saliva. The respiration is accelerated, and in four or five minutes vomiting is produced. After the vomiting has ceased, the gastric juice is frequently, though not invariably, alkaline. This alkalinity of the gastric secretion is frequently met with in the empty state of the stomach, or even after the introduction of indigestible substances, such as sponge or pebbles; but during digestion the secretions of the stomach are always acid. The above described action of salt is peculiar to it; for pepper, which is regarded as a much more irritating substance, is very well borne, and increases the gastric secretions without provoking any of those contractions and vomitings described.—*Archives Générales de Médecine*, December 1847.

110.—*Oxalate of Lime a Constituent of the simplest Cellular Plants, and of the Secretion of the Mucous Membranes.* By Dr C. Schmidt of Dorpat.—In yeast, which had been left to itself for three weeks, the author observed the formation of a crop of beautiful crystals of oxalate of lime. By a series of careful experiments, he ascertained that this salt existed ready formed in the yeast cells, and could be extracted from them when perfectly fresh; and he concludes, from various circumstances, that it must be dissolved in the fluid contents of the cell, as a compound of oxalic acid, albumen, and lime (*oxalsaures albuminkalk*).

As regards the elimination of oxalate of lime from the system, the author considers it impossible that, in the oxalic acid diathesis, it can be found in the stomach, experiment having shown that, when the oxalate of lime is swallowed, it is never found in the urine, the oxalic acid being oxidized in its passage through the system, and thrown off by the lungs and kidneys in the form of carbonic acid. He has never in any case found oxalate of lime, either in the saliva or gastric juice, but very frequently in the urinary sediments. Now, oxalate of lime is totally insoluble in fresh urine, and as, from the structure of the secreting portion of the kidney, it is impossible for the urine to carry with it any insoluble matter, he infers that the oxalate must have a different source from the urea and uric acid, &c., of that fluid; and he concludes that it is a secretion of the mucous membrane of the kidney, and even of the bladder itself, from which it is probably thrown off in the form of the soluble compound above-mentioned, and precipitated in the insoluble form by contact with the urine. In proof of this position, he points out that morbid increase of the vesical mucus is always attended by an increase in the oxalate of lime. That this salt is also found in the bile, where it is held in solution by the biliary mucus, and is precipitated when that substance undergoes decomposition, but not till then, as the bile does not, like the urine, possess the property of bringing it into the insoluble state. And lastly, which is his strong proof, he has invariably found the oxalate of lime present in the mucous membrane of the uterus during pregnancy.—*Annalen der Chemie und Pharmacie*, vol. lxi.

111.—*Researches on the Bile of the Pig.* By Strecker and Gundelach.—Thenard, long since, pointed out that the bile of the pig is precipitated by acetic acid; and Gorup Besanez, who has recently been occupied with its study, has concluded, from his experiments, that it consists principally of choloidic acid. The authors have, however, ascertained, that its chief constituent is the soda salt of a new acid, to which they have given the name of hyocholeic acid. Pig's bile contains about 88·8 per cent of water, and the solid contents consist of:—

Mucus,.....	5·4
Hyocholeate of soda,.....	74·8
Fatty matters, and cholesterine, with a small quantity of hyocholeate of soda,.....	19.8
	100.0

The aqueous solution of the bile, purified from mucus and fatty matter, is per-

cipitated by chlorides of calcium, barium, and iron ; by salts of copper and manganese, acetate of lead, nitrate of silver, and chlorides of tin and mercury ; and all of these precipitates are soluble in alcohol.

In order to obtain the hyocholeate of soda in a state of purity, the bile, as it is obtained from the gall-bladder, is mixed with crystallized sulphate of soda, and subjected to a moderate heat, as the sulphate dissolves the hyocholeate of soda, which is insoluble in a saturated solution of that salt, is separated. After washing with a saturated solution of sulphate of soda, it is dried, extracted with absolute alcohol, decolorised by animal charcoal, and precipitated from the solution by means of ether. It is then a white powder, which cannot be made to crystallize, with a bitter and persistent taste. Analysis gives, for its formula, $C_{54}\ H_{53}\ NO_{10} + Na\ O$.

From this salt the acid is obtained by the addition of sulphuric acid, which precipitates it, and it is purified by dissolving in alcohol, and throwing down by means of water. It is a white resinous substance, which fuses in warm water, and presents a silky aspect ; after some days' exposure to heat in the water bath, it becomes solid, and then does not melt until the temperature rises above 248°. It is scarcely soluble in water, and quite insoluble in ether ; alcohol, however, dissolves it readily, and the solution has an acid reaction. It is easily soluble in ammonia, the caustic alkalies, and their carbonates. When treated with sugar and sulphuric acid, it gives the purple coloration which is also obtained with ox bile. The analysis gives for the acid the formula $C_{54}\ H_{43}\ NO_{10}$. The acid is therefore anhydrous, and does not contain an atom of water in the place of the base in its salts.

The salts of this acid are all amorphous, with the exception of that with ammonia, which is obtained by the addition of a salt of ammonia to the hyocholeate of soda. It deposits, in the form of a silky powder, composed of microscopic needles, readily soluble in water, but insoluble in solutions of ammoniacal salts. Its aqueous solution is partially decomposed by boiling.

Hyocholeic acid is possessed of much greater stability than the constituents of ox bile, and may be boiled for a long time with caustic potass without undergoing decomposition ; it is only when the alkali becomes nearly monohydrated, that it is decomposed with the evolution of ammonia. Treated with nitric acid, it gives the same products as cholesterine and choloidic acid.

The bile of the pig differs from that of every animal hitherto examined, in the total absence of sulphur, and consequently of taurine, which is so important a constituent of ox bile.—*Annales de Chimie et de Physique*, Jan. 1848.

III.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

112.—ROKITANSKY *on the Morbid Appearances of Fat.*—Rokitansky arranges the morbid appearance of fat in twelve subdivisions :—

1. The occurrence of fat in the fibrinous clots of blood found in the veins, a consequence of a diseased condition of the serum of the blood, arising either spontaneously, or from infection with inflammatory products.

2. The fatty metamorphosis of the coagula similarly developed in the capillary system—what is termed deposition or metastasis.

3. The occurrence of fat in fibrinous and albuminous inflammatory products ; as, for instance, in exudations, and especially in pus. This may be best observed in the exudations occurring on serous membranes.

4. The fat occurring in the albuminous and fibrino-albuminous products, formed in the kidneys in Bright's disease. The spots at which the actual process of fatty transformation are proceeding, are generally perceptible to the naked eye as faintly white, fatty, shining, and generally rather turgescent points.

5. The occurrence of fat in lardaceous infiltration of the liver. The lardaceous blastema appears at points to be opaque, and of a faint white, or whitish-yellow tint.

6. The occurrence of fat in tubercle, during its incipient softening, as well as in the surrounding masses of crude fibrin as they also soften.

7. The occurrence of fat in colloid substance, which is especially observable in colloid of the thyroid gland. In the more consistent forms of colloid it may be remarked by the naked eye, as forming opaque, pale white, or whitish-yellow spots.

8. The occurrence of fat in cancer, where it forms emulsive compounds with albumen, and soapy, glutinous compounds with bases—the saponifying process of cancer. The points from which the process commences, are very frequently the yellow

fibrinous masses, which either penetrate the mass in the form of a reticulum, or constitute enveloping accumulations.

9. The occurrence of fat in what is commonly designated the atheromatous process, in the depositions on the inner surface of arteries, and in the soft groundwork of the concretions sometimes found in veins.

10. The fatty conversion of the fibrous blastema and tissue in fibrous tumours and fibrous exudations.

11. The fatty degeneration of the circular fibrous coat of the arteries, partly pure, and partly combined with, and dependent on, the deposition and its metamorphoses—atheroma and ossification.

12. The occurrence of fat in the muscles of animal life, for instance in the heart, manifesting itself by an apparent conversion of the muscular fibrillæ into molecular fat, and accompanied by the disappearance of the transverse striæ, and by the swelling of the sheaths.

Whether milky-looking blood, so far as this appearance depends on fat, and whether the secretion of fat from the intestinal canal, should find a place in this class, are points which cannot be decided without more accurate observation and investigation.

The metamorphosis into fat affects (as must be understood from the remarks we have already made) crude fluid and solid blastemata, such as are in various stages of development into tissue, and tissues that are perfectly formed.....It must be regarded as a favourable event, since it reduces many kinds of tissue to a condition in which they can be more readily resorbed and reassimilated; further, it is the basis of the processes of involution, destruction, and death of the structure in question.

In regard to the last property, it is very frequently combined with the so-called processes of ossification and cretefaction occurring in blastemata and tissues—processes which present a striking analogy.

The fats occurring as the consequence of these metamorphoses may present many differences. In most cases, we find fluid fat in a finely-divided molecular condition, or in drops, which are sometimes comparatively large, clear, and strongly refracting, and sometimes more opaque, yellow, and glutinous. Cholesterin is very frequently found in a crystalline state in exudations, tubercle, colloid, cancer, and especially in atheroma of the arteries.—*Handbuch der Pathologischen Anatomie, and Brit. & For. Med. Chir. Review*, (Pp. 287-90.)—January 1848.

113.—*On Certain Pathological Conditions of the Blood and Urine in Gout, Rheumatism, and Bright's Disease.* By Alfred B. Garrod, M.D.—The object of the author's researches is to prove that—

1st—In gout the blood always contains uric acid, and that this body can be crystallized from that fluid in the form of urate of soda.

2d—That the uric acid is diminished or absent in the urine immediately preceding the gouty paroxysm.

3d—That in patients subject to chronic gout with tophaceous deposits, the uric acid is always present in the blood, and deficient in the urine, both absolutely and relatively to the other organic matters, and that the chalk-like deposits appear to depend on an action in and around the joints, &c., vicarious to the "uric acid secreting function" of the kidneys.

4th—That the blood in gout sometimes yields a small amount of urea, (no albumen being present in the urine).

The author next spoke of some experiments made on the blood of the sheep, and of birds. Sheep's blood was not found to contain uric acid, and even from the blood of the pigeon, whose urine consists almost entirely of that substance, none could be obtained. Human blood, from patients in tolerable health, was always found to yield a trace of uric acid, but a quantity exceedingly minute, compared with the amount in gouty blood.

The author further ascertained, that in acute rheumatism the blood contained no greater amount of uric acid than in health, and that no urea can be extracted from it. In Bright's disease the urea was much increased in quantity in the blood; the uric acid being sometimes increased, and sometimes not. He is led, from his researches, to consider uric acid as formed naturally in the blood, and merely secreted by the kidneys; instead of being a product of the urinary secretion, as has been often supposed.—*Medical and Chirurgical Soc. of London, from the Lancet*, Feb. 26, 1848.

114.—*On the Variations in the Amount of Phosphatic Salts in the Urine in Health and Disease.* By Dr Bence Jones.—"Mulder has shown, that in inflammation, one of the albuminoid constituents of the blood passes into a higher state of oxidation than that in which it usually exists. Oxides of protein, as he has called them, form the inflammatory crust. Indeed, the whole of the fibrin of the blood is changed into these substances. This alone would give us some reason for expecting, that in inflammations of particu-

lar organs, the constituents of these organs would be affected in a similar way. For example, that in inflammations of the brain, we should find the phosphorus of the phosphorized fats oxidized, forming phosphoric acid.

"Now, after a long-continued experiment, which I have been enabled to make on the appearance of phosphatic salts in the urine, the result of nearly a hundred cases of disease, and of many hundred quantitative analyses, has been, that acute affections of the nervous substance, organic and functional, are the only diseases in which an excess of phosphatic salts can be proved to exist in the urine. By phosphatic salts, I do not mean the earthy phosphates alone, but the alkaline phosphates, as well as the earthy ones. I obtained and weighed not only the earthy phosphates, but the earthy and alkaline phosphates together—thus determining the total phosphatic salts present in the water. If it could be obtained, the water first passed in the morning was used for analysis; for I found it impossible to obtain, with any approach to accuracy, the whole quantity passed in the twenty-four hours. Had this been possible, it is probable that chronic diseases would have furnished me with positive results.

"It was necessary, before beginning my experiments on disease, to trace the variations and their causes in the state of health.

"1. I found that the earthy phosphates varied soon after food from 1·91 per 1000 parts of urine, specific gravity, 1033·2, to ·97 per 1000 urine, specific gravity, 1027·3.

"Long after food, they varied from ·75 per 1000 urine, specific gravity, 1028·0, to ·20 per 1000 urine, specific gravity, 1028·2.

"The alkaline phosphates, long after food, and soon after exercise, vary from 8·10 per 1000 urine, specific gravity, 1028·0, to 6·50 per 1000 urine, specific gravity, 1022·8. Soon after food, the quantity varied from 6·67 per 1000 urine, specific gravity, 1025·5, to 4·72 per 1000 urine, specific gravity, 1033·2.

"Sulphate of magnesia, chloride of calcium, or lime water, taken into the stomach, increased the earthy phosphates at the expense of the alkaline phosphates. After sulphate of magnesia had been taken as medicine, the earthy phosphates were found to increase as high as 2·99 per 1000 urine, specific gravity, 1027.6; and in a second case, up to 2·93 per 1000 urine, specific gravity, 1026·2. The amount of alkaline phosphates was found by experiment to be chiefly influenced by the diet, and to a less extent by exercise. —*Philosophical Transactions*, 1845. I then passed on to the amount of phosphates in disease. I found the variations in the earthy phosphates to be almost independent of the nature of the disease.

"2. In fractures of the spinal column, and in paraplegia, the total amount of the phosphatic salts was slightly above the healthy standard at the early period. When chronic, the total quantity of phosphatic salts was lower than natural.

"3. In some acute diseases, as acute inflammations and fevers, showed no increase.

"4. In some chronic diseases, as Bright's disease, dropsies, scrofulous diseases, exostosis, there was no increase. One case of mollities ossium presented a marked exception.

"5. In chronic diseases of the brain, and in chronic or even acute diseases of the membranes, there was no increase of phosphates.

"6. In fractures of the bones of the skull, when any inflammation of the brain supervened, there was an increase in the total amount of phosphatic salts. When there were no head symptoms, no increase of phosphates was observed, even though other acute inflammations supervened.

"7. In the general paralysis of the insane, no increase of phosphates was observed. Other insane patients presented nothing very remarkable.

"8. In acute inflammations of the brain, there was an excessive amount of phosphates secreted. When the acute inflammation being chronic, no excess was observable.

"9. In some functional diseases of the brain, an excessive amount of phosphates was secreted; this ceased with the delirium. In other cases of delirium, the phosphates were found to be greatly diminished."—*Lancet*, July 29, 1847.

115.—*Emphysema of the Lungs.*—Rokitansky considers the dilatation of the air-cells in emphysema to be produced by too deep and vehement inspirations. Hamernjk, on the other hand, ascribes this dilatation to the expiratory act when this is sudden and forcible. He supposes that the area of the bronchi, and their ramifications, may be represented by a cone, whose apex or smaller extremity corresponds to the large bronchi at the root of the lung; and that hence the column of air in forcible expiration is retained in passing the larger bronchi, and pressure is exerted backwards towards the air vesicles, which thus become abnormally distended and relaxed. This will

be the more apt to occur when the bronchi are clogged by mucus. According to Hamernjk the inspiratory act can never produce emphysema, because the ingress of air into the vesicles is regulated by the expansion of the walls of the chest, and not by pressure acting within the air passages so as forcibly to distend the air-cells.—*Hannoverische Annalen*, 1847.

IV.—PRACTICE OF MEDICINE.

116.—Hebra *on Skin Diseases.*—(*Continued from* p. 35.)

c. Purulent exudations.

Hebra calls them all *impetigines*, and includes those which have an acute course. The pustules are the characteristic symptom, and the three varieties of pustules, form here the principle of division.

1. *Impetigo achor.*—Small pustules seated in the follicles, accompanied or not by an inflammation of the skin, acute or chronic; at first they are level with the skin and perforated by a hair, afterwards the epidermis is burst through, and the pus mixed with sebum dries as a honeylike yellow crust; this is thrown off, and the epidermis becomes regenerated. It is distinguished from eczema by no infiltration being perceptible after the loosening of the crusts. It is localized on the hairy scalp, forming the *Tinea mucosa, Porrigo favosa muciflua* of authors, and may either occupy the entire scalp (*achor mucosus*), or exist in isolated groups (*achor granulatus*). It is distinguished from *Favus* by the favous efflorescence being seated not on, but in the skin. On the face, when it affects the hairy parts, it has been called *Tinea barbæ, crusta lactea, Mentagra.* It arises from the same causes as *Eczema;* the prognosis is, however, more favourable, and the treatment simpler; it is often sufficient merely to remove the crusts, or the cold douche may be applied, or an ointment of sulphuretum iodi, ʒ ss—ʒ j to the ounce of lard, or an ointment of zinc.

2. *Impetigo psydracion.*—The pustules, product of an inflammation and ulceration of the follicles, or of a purulent metastasis to the skin, are round or irregular as one or more follicles are engaged. The pus dries to greenish scabs; the green colour is not, however, diagnostic, as the crusts of *I. achor* of long standing, and treated by fomentations, acquire a greenish hue, and those of all the three varieties may have a brown colour from admixture of blood by scratching. Various subdivisions have been made from the arrangement of the pustules, as *sparsa, confluens,* &c. The *I. erysipelatosa s. faciei rubra,* begins with a slight erysipelatous redness without swelling, which disappears on the formation of the pustules; a more chronic form going under the same name, consists in each pustule being surrounded by a red halo, these halos coalescing as the pustules increase in number. Both frequently follow other skin diseases, or are formed metastatically through the pyæmia in phlebitis, as occurs in puerperal or glandered patients.

In these latter cases, the treatment can only be general; in ordinary cases, the same treatment as for *I. achor* suffices.

3. *Impetigo phlyzacion,* called generally *Ecthyma.* Almost exclusively confined to the extremities, forming large round pustules surrounded by a halo, which change to dark brown crusts, beginning at the centre; they are almost always isolated, and may be seen in different stages at different places. It may be confounded with *Rupia,* but this begins with a vesicle, has always larger crusts, and is usually equally advanced at all places, occurring likewise over the whole body. It may become developed after the external use of tartar emetic, usually, however, occurs in decrepid and badly nourished individuals. In the higher ranks it is extremely rare; good nourishment, baths, and fomentations, have in most instances proved successful.

Hemorrhagies form the 5th Class.

Here also has Hebra endeavoured to simplify the hitherto complicated nomenclature. Every escape of blood into the substance of the skin, although caused by laceration or bruise, he calls *Purpura.* Hence the redness is not always visibly altered by the pressure of the finger; the efflorescence accompanying these effusions may be macular, papular, bullar, or vesicular. If the hemorrhagic spots resemble flea-bites, they are called *petechiæ,* if they be striped, *vibices,* if they extend over large surfaces, *ecchymoses.*

Idiopathic Hemorrhagies are—

1. *Purpura traumatica.*

2. *Purpura febrilis simplex.*—A form of cuticular apoplexy which occurs in plethoric individuals, particularly drunkards.

3. *Purpura senilis.* The same disease in old people.

Symptomatic are—

1. *Purpura febrilis.*—Appears to arise

from a sudden alteration of the blood, particularly great defibrination. After considerable fever, lasting twenty-four hours, ecchymoses appear in the region of the stomach, afterwards on the superior and inferior extremities, and in the course of three or four days, if death have not earlier occurred, the entire body is covered with them; after some time a disagreeable stench is developed in the atmosphere surrounding the patient. Hemorrhagies into all the organs are found on dissection.

This form arises most commonly after bites from poisonous snakes.

2. *Purpura hæmorrhagica seu morbus maculosus Werlhofii.*—This disease arises suddenly, but without fever, and hemorrhage from some opening is the first symptom, almost simultaneous with this ecchymoses appear on the skin; after fourteen days or three weeks, the bleeding and disease stop without the occurrence of fever, and without any treatment.

3. *Purpura rheumatica, seu Roseola rheumatica, seu Peliosis rheumatica,* after a few days pain in the joints, particularly the knee, round red stains, papulæ, and ecchymoses occur in its neighbourhood, and extend along the extremities only; they become yellow in a few days from absorption, and in a few weeks the disease departs likewise without treatment.

4. *Purpura scorbutica.*—Here the hæmorrhage is only one symptom of the disease; the rest are well known. Its appearance through the skin causes the peculiar yellow cachectic appearance of the patients. Alteration of their mode of living is more productive of cure than the employment of acids.

5. and 6.—*Purpura typhosa* and *exanthematica.*—(*To be continued.*)

117.—*On Albuminuria independent of Renal Disease.* By Dr FINGER of Prague.—Among about 600 medical cases of various kinds in the general hospital at Prague, the urine was found to contain albumen in 155. Among these were—

Tuberculosis,	186 Cases.	Albuminuria in,	46
Typhus,	88 ...		29
Puerperal Fever	46 ...		32
Carcinoma,	14 ...		6
Chlorosis,	6 ...		2
Acute Rheumatism,	18 ...		0
Ague,	10 ...		1
Pneumonia,	33 ...		15
Pleurisy,	14 ...		2
Peritonitis,	6 ...		2
Chronic Catarrh,	16 ...		3
Diarrhœa,	65 ...		8
Disease of Heart	18 ...		7
Epilepsy,	2 ...		2

The remaining cases were 3 of chorea, 6 of paralysis, 2 of tetanus, and 3 of hysteria; in these no albumen was found.

Of the 46 cases of tuberculosis with albuminous urine, 35 died; in 19 of these there had been œdema of the lower extremities, leading to a suspicion of granular disease of the kidney, which was nevertheless found to exist in 2 cases only.

Of the 29 cases of typhus, 17 died; disease of the intestinal glands was present in all, combined in 2 cases with pneumonia; the kidneys were sound in all the cases. The albumen appeared in the urine generally from the 16th to the 25th day, while the disease was on the increase or at the height; in those which recovered, it uniformly declined and disappeared during the convalescence.

The large proportion of cases in which puerperal fever was accompanied by albuminous urine, is explained by the admixture of the urinary and lochial discharges; in 6 cases, however, which were fatal from peritonitis, and in which the kidneys were sound, the albumen continued to present itself in the urine after the disappearance of the lochia.

In 4 of the 6 cases of cancer, the albumen was evidently from the admixture of uterine discharges. The kidneys were sound in all.

In 9 of the cases of pneumonia, the albumen disappeared from the urine during convalescence. In 6 which died, the kidneys appeared sound.

Dr Finger is disposed to conclude, that in cases like the greater part of the above, where albumen appears in the urine along with a fibrinous or purulent exudation into some organ of the body, it is in consequence of these exudations being re-absorbed into the blood, and evacuated as effete matter by the kidneys. In support of this view, he gives three cases where albumen appeared in the urine simultaneously with the formation of abscesses in different parts of the body; and in two of which it was observed to disappear rapidly on the abscess being opened and the pus evacuated.

Dr Finger speaks strongly of the necessity of caution in the diagnosis of diseased kidneys from the presence of albuminous urine, where the evidence derived from the history of the patient is from any cause not conclusive. He narrates two very interesting cases of patients admitted to the hospital, with all the usual symptoms of cerebral disorder from retained urea, in whom there was also a large quantity of albumen in the urine; and which, nevertheless, after death presented no appearance of granular kidney. In

one there was slight puerperal peritonitis, and inflammation of the brain and its membranes, with two abscesses in the right hemisphere; in the other there was inflammation and purulent deposition in the urinary passages, with obstruction of one ureter and impediment to the function of the corresponding kidney, which was very much distended. In both these cases the diagnosis of Bright's disease, which was the one arrived at, was unavoidable, from the absence of any history of the patients' illness, and the state of insensibility on admission.

In the two cases of epilepsy in which albuminuria was discovered, the albumen presented itself only after a convulsion, diminishing, and gradually disappearing, after the lapse of thirty-six hours. This observation is important in connexion with the cases recorded by Lever and others, of the concurrence of albuminuria with puerperal convulsions. — *Präger Vierteljahrschrift*. 1847. No. IV.

[We consider Dr Finger's observations as an important contribution to the pathology of albuminuria; at the same time, we cannot view his results as by any means clearly or definitely established. We are sure that no modern pathologist who has given any attention to the minute examination of the kidney, would be content to assume the soundness of that organ from the absence of the ordinary appearances of granular disease. Moreover, if Dr Finger's explanation of the albuminuria occurring during acute diseases be correct, how comes it that the albumen is present in the urine during the *inflammation*, when the fibrinous exudation is at the same moment thrown out elsewhere; and absent during the *resolution*, at the very time when that exudation is reabsorbed into the current of the circulation. Further, we know, from the observations of Schönlein and others, that the effete fibrine of inflammatory exudation is generally converted, in passing off by the kidneys, into lithate of ammonia, which is deposited as a sediment soluble by heat; and, if this be established as the usual process, surely the secretion of unaltered albuminous matter by the kidneys, must be the result of some disturbance of their function. On the whole, we think it most probable, from the evidence before us, that the secretion of albumen by the kidneys, is generally the result either of functional alteration or of organic disease of the organ itself; and the researches of Dr Finger are valuable and important, as tending to show the circumstances under which this must readily occur as a temporary exudation, thereby presenting hints for present use in a diagnostic, and for future inquiry in a pathological, point of view.]

118.—*Cholera Infantilis—Clinical Lecture* by Professor Trousseau.—The cholera of children is one of the most frequent, and perhaps the least known, of the maladies of infancy. It attacks them when they are improperly weaned. The new food which is offered to the stomach disagrees with it, and produces a diarrhœa at first of a mild, but afterwards of an incurable nature. After lasting some time without occasioning any great change in the general condition of the little patient, this disturbance of the digestive functions suddenly brings on a striking and frightful alteration. In the space of a few hours the eyes are sunk and surrounded with a bluish margin; the face and extremities are as cold as marble; the temperature of the mouth and tongue is also lowered much beneath the standard of health; the skin loses its elasticity, and pits on pressure: if, for instance, the skin of the abdomen be seized between two fingers, the fold thus produced does not disappear when the hand is removed. Respiration is deep and slow; vomiting incessant; the diarrhœa, at first lienteric —*i. e.*, consisting of the passage with the fæces of recognisable nutriment—is soon constituted, when all the food contained in the bowels has been thus evacuated, by a greenish fluid, and sometimes of so light a colour as to be mistaken for urine: this secretion, as in the cholera of the adult, is suppressed. Cramps are observed in the child; they are attested by the cry, coupled with rigidity of the extremities, the cry not being followed by alvine evacuations. The disease may last from a few hours to two days, great danger seldom being prolonged beyond the third day. With regard to treatment, we should recollect that vomiting and diarrhœa do not constitute the essence of cholera, but only two of its features: we should seek that essence in the nervous disturbance, which from the beginning seems to impede, or at least greatly to interfere with, the action of the heart and the circulation of the blood. In children the vomiting and diarrhœa can even be arrested without very great difficulty by the exhibition of astringents and opium; but this arrest almost invariably proves fatal within a short time. We recommend during the first period the application of stimulants to the surface of the body; for this purpose the child may be plunged in a bath heated to 28° R. (95° F.), some mustard flour having previously been

placed in the water. The child should be held in the bath for some ten minutes, and this application repeated twice or even three times in the course of the day. The most advantageous internal exhibition is ipecacuanha. In order to facilitate the reaction we also employ a stimulant mixture of the following nature :—R. Aq. menth. pip., ℥j.; syrupi ætheris, and syr. corticis aurant., aa. ℥ij. Sumat. cochl. j. amplum q. horâ. When the reaction is fully established, these measures should be suspended and antiphlogistic remedies put in requisition.—*Med. Times*, Jan. 29, 1848.

119.—*Differential Diagnosis of Pneumonia and Pleuritis.*—The following points chiefly deserve attention. 1. The resonance of the voice is clearly perceived in pneumonic, but never in pleuritic exudations; chiefly in the former when the voice is neither high nor feeble. 2. In pleuritic exudations, percussion can distinctly limit the healthy and diseased regions, whereas, in pneumonic, the dulness on percussion vanishes only by degrees. 3. On account of some cells still retaining air, even amidst the infiltrated lung, the tone of percussion is not so perfectly dull in pneumonic exudations as in pleuritic; for the same reason the resistence of the chest is less in the former. 4. Whenever the dull tone is perceived only at the angle of the scapula, and not likewise on the anterior surface of the chest, the exudation is necessarily of pneumonic origin. 5. Enlargement of the thoracic walls never occurs, as a consequence of pneumonic exudation; on the contrary, as a consequence of pleuritic exudation, it constantly occurs in children, and very frequently in adults. Pleuritic exudation, when on the left side, may be easily mistaken for an enlarged spleen; but in such cases, it should be borne in mind that the surface of the pleuritic exudation has a tendency to cross the ribs; whereas the tumour of the spleen invariably extends in the direction of the ribs. —*Clinical Notes taken in the Hospital of Prague. Hannoverische Annalen*, 1847.

120.—*Treatment of Pneumonia.*—Ordinarily the physicians of the hospital abstain from blood-letting, as well as from the employment of tartar emetic. Some of them, however, are now resorting to the use of the first, in those cases in which the disease is still in the stage of mere congestion, and where as yet no exudation has occurred. It is likewise employed where the dyspnoea, the pain, and the frequency of pulse, have reached their height. Hamernjk alone employs blood-letting in the last stages, and apparently without any disadvantage. Blistering is almost never adopted. Comparing the numeric results of this expectant treatment with the more energetic ones, they appear similar, with this exception, that in the former the convalescence is much more rapid.—*Ibid.*

121—.*Diagnostic Observations on Diseases of the Heart.*—In a case of enormous dilatation of the right ventricle, Jaksch was misled by the presence of increased dull percussion and diminished impulse, so as to pronounce the case one of pericardial effusion. He observes, that in guarding against similar errors useful information might be derived from the jugular veins, which are generally distended in dilatation of the right side of the heart. According to Hamernjk, the cause of the reduplication of the heart's beat is want of correspondence in the time of the systole of the two sides. The occurrence of abnormal sounds of the heart is by no means peculiar to organic diseases of that organ, being also found at the beginning of typhus, pneumonia, scarlet fever, &c., as well as in anæmia. In this last case Oppolzer ascribes the murmur to alterations in the quality, rather than the quantity, of the blood; as he observes that, after considerable losses of blood, the murmur does not occur until some time has elapsed, during which, the lost bulk has been replaced by the addition of water.—*Ibid.*

V.—PRACTICE OF SURGERY.

122.—*On the Operation of Gastrostomy (formation of an artificial opening into the stomach, from γαστηρ; στομα), as applicable to cases of obstructed Œsophagus.* By Professor SÉDILLOT of Strasburg.—The operation here proposed, consists in incising the abdominal parietes opposite the anterior wall of the stomach, making an opening into the latter, and connecting the edges of this opening with the external wound, so as to form an artificial fistula, by which sustenance may be administered in cases where irremediable obstruction of the natural passage exists. Such cases, if left alone, are quite desperate, their only possible termination being death by fa-

mine; and Sédillot, therefore, holds that it is justifiable to interfere by any means which offers a chance of safety. That the operation which he proposes is not impracticable, is proved by various cases (such as that of the celebrated Alexis St Martin) in which a stomacal fistula occurred, as a consequence of accidental wounds; and also by the experiments of Blondlot on animals, in one of which he kept a dog in health two years, nourishing him by means of an artificial fistula of the kind described. Experiments of this description have also been performed by Sédillot himself, with a successful result. With these facts before him he argues, that although gastrostomy ought not to be proposed where there is a probability of life being continued for some time without interference, yet in those in which death is evidently imminent, and where there is no other resource, the surgeon ought not to hesitate about giving his patient the chance of a prolonged existence, and freedom from suffering.

If this be admitted, it is evidently of great importance to keep in view those circumstances under which obstruction of the œsophagus might render such an operation necessary. The author, therefore, enters in an elaborate review of all those lesions of the œsophagus which lead to permanent constriction of the natural passage. He gathers from pathological writers a great variety of cases, which he arranges under fifteen heads, viz.:—

1. Congenital absence of part of the œsophagus.
2. Stricture in consequence of tumours in the neighbourhood of the œsophagus.
3. Tumours formed between the tunics.
4. Hernia of the mucous membrane.
5. Polypi.
6. Stricture, by atrophy of the tube, without appreciable lesion of its walls.
7. Atresia, from cicatrices, with loss of substance.
8. Fibrous stricture.
9. Fibrous degeneration of the muscular coat.
10. Cartilaginous stricture.
11. Osseous transformation.
12. Complete obliteration.
13. Cancerous stricture.
14. Impermeable stricture of the cardia.
15. Fatal œsophageal stricture without known cause.

The cases to which the operation is applicable, as above enumerated, appear to be referrible to two divisions; the first being those cases in which the operation is performed without hope of modifying thereby the original diseased condition, and merely to prevent death by hunger; the second, comprising cases in which the original condition is susceptible of modification, and where the establishment of a new passage to the stomach either assists the cure, or prevents the further progress of the disease. In this respect, the proposed operation has a close analogy in its mode of application with the more familiar one of tracheotomy.

The principal cases to which gastrostomy is applicable, according to Sédillot, with the double purpose above mentioned, are those comprised in the 4th, 7th, and 13th sections of his arrangement. In the 4th series, in which the mucous membrane is thrust through the other tunics, so as to form diverticula, he holds that the constant passage of the food distending these abnormal pouches is certain to keep up the morbid lesion, and, even by dilating the pouches still farther, to hasten the ultimate obliteration of the normal passage; whereas, if the operation of gastrostomy be performed, there is a probability that the pouch may, in time, contract and obliterate itself. In the 7th series, comprising all the wounds and inflammatory lesions of the œsophagus, in which there is hope that the judicious employment of catheterism might ultimately restore the tube to its function, Sédillot holds that gastrostomy will often permit us to continue this treatment when otherwise the death of the patient by inanition would have frustrated our efforts; and he believes that, in such cases, the chances of cure will often be greatly increased by the complete rest which is obtained in the intervals of treatment for the diseased portion. Finally, in the truly cancerous lesions, where the diagnosis can be ascertained with any degree of certainty, he conceives repose of the part to be of the first consequence, as both catheterism and the passage of food through the cancerous part, tend very much to the rapid progress and fatal issue of the disease; and he thinks, therefore, that gastrostomy may possibly be found to be applicable to cancerous cases at an earlier period than that at which death by inanition is imminent.

It is necessary to state, that the operation has never yet been performed by Sédillot, although he so strongly advocates its performance.—*Gazette Médicale de Paris*, Nos. 1, 3, 5; January 1847.

123.—*On the Treatment of Strictures of the Œsophagus by Catheterism and Cauterization.* By M. Gendron of Chateau-du-Loire.—The author is of opinion that many strictures of the œsophagus, which

at first appear incurable, will be found to yield to careful and protracted treatment by the œsophagus-bougie, with occasional use of cauterization. He objects to the treatment proposed by Sédillot (see last article) as being unpractical and hazardous. The use of the bougie, on the contrary, is in no way dangerous if due care be taken; and the objections of the patient to it are of short duration, as the œsophagus becomes very soon accustomed to the stimulus of the instrument. So long as there is any obstruction, it is necessary to support and guide the bougie in its passage downwards, by means of two fingers of the left hand introduced into the pharynx. Dilatation occurs very gradually, and sometimes there appears to be a re-contraction, rendering it necessary to return to a smaller size of instrument after some progress has been made. The completeness of the cure is to be judged of chiefly according to two circumstances:—*First*, the ease with which a full-sized bougie can be passed, *using one hand only; second*, the disappearance of the tracheal rale, and unnatural quality of the voice, which almost invariably accompany an œsophageal stricture.

M. Gendron alludes to four cases in which he has succeeded in curing tight strictures of the œsophagus by the method here spoken of. Three of these were in consequence of diphtherite; one was without known exciting cause; one was not more than eighteen days under treatment; the rest from one to two months. Cauterization, by nitrate of silver, was employed in three of the cases; in two repeatedly; in the other, only twice. The elastic bougie, or the whale-bone staff with sponge, was used at short intervals; often several times in each day, but not so frequently after cauterization.—*Gazette Médicale de Paris*, No. 11, 1847.

124.—*On the Treatment of Dislocation of the Patella on its Edge.* By Mr VINCENT. —"When the patella rests in its trochlea, but is turned on its edge, the inner edge is applied to the femur, the outer, of course, standing out at right angles to it; the upper surface faces the other knee, and the articular surface looks outwards. It might, on first consideration, be supposed that a replacement could be readily effected; but, practically, it is a very formidable undertaking, if the surgeon has not entered into those views I now offer to the profession, in connexion with the association under which muscles act. Some years ago, I was called suddenly by a surgeon to assist in reducing a dislocation of this sort; for effecting which, the medical man had resorted to all the various expedients he could contrive for effecting the purpose. I found the patient to be a gentleman who some years before had, in the common way, dislocated the patella whilst shooting; and that he had subsequently had the same accident often occur; but now it had become the dislocation of the above kind. The surgeon had exhausted his ingenuity: however, we resumed the series of contrivances with all the powers we could exert of lateral pressure on the bone in all directions, but nothing availed; and it seemed to me as firmly fixed in position as if three or four long screws had been driven through its thickness, and bound it most closely to the femur. All this time we were acting in the falsely received notion of relaxing muscles by merely keeping their attachments as much as possible approximated to each other, and the leg was most carefully kept extended on the thigh."

"After a long course of trials in this way, it occurred to me, that I might effect some change by giving the bones a sort of shake; for this purpose, I slightly bent the leg, and gave a little rotatory motion to the tibia, when the patella quietly returned to its proper situation, as if a charm had released it from its fixed state. The hand of an infant might now have deposited it in its trochlea. The result of the manipulation in this case, led to reflections which opened to my view principles very different from those I had formerly held. It offered a forcible example, that any muscle disturbed in its arrangement, is under great excitement to act. The disturbed arrangement here was the elevation of the centre of action of the extensors above the ordinary position; and as these muscles, in the straight position of the whole limb, are called upon to support a great proportion of the weight of the body, so when in that position they are naturally impelled to exert a vast force. But in obedience to the associated action of combined muscles, when the leg is bent, and another order of motions in this complicated joint is brought into play, then these extensor muscles immediately relax; they would otherwise, by their action, prevent the rotatory motion of the leg upon its axis. Thus the moment the leg was bent, the extensors returned into a comparative state of repose, and left the patella quietly to resume its appointed position. Not very long after the occurrence of the above case, I was called one night to the hospital to a similar one. The house-surgeon had adopted all the means of ingenuity and of force, but had not succeeded in reducing it. I bent the leg,

and, rotating it in the axis of the tibia, the patella quietly returned, and thus was accomplished the reduction."—*Observations on some parts of Surgical Practice.*

125.—*Contributions to Aural Surgery.* By Mr Wilde of Dublin.—In the operation of perforating the membrana tympani, Mr Wilde objects to instruments in the form of punches or trocars for the purpose of removing a circular portion of the membrane, because, from their size, they occupy so much space within the speculum, that the surgeon cannot see accurately the part of the membrane he is operating on, and also because he considers that they may produce a degree of violence which might be dangerous. The following is the plan of operating which he adopts:—Having brought the membrane fairly within view, under bright, direct sunlight, he introduces a small sickle-shaped knife, with a double cutting edge, and having made the patient inflate the tympanum, so as to make the membrane tense and pressed outward, he gently introduces the point of the knife into its lower, thin, vibrating portion, and, drawing it downwards and forwards, makes a simple incision of the membrane, about a line and a half in length. So simple is this, and so little pain does it give, that the patient has often been unconscious of its performance until made aware of its completion by the air rushing out through the aperture. In about a minute a slight oozing of blood takes place from the edges of the aperture, like that which follows a wound of the sclerotic with an ordinary broad cataract needle, and if left in this condition it would soon heal up; therefore a very fine probe, fixed in a handle and slighty pointed with nitrate of silver by being immersed in the caustic, when heated to fluidity should be immediately passed down into the perforation, the edges of which are thereby cauterized and prevented adhering; and this latter process should be repeated from time to time, as often as the wound shows an inclination to heal, and until we establish a sufficiently large elliptical opening.

Where inflammation has extended to the periosteum lining the bony portion of the auditory canal, and to the pericranium over the mastoid process and post-aural region, Mr Wilde recommends making a free incision down through the periosteum there, at least an inch in length. In performing this operation the head should be firmly secured, and supported against some unyielding substance, as the back of a high chair or the breast of an assistant. A stout scalpel is the best instrument to employ; it should be grasped so that the fore-finger and thumb may come down upon the blade, so as to leave about an inch of it uncovered. It should be inserted steadily till the point reaches the bone, which it should be made to traverse, for the full length of the incision. By this means we secure complete division of the periosteum. With regard to the line of the incision, circumstances may require its being made in other directions, but he finds that it is most generally required parallel with, and about an inch from the attachment of the auricle. The knife should be drawn from below upwards; and, from the swollen state of the parts, the depth to which we are sometimes obliged to introduce the instrument is often nearly an inch. The hemorrhage, unless we wish to extract blood, may be arrested by placing a dossil of lint within the incision. The cut surfaces generally present the brown-like appearance seen in phlegmonoid erysipelas. Although pus may not have been reached by the incision, still, immediate relief is almost invariably experienced. The subsequent management of this particular part of such a case must depend upon the circumstance of exfoliation. —*Dublin Quar. Jour. of Med. Science.* Feb. 1848.

126.—*Laryngotomy in Typhus Fever.* By Dr H. Frey of Mannheim.—Dr Frey directs attention to the frequent occurrence in typhus fever of lesions of the larynx, threatening fatal obstruction of the glottis. The principal of these are simple mucous inflammation, fibrinous exudation, deposition of typhus matter with its sequelæ, viz. abscess, ulceration, and sloughing of the parts in the neighbourhood of the glottis. He observes that the degree of lividity of the surface is a false measure of the amount of danger, as in typhus the anemic condition of the patients prevents the development of this condition. He is not deterred from operating in cases where any degree of vital power remains, by the fear of hemorrhage or of subsequent suppuration, having seen many instances of recovery in circumstances apparently very unfavourable. In one case, however, he has seen the operation unsuccessful indirectly on account of hemorrhage. In this case the venous oozing having been uncontrolled by the application of ice, the physicians were induced to have the wound closed, on which suffocation soon afterwards recurred. The hemorrhage is in this case ascribed by the author to the abnormal condition of the blood.—*Zeitschrift für Rationelle Medizin*, 1847, Bd. 6.

[We have had frequent opportunities, in the Edinburgh Royal Infirmary, of observing patients saved from impending suffocation, in the progress or decline of typhus fever, by the timely performance of tracheotomy, which operation is always preferred to laryngotomy there, excepting when the suddenness of the seizure renders a second or two of the utmost importance. A considerable number of the cures have been permanent, and, where death has ultimately occurred, it has generally been from secondary consequences, such as the occurrence of pneumonia or pleurisy, or from the natural progress of the fever, rather than from any circumstances connected with the operation. Hemorrhage has not generally been found to occur to any very considerable extent, and has only been dangerous when the opening into the trachea has been made too wide for the tube, so as to permit of the flow of blood into the respiratory passages. When the deep part of the wound is of limited extent, and the tube is grasped tightly by the opening in the trachea, there is generally no hemorrhage, in consequence of the direct compression of the vessels by the tube. On the whole, the result of experience in Edinburgh seems to show, that deaths occur in typhus much more frequently from the delay, than from the timely performance of an operation which is not in itself fraught with very serious consequences.]

127.—*Ophthalmia from Caries of a Tooth.* By Dr T. EMMERICH of Mutterstadt.—A man, whose general health was quite good, had been for fourteen years subject to a painful affection of the eye, much increased by any excess in food or drink. When examined, the conjunctiva was found congested, as also the sclerotic; the cornea had a pale brilliancy, and presented the marks of old ulcerations. There was also epiphora. One of the upper bicuspid teeth was carious, and the patient stated that the disease of the tooth and eye had commenced simultaneously. The superior maxillary bone was excessively tender at the root of the carious tooth, which was considered to be the cause of the whole symptoms. On the tooth being extracted accordingly, the eye became quite well.—*Zeitschrift für Rationelle Medizin*, 1847, p. 75.

128.—*Congenital Luxation of the Radius in both Arms.* By Dr HOLLSTEIN of Fürth.—The patient, aged fifteen years, had laboured from his birth under a displacement of the radius in both arms, which required adjustment often several times in the day. The form was so much altered, that the upper and fore-arm formed an obtuse angle at the inner side of the elbow. The head of the radius was not easily discovered during extension, being situated under the tendon of the biceps. The movement of the fore-arm in the upper arm, was limited to an angle of 75°. On the right side displacement was greater than on the left; and the power of movement was also less, the muscles being considerably relaxed.—*Walther und Ammon's Journal*, VI. p. 503.

VI.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

129.—*Disorders of the Nervous System during Pregnancy.* By Dr LEVER.—The author lays down the following propositions as the results of his observation:—

1. That pregnancy is occasionally associated with chorea, or convulsive movements; with paralysis of various parts of the body, of the extremities, and of the nerves of special sense; and with mania.

2. That the varying symptoms of such complications may be produced at any period of pregnancy; but when produced, although modified by treatment, are rarely removed during the existence of gravidity.

3. That the patients in whom these complications exist, are women of a highly nervous temperament, of great irritability, or whose constitutional powers have been reduced by some long-continued but serious cause of exhaustion.

4. That in the treatment of such cases, heroic measures are not to be employed; that the curative means consist in improving the secretions, keeping the bowels free, and administering those medicines, and employing that diet, which will increase the tone and energy of the nervous system.

Lastly, That although, in most instances, the symptoms will continue as long as pregnancy exists; yet in the majority of cases we are not justified in inducing a premature evacuation of the uterine contents.

The following cases are adduced in illustration:—

Chorea with Pregnancy.—Case I. At the commencement of the third month of pregnancy, this patient became irritable and pettish. Convulsive movements of the muscles of the face were observed, and in

about a week afterwards tossing of the head. Subsequently she was seized with convulsions of the right arm, then of the left, then of the left leg, and then of the right leg. The mode of speech was also altered. In other respects she was in very good health. A great variety of treatment was resorted to without effect. Labour came on at the full time, and was terminated easily and naturally. While the pains were present, the convulsive movements ceased, but during the intervals they were most distressing. She made a good convalescence, and the chorea disappeared.

Case II.—This woman became a second time pregnant shortly after weaning her first child. The chorea returned, but at an earlier period of pregnancy. About the fourth month an accidental fright induced an attack of uterine hemorrhage, which was followed by the evacuation of the contents of the uterus. She gradually recovered her strength, and the chorea declined and disappeared.

Case III.—In the third month of her first pregnancy this woman was first observed to have lost the perfect control of the movements of the right leg and arm. Afterwards she complained of numbness affecting the whole right side. Two weeks after this, signs of mental disorder appeared, along with some pain in the forehead. This complaint was somewhat of a paroxysmal character, being aggravated generally in the afternoon and at night. Between three and four months afterwards, this woman recovered completely under treatment, and was subsequently delivered of a living child.

Case IV.—This woman, æt. twenty-four, was delivered two years ago, in an easy labour, of a living child. In the third month of her present pregnancy she lost the complete power over some of the voluntary muscles; dropping, for instance, whatever was put into her hand. About the end of the fourth month, while walking, she was taken for a minute or two with swimming in the head and unsteadiness of gait, which caused her to take hold of something near for a support. These feelings recurred several times every day for a month afterwards.

She continued to be troubled with these symptoms variously modified, and accompanied with twitching of the fingers, jactitation of the arms and legs, numbness of the fingers and toes, dizziness of sight, &c. When labour pains supervened, the irregular movements ceased, and she was delivered naturally of a living child. She made a rapid recovery.

Case V.—In her first pregnancy, when seventeen years old, this woman had frequent fainting fits before the time of quickening. Afterwards she suffered from the most copious leucorrhœa, which continued till her confinement at the full time.

Two years after this delivery she became again pregnant, and at the end of the third month a fright induced miscarriage, which was accompanied with considerable flooding, and subsequently by green discharge and irritation about the vagina. Two weeks afterwards she was seized with contortions of the face, numbness, and slight twitching of the right arm, and then of the right leg. These symptoms, along with leucorrhœa, continued till she became pregnant for the third time. Her previous symptoms then became increased; faintings also came on, with great nervousness and depression of spirits. After quickening, her symptoms again became all more aggravated and severe. She improved considerably under treatment, till the time of her confinement, which was natural, and after which the symptoms entirely ceased.

Paralysis with Pregnancy. Case VI.—This woman had for many years been subject to weighty pains in the head, with confusion of ideas. She had never had a fit. In her first pregnancy she was troubled with numbness and partial loss of power on the whole right side, which continued till her delivery. After suckling for some time, the same symptoms again began to affect her, and her child was consequently weaned on the fourth month after her confinement. A life of celibacy was enjoined, and was followed by the best effects. But she again conceived, and in a month after, the symptoms reappeared. In four subsequent pregnancies the same phenomena took place very soon after conception, and continued till delivery put a stop to them. Under lactation they reappeared, and were always removed by the means above stated.

Case VII. This woman, in the eighth month of her ninth pregnancy, was suddenly seized with a tingling sensation, and loss of power in the whole right arm. She experienced decided improvement from the use of zinc, but did not recover till after her confinement.

Case VIII. This woman had suffered from hysteria before and after her marriage. She had miscarried three times, and subsequently borne two children at the full time. In the fifth month of her sixth pregnancy, she was suddenly seized with loss of power over the upper extremi-

ties, and loss of voice. On being visited a week afterwards, the pupils were found irregular and contracting without the stimulus of light, the tongue was protruded at will in a straight line; the upper extremities were rigid and extended; and the hands forcibly supinated. The heart's action was tumultuous, heard all over the chest. These symptoms diminished under treatment, but did not disappear till after delivery.

Case IX. This woman, after her sixth natural labour, was taken with numbness and weakness in the lower extremities, which gradually disappeared. About the third month of her seventh pregnancy, she was seized with paralysis of the lower limbs; this continued till after the delivery, when she completely recovered. In her eighth pregnancy, the paralysis did not come on till after labour.

Partial Amaurosis with Pregnancy.—*Case* X. Soon after the quickening of her fifth child, this woman was suddenly seized with a peculiar sensation in the eyeballs, and found that she could see only the outlines of objects, their centres being dark. These symptoms continued, with slight variations, till delivery, after which she steadily improved, and in three months sight was perfectly restored.

Our author has seen but one case in which the amaurosis was permanent. In one female he had observed it in two successive pregnancies. [Dr Santesson of Stockholm has informed us of the case of a feeble and delicate woman (the wife of an apothecary in Wadstena, a small village in Sweden), who laboured under complete amaurosis of both eyes during the last five months of pregnancy for eight successive times, and all during only ten years. After each delivery she soon completely recovered her sight; but with each pregnancy she became more and more feeble, and made more prolonged recoveries, and, at the same time, the amaurosis became longer in disappearing. In her first pregnancies, sight returned in about a week, but in some of the last she did not completely recover from the amaurosis for a month after delivery.]

Deafness with Pregnancy.—*Case* XI. In this woman, deafness supervened gradually after conception had taken place for the first time. The deafness grew worse and worse with the advance of pregnancy, and, after delivery at the full time, it gradually disappeared. Under protracted lactation it began to return, and was again entirely removed by weaning the child, and a course of tonic treatment.

Case XII. After quickening with her first child, this woman was seized at various times with faintings, hemiplegia, paralysis of one or other extremity, speechlessness and irritability of temper coming on daily about the same hour. These symptoms diminished, but did not entirely disappear before delivery. In her second pregnancy she lost the power of speech for two weeks; and on rising, a fortnight after delivery, she found she had lost the power over her lower extremities, but gradually regained it, and soon recovered completely.

Case XIII. This woman at the commencement of her first pregnancy experienced a great change in her manner and temper. "From being light-hearted and gay, she sat wherever she was placed, neither turning her head nor her eyes to one side or the other; she was a living automaton." She continued in this state till delivery, after which she recovered completely.

Case XIV. A young lady was seduced by her pretended lover, and became pregnant. Marriage was refused. She became insane, and continued so till the child cried on delivery. At that moment she recovered completely.—*Guy's Hospital Reports*, Vol. V. 1847.

130.—*Puerperal Convulsions Treated by Chloroform Inhalation.* By Messrs CLIFTON, FEARN, and Dr WILSON.—Mr Clifton's patient was in labour with her second child. Convulsions came on before the first stage was completed. The membranes were ruptured, and she was bled to about twenty ounces, after which she experienced some relief; but the convulsions soon returned, of a very severe and apoplectic character. She then began to inhale chloroform, and in less than half a minute sank into a most tranquil sleep. Labour-pains still continued at regular intervals; and she was safely delivered of a living male child, having been under the influence of chloroform forty-five minutes, without any recurrence of the convulsions. She made a good recovery. —*Medical Times*, Feb. 12, 1848.

Mr Fearn's patient, æt. 17, was taken in labour at the seventh month. After pains had continued for some hours, convulsions of a severe character set in. Bleeding and purging enemata gave some relief, but in a short time she became alarmingly worse, being in a state of total insensibility, the pulse very small and frequent, and the pupils exceedingly contracted. The head of the child was low down, and uterine efforts had ceased. Chloroform was then administered in the usual way, and in a few minutes the con-

vulsive movements, which had endured a whole day, entirely ceased. She was easily delivered with the crotchet. During the night she had a slight convulsion, but subsequently her recovery was uninterruptedly good.—*Medical Gazette*, Feb. 11, 1848. [We know of another case of puerperal convulsions having occurred in January last in the practice of Dr Wilson of Glasgow, and in which chloroform was successfully administered. After the sleep was induced, the convulsions entirely ceased, and the woman was safely delivered.]

131.—*Double Uterus and Vagina.* Dr Huguier.—This woman, shown to the French Academy of Medicine, became pregnant in one half of the uterus. It was very remarkable that, after delivery, the mamma of the corresponding side alone became hard and swollen.—*Compt. Rend. de l'Acad. de Médecine.*

132.—*Artificial Vagina.* Dr de Bal and M. Kluyskens.—*Case* I. A girl, æt. eighteen, had for some time severe pains in the back and side. The uterus was enlarged to the size of that of the sixth month of pregnancy. Vomiting and febrile symptoms had supervened several times, but at last became continued. By means of incision and the use of the trocar, upwards of two pints of a very viscid liquid, without smell, was evacuated. The patient recovered.

Case II. A girl, æt. eighteen, had occasionally suffered from colic pains for fifteen months. These gradually became more and more frequent till the uterine tumour acquired the size of that of advanced pregnancy. M. Kluyskens made an incision between the urethra and rectum, which he deepened till he reached the cavity. Five pounds and a half of a fluid like viscid blood, and of a faded smell, was evacuated. She recovered.—*Annales et Bullet. de la Societé de Méd. de Gand.* July 1845.

133.—*Compression of the Aorta in Post Partum Hemorrhage.* M. Escalier.—In a case of hemorrhage after delivery, in which every means had failed to arrest the flow of blood, M. Escalier succeeded in stopping it by compression of the aorta by his hand, above the umbilicus. He considers this neglected mode of treatment useful not only in arresting the flow of blood towards the uterus, but also by sending it back towards the brain, so as to prevent those fits of convulsions which so frequently occur after, or during severe hemorrhage and often prove fatal.—*L'Union Médicale*, Feb. 10. 1848.

134.—*New Operation (par glissement) for Vesico-vaginal Fistula, with Loss of Substance.* M. Jobert.—In this operation, the bas-fond of the bladder is separated by the knife from the anterior surface of the vagina and neck of the uterus, a proceeding which allows the easy slipping (*glissement*) of the upper lip of the fistula, and consequently its approximation to the lower, where it is retained till perfect agglutination takes place. M. Jobert has several times succeeded in completely curing vesico-vaginal fistula in this way where all other means had failed.—*L'Union Médicale*, 1847.

VII.—MATERIA MEDICA AND THERAPEUTICS.

135.—Chloroform. *Preparation.*—MM. Larocque and Hurault have prepared chloroform, by the following modification of the process of Soubeiran, obtaining from six to six and a half tenths of the weight of alcohol employed. The process of Soubeiran yields only from two to three tenths. Water 40 litres, lime 5 kilog., chloride of lime 10 kilog., and alcohol 1½ litres, are mixed and distilled in the usual way. The fluid obtained, after separation of the chloroform, is again introduced into the still with 10 litres of water; the same proportions of lime and chloride of lime, and only 1 litre of alcohol; what was previously in the still being allowed to remain. The whole is distilled, as before. If the vessel be large enough, the distillation may be repeated a third and even a fourth time, the same proportion of substances being employed as indicated for the second operation.

By the above method, they are enabled to furnish the chloroform at 11s. 8d. the kilog., or something like 4d. an ounce.

They observed also, that the more quickly the operation is conducted, the greater the quantity of chloroform obtained. The yellow colour sometimes seen in impure chloroform, is attributed by them to the presence of the bichloride of tin, and is only noticed when a tin still is used. With a copper vessel they always procure a colourless product.—*Journal de Pharmacie et de Chimie*, February 1848.

Physiological action (a) *on Animals.*

MM. Dumeril and Demarquay, in a communication to the French Academy of Sciences, have directed attention to the lowering of the temperature observed in animals under the influence of ether and chloroform. The animal heat sinks, according to their experiments, in dogs and fowls, from ½° to 5° R., the diminution increasing with the length of period during which the insensibility is maintained. This effect is constant, and is observed equally when the vapour is introduced by the rectum, as when it is inhaled.—*Comptes Rendus*, February 1848. A warm discussion has arisen among the French experimenters, in reference to the changes observed in the blood of animals submitted to the inhalation of chloroform. M. Amussat asserts that the arterial blood assumes a dark venous hue, while MM. Gerardin and Verrier maintain, on the contrary, that it undergoes no change. (See Retrospect, p. 49.) Lastly, It is affirmed by M. Gruby, that the inhalation heightens the intensity of the red colour of arterial blood, and changes the dark hue of the blood in the veins to a bright red.—*Comptes Rendus*, February 1848.

(b) *On Man.*—In some interesting remarks on the action of narcotic poisons, Mr Sibson observes, that "under the increasing influence of ether and chloroform, the pupils first contract, then oscillate between contraction and dilatation, and finally dilate. So long as the pupil is contracted, the patient, when operated upon, frequently manifests an unremembered consciousness; he is, in fact, in the state of sopor or sleep. When the pupils dilate, and the iris is immovable, consciousness is extinguished, and the patient is in the state of coma." These successive changes of the pupil, Mr Sibson explains by reference to Valentin's view of the physiology of the iris. This distinguished physiologist conceives that the contraction of the pupil constitutes a safe guide in the administration of chloroform.

Mr Sibson asserts that the state of the pupil is due to the reflex action of the brain, through the ciliary filaments, and from the motor oculi, and that its dilatation is due to the reflex action of the spinal marrow, through the ciliary filaments from the cerebro-spinal nerves. In sleep, or sopor, Mr Sibson supposes that although consciousness and volition are absent, the cerebral reflex action is still active, and induces contraction of the pupil; but, in coma, the reflex function of the brain is destroyed, and dilatation of the pupil is the consequence, as the reflex function of the spinal marrow acts uncontrolled. During the stage of sopor, there is frequently rigidity of the muscular system, which is speedily followed, on the supervention of coma, by complete relaxation of all voluntary muscles, except those of respiration. When it is desired simply to produce insensibility to pain, or to exert a calmative action, as in delirium tremens, the inhalation ought to be immediately discontinued when the pupils begin to dilate. If the object be to induce complete muscular relaxation, as in tetanus, dislocations, &c., the inhalation may be continued a little longer if necessary.

The question of the cause of death in the case of Hannah Greener, detailed in our last Number, has given rise to much difference of opinion. We cannot attribute the fatal event to *idiosyncrasy*, as the girl had, some months previously, been etherized without suffering any bad effects; and it is improbable that idiosyncrasy should exist in reference to chloroform (and not to ether), seeing that such a close resemblance exists between the actions of these agents when inhaled. Dr Snow maintains that the patient was directly poisoned, in consequence of the rapid administration of the vapour in a very concentrated form.

Mr Meggison, under whom the melancholy event occurred, warmly combats Dr Simpson's view (see Retrospect, p. 50). He asserts that a teaspoonful of brandy only was administered, which the girl swallowed, though with difficulty. There was not the slightest symptom to indicate choking. He further argues, that as the patient was pulseless before she got the brandy, it is difficult to conceive how the "enormous congestion of the lungs" could have been formed subsequent to its administration. The girl died in a few seconds, but some time and a certain activity of circulation are requisite for the production of such congestion of the lungs. Lastly, he mentions that, in Dr Glover's experiments with chloroform, the blood was found fluid, and in some of the animals the brain and its membranes were much congested.—*Medical Gazette*, Feb. 25, 1848.

Dr Jameson has published a detailed account of the case noticed in our last Number, of Arthur Walker, who killed himself by inhaling chloroform. He had been unconscious for upwards of twenty minutes before Dr Jameson saw him. His countenance was then pale and composed, the pupils much dilated, and the lips livid. No pulse could be felt in the extremities, nor could any sound or motion of the heart be detected. The breathing had ceased, and the temperature of the extremities was evidently sinking. Artificial respiration

was diligently practised for some time ; a vein was opened at the bend of the arm, but only a single drop of blood oozed from the orifice ; in short, the *post-mortem* appearances closely resembled those found in Hannah Greener.

The body was examined twenty-four hours after death. There was found considerable venous injection of the brain and its membranes. A small quantity of serum flowed from the ventricles, which some of the gentlemen present thought had a faint sweetish odour, like that of chloroform. The lungs were turgid, and extensively adherent to the walls of the chest. They were loaded with dark coloured blood, particularly at the three following places, where the engorgement was extreme, and of the apoplectic character : viz. "the upper margin of the lowest lobe of the right lung, the lower lobe of the lung, and a smaller portion of the upper lobe of the right lung." The two first-named apoplectic portions of lung were at least six inches long, and averaged about one and a half inches in depth. The lungs were generally emphysematous, and air had escaped into the subpleural cellular tissue. The heart was extensively adherent to the pericardium. The right side of the heart was distended with dark fluid blood ; the left was empty. The walls of the right ventricle were unusually thin, and the cavity itself was enlarged. The abdominal organs were moderately congested. The blood was uniformly fluid, unusually thin and dark-coloured, and presented no peculiar odour. On distillation, it yielded a small quantity of a volatile liquid, possessing a strong smell of chloroform, and presenting some of its chemical characters.

The quantity of chloroform inspired, is supposed to have been about three or four drachms. Dr Jameson considers the cause of death to have been asphyxia, consequent upon the inhalation of chloroform. He thinks it probable that the fatal issue may have been facilitated by the unfavourable position in which the body was placed, and possibly also by the morbid conditions which existed within the chest.

[In order to understand fully the post-mortem appearances in the case, it is necessary to mention, that for some time after death, the chest was inflated by means of a bellows, the nozzle of which was introduced into an opening made in the trachea.]

136.—*Traumatic Tetanus cured by Quinine and Morphia.* By Dr Bishop.—A man accidentally ran a rusty nail into the hollow of the foot ; the wound progressed unfavourably, and on the 18th day severe tetanus supervened. He was freely purged, and counter irritation was applied to the spine. The following was ordered to be taken daily :—

℞. Sulph. quinæ.....gr. 15
Sulph. morph.....gr. ¾
Syr. simp.....q. s. ℿ.

He improved gradually ; but on the sixth day of the treatment the quinine and morphia were suspended, and the symptoms returned with their previous severity. The medicine was resumed on the seventh with the same happy effect, and on the eleventh day of the treatment he was convalescent.—*Southern Journal of Medicine and Pharmacy, America*, November 1847.

137.—*Acetate of Morphia in Melancholia.*—The form of mania which is most relieved by the acetate of morphia is melancholia, tending to suicidal madness ; but insanity, which arises immediately after parturition, is equally amenable to similar treatment. Dr Seymour observes (Thoughts on several Severe Diseases, &c.), "It has generally been, in mild cases, my practice to begin by a quarter of a grain every night, in solution ; then, after a week, to increase this to half a a grain ; it has rarely in such cases been necessary to increase the dose beyond half a grain. In severe cases, I begin with half a grain, and increase it speedily to a grain." He rarely exceeds this dose. The medicine is given at bed-time, and must be repeated without the intermission of a single night, for several weeks in mild cases, and for, at least, three months in the most severe ones. Dr Seymour has employed this mode of treatment in ninety cases, of which seventy have recovered, and no case is considered a recovery unless two years of unabated health have elapsed since the treatment was discontinued.—*Dublin Quarterly Journal*, August 1847.

138.—*Tartrate of Magnesia.*—[We have prescribed in several cases the solution of this salt, prepared in the manner indicated by M. Aviat. (*Retrospect*, p. 52.) Its purgative action is, contrary to the statement of Aviat, weak and uncertain, being much inferior to the sulphate in this respect, for which it cannot be considered a good substitute.]

139.—*Adulteration of Medicine.*—[Every day adds to our conviction of the necessity of directing attention to this subject, as undoubtedly much of the scepticism in medicine, as well as the irregularity in the

action of drugs, is traceable to this source.] The following analysis of a *blue pill*, sold extensively in New York, is instructive:—

Mercury,	7·5
Earthy clay,	27·0
Prussian blue,	1·5
Sand,	2·
Soluble saccharine matters,	34·0
Insoluble organic matters,	12·0
Water,	16·0
	100·

The Committee of Inspection of the College of Pharmacy, New York, asserts that the *quinine* generally found in America is at least one half *salicine*. Some dealers adulterate it with flour. There cannot be a doubt, that the great irregularity in the action of quinine is to be ascribed in part to this source, and serious accidents might occur on the commencement of a new parcel, which might chance to be genuine.[1]—*Southern Journal of Medical Science*, November 1847.

140.—*Easy Method of detecting Carbonate of Potash in Iodide of Potassium.* By M. DE TREZ.—Rub in a mortar a few grains of the suspected iodide with an equal quantity of muriate of ammonia; if carbonate of potash be present, a distinct odour of ammoniacal gas is immediately perceived.—*Journal de Pharmacie.*

141.—*Ferrocyanate of Potassa for Ascarides of the Rectum.*—A correspondent of the American *Journal of Medical Sciences*, strongly recommends the use of this salt by injection, in the treatment of inveterate cases of ascarides. He says, "Commence with five grains of the prussiate, rubbed up in two ounces of water, or mucilage of gum arabic (the pure water is preferable, except in cases where much irritation of the mucous membrane exists); throw this into the rectum, and retain it until the next regular defecation. Repeat this daily, gradually increasing the quantity of the prussiate until perfect and permanent relief is afforded. I believe the greatest relief will be experienced after using it once or twice."—*Medical Gazette*, July 1847.

142.—*Adulteration of Oxide of Zinc.* By M. L. SCHAFFNER.—The oxide, treated with boiling water, gave a light mucilage, in which tincture of iodine indicated the presence of starch.—*Journal de Pharmacie.*

VIII.—FORENSIC MEDICINE AND TOXICOLOGY.

143.—*Injury of the Head, alleged to have been Produced by a Fall at the Moment of Birth—Suspected Infanticide.*—The body of an infant, born the day before, was disinterred immediately after burial, for the purpose of a medical examination into the cause of death. It was a female infant, strong, fat, and well formed. The surface was of a dull white colour. There was a bandage around the body, covering the navel. The remains of the navel-string were less than half an inch in length, dry, firmly tied; the extremity irregularly cut. There was no mark of injury on the infant, except on the head, over the middle of the left parietal bone, where there was a stellate wound. A rounded layer of the scalp, adhering at its anterior and exterior margin, to the extent of four-fifths of an inch, covered a wound about the size of a crown-piece. This portion of the scalp was detached every where besides, both in its margin and under surface. The pericranium was separated over half the wound, and the bone laid bare. An extensive ecchymosis raised the scalp from the cranium, and the bones themselves were infiltrated with blood. In other respects, the bones of the cranium were uninjured. On the inner surface of the cranium corresponding to the external wound, there was a red discoloration. Over the fissure between the hemispheres, beneath the dura mater, there was a considerable effusion of red coagulated blood. No appreciable alteration in the brain, the heart, or the lungs. There was a very small and thin extravasation on the convex surface of the liver. The umbilical arteries were wide open, after being divided near the umbilicus. The stomach contained a transparent liquid, in which were a few streaks of blood. The mother of the child was a young woman of twenty-five. It was her first child. According to her account, she was suddenly seized in labour while sitting alone by the fire and, as she attempted to reach her bed,, the child was all at once expelled, and

[1] [We bought, at the house of Pelletier, Paris, some aconitina, half a grain of which, introduced into the cellular tissue of a rabbit, produced very slight effects. The twelfth of a grain of the genuine alkaloid, as prepared by Messrs Smith, Edinburgh, introduced in the same manner into the system of the rabbit, proves fatal in a few minutes. That the aconitina of Pelletier, applied in the form of ointment in the treatment of neuralgia, can be of no service, is shown by the experience of the few French physicians who have tried it.]

fell upon the floor, thus wounding its head; that she had afterwards the assistance of a midwife, and that the infant died about four hours after it was born. It could not be ascertained whether or not the umbilical cord had been broken at the moment of birth. The floor was of plank, worn through in several places; but the head might have come in contact with a small part of it which was covered with lime and gravel.

After much discussion, the medical men consulted came to the conclusion, "that the injury discovered in the head of this infant could not, by any means, be the result of a fall on the ground during delivery in the standing posture; that its form, its extent, and the laceration of the pericranium, as well as the great amount of the effusion of blood beneath the membranes between the hemispheres of the brain, proved the exercise of violence during life; and that the death of the infant had been occasioned, first, by that violence; secondly, by the hemorrhage, which had hastened its occurrence; lastly, that the furrows (sillons) observed on the skull, confirmed their opinion as to the violence offered." In short, they declared that the infant had been murdered.

In answer to additional questions put to them by the authorities, they declared their opinion, that if the mother had inflicted the injury, it was not likely that it was done after the delivery, owing to the state of exhaustion in which she must have been, and that it was equally unlikely that she would be able to inflict such an injury in the progress of labour.

In consequence of this last statement, her father and mother were put on trial along with her; but, owing to defect of evidence, all the three were acquitted.—*Gazette Médicale de Paris*, March 11, 1848.

[Though it cannot be regarded as a common case, yet there is undeniable evidence that a woman, even after a first delivery, sometimes retains sufficient force to perform acts far more difficult than the infliction of such an injury as that detailed above.]

144.—*Thefts and Fire-raising by a Female Servant in a supposed State of Fatuity.*—The girl was twenty-one years of age, and had been brought up in a Foundling Hospital. Having come to Paris, she became child's maid in a private family. She had no sooner been placed in this family than the bells began to ring of their own accord, the doors to open, various unusual noises to be heard, while several articles of silver plate disappeared. The girl talked much of God and of her confessor. By and by a fire occurred in the house, causing a considerable loss, and again pieces of silver plate were missing. She wished to go and find a neighbouring priest, who, she said, would discover what had become of the silver-plate. But an agent of the police being talked of, she was at no loss to discover where to find it. Being brought to trial, the jury acquitted her on the ground, it is to be presumed, of her imbecility of mind.—*Gazette des Tribunaux*, 5th October 1847.

[In a case of this kind, that is, on the assumption that the girl was not a responsible agent, a simple acquittal is plainly erroneous. An irresponsible person already proved to have committed numerous acts of theft, and to have set a house on fire, is let loose on the world unreproved, or rather, after having gained a victory over justice, to commit new crimes, very probably of a far more heinous character than those for which she was tried at the October sitting of the Assize Court of the Department of the Seine. But it may be said, the offences were not of a sufficiently aggavated nature to warrant a decision which should confine her for life as a lunatic. And undoubtedly it would be a serious burden on the state to support all those who are liable to commit thefts, and the like, owing to the weakness of their faculties. But is this a reason why such persons should not be punished when detected? Surely, if they escape unpunished, they are encouraged to repeat the offence. Public punishment carries nothing of vengeance in it. Its object is to correct the offender, so as to save him or her from self-indulgence, and, at the same time, to protect society from injury. It is only in the case of the completer forms of mental alienation, and in regard to the severer punishments, that there is any just ground for acquittal on the plea of irresponsibility. There is no choice; there must be either confinement on account of mental alienation, or punishment for the offences committed when the individual is left at large.]

145.—*On the comparative efficacy of the Hydrated Sesquioxide of Iron and Magnesia as Antidotes to Arsenic.* By Caventou and Bussy.—Caventou supports, in opposition to Bussy, the superiority of the hydrated sesquioxide of iron over magnesia as an antidote to arsenic. He regards the compound formed by arsenic with the iron-antidote as much less apt to be decomposed by the salts of the stomach and bowels than that formed by it with the magnesia-antidote. These two chemists are in particular at variance as

regards the effect of the hydrochlorate of ammonia within the alimentary canal on the magnesia-compound with arsenic. Caventou objects that the arsenite of magnesia is much more readily acted on by the hydrochlorate of ammonia than the arsenite of iron; so that, when the former is produced by the antidote, more arsenic is apt to be again reduced to the soluble form, than when the latter is the product of the antidote used. Bussy, however, affirms, that an excess of magnesia being employed, the hydrochlorate of ammonia is destroyed, so that no such re-solution of the arsenic follows. Caventou replies, that the decomposition of the hydrochlorate of ammonia by the excess of magnesia, cannot take place without the extrication of free ammonia, which by its irritating qualities must complicate the case, and concur with the arsenic in injuring the mucous membrane. Caventou, however, in the end acknowledges, that magnesia should be used if the iron antidote be not at hand, care being taken that it is not too much calcined.—*Gazette Médicale de Paris* Jan. 22. 1848.

[These disputes as to the effect of the minute quantity of hydrochlorate of ammonia, contained naturally in the alimentary canal, on these rival antidotes, will appear little better than a species of pompous trifling, when it is considered how doubtful it is, if either the one or the other of these so-called antidotes can be of any efficacy in an actual case of poisoning by arsenic. It is well ascertained, that when arsenic is in solution both the iron-antidote and the magnesia-antidote will produce the designed effect; but when the poison, as it commonly happens in real cases, is in the form of powder, there is too much reason to fear that no salutary effect will follow. We are far from wishing to discourage the use of the one or the other, or a mixture of both these so-called antidotes; yet it is not to be forgotten that a reliance is not to be placed on either, to the exclusion of other means of counteracting or removing the poison. We may fortify our opinion by the following extract from Dr Taylor's late work:—"I have placed these substances in the list of antidotes, in deference to the views entertained by some eminent toxicologists: but I do not consider it the less necessary to state here those circumstances which induce me to believe that no reliance can be placed on either of them in cases of poisoning by arsenic."—P. 86.]

146.—*Poisoning by Sausages.*—Three inhabitants of Wurtemberg partook of sausages made of liver, lung, and brain of pork, with bread and milk, seasoned with spices, and smoked. One of them vomited, had colic pains, lost his sight, and died in ten days. A second lost his sight also, as well as his voice; his extremities became cold; he swallowed with extreme difficulty; there was paralysis of the eyelids; and at last the patient died suddenly, after the symptoms had undergone an evident amelioration. On opening the body, the blood was fluid, and the viscera showed an extreme friability. The third recovered, after having exhibited symptoms very much the same as those observed in the other two cases.—*Journal de Pharmacie*, Feb. 1848.

147.—*Poisoning by Camphor.*—A robust young man, twenty years of age, being in a laboratory while lumps of camphor were broken down, swallowed bit by bit to the extent of two drachms. Becoming affected with headache, he went home, and then his actions and gestures took a strange turn. After some gambols he went into his own room, whence he came out very soon stripped entirely naked, dancing, and seeking to leap out at a window. A medical man being called in, found the patient in a state of excitement bordering on frenzy; the pulse small, 180; the conjunctivæ injected; the pupils a little dilated; the respiration hurried; the breath exhaling the odour of camphor; the face pale, without intelligence; the desire to pass urine frequent; the urine clear, and with the camphor-odour; a viscid sweat covering the whole body. The wine of opium was administered. The patient vomited the contents of the stomach, in which were bits of camphor. He had an inclination to sleep, which was combated. Soon after, some amelioration of the symptoms being observed, he was permitted to sleep, and, after sleeping for three hours, he awoke without any recollection of what had passed.—*British American Journal of Medicine, and Union Médicale.* Feb. 12, 1848.

148.—*Detection of Arsenic.*—M. Tizot recommends that all arsenic should be mixed with red sulphuret of mercury, colocynth in powder, and creosote. By this means, colour, taste, and smell, would all combine to render its detection easy when mingled with alimentary substances.—*Report of Proceedings of Academy of Sciences of Paris.*

[Considering the many delicate uses to which arsenic is applied in the arts, we fear there are but few purposes for which arsenic is kept that will permit of such an admixture.]

MONTHLY RETROSPECT

OF THE

MEDICAL SCIENCES.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

149.—*On the Anatomy of the Liver.* By Dr LEIDY.—In the lowest orders of the animal kingdom no biliary structure can be detected. In the *polypi*, the *polygastrica*, the *annelida*, and in some of the intermediate orders, its existence appears probable, but the form is rudimentary, consisting of cells, forming part of the parietes of the digestive cavity, or of cœca appended to the sides of the alimentary canal. A distinct hepatic structure is first observed in the *myriapoda*, and is found to be the same as that existing in the *insecta*. In these classes of animals, the liver consists of a number of distinct tortuous tubes, sometimes terminating in blind extremities, at others uniting, so as to form loops. These tubes are found to be formed of a delicate basement membrane, lined by secreting cells. The cells are of a round or oval form, contain a nucleus with its nucleolus, and are filled with a finely granular matter, and numerous minute oil globules. The cavity of the tube is generally found filled with granules and oil globules.

In the *crustacea* the liver consists of an aggregation of long conical cœca, each of which is composed of a sac of basement membrane, its inner surface being lined with secreting cells. From each cœcum a narrow duct passes off to join a common trunk, which opens into the intestinal canal near the pylorus. The same structure is found in the *mollusca*, with this difference, that the cœca, instead of being elongated, are of a bulbous form. A large quantity of oil is found in the secreting cells of the liver in both of these classes.

In *vertebrata* the liver is made up of a number of lobules, which are composed of the ramifications of biliary tubes. In the interspaces of this network the blood-vessels ramify, and form an intimate anastomosis; the whole being closely connected by white fibrous and yellow elastic tissue. The biliary tubes consist of cylinders of basement membrane, lined by numerous secreting cells; they are generally from two to two and a half times the diameter of the cells. These cells are filled with a finely granular matter and minute oil globules. The quantity of oil contained in the liver varies greatly, being much increased in fatty degeneration of the organ. Blood is conveyed to the liver by two sets of vessels, the hepatic artery and the portal vein. The blood contained in the former appears appropriated to the nutrition of the organ; while the latter probably conveys to the secreting structure the fluid, out of which the bile is elaborated. Branches from both of these vessels enter the lobules, and converge towards their interior, where they terminate in trunks, which are the commencement of the hepatic veins.—*American Journal of the Medical Sciences*, January 1848.

[These observations of Dr Leidy are interesting; and, were his opinions with regard to the structure of the liver in the *vertebrata* confirmed, an important advance in anatomy would be made. But there is not in his paper sufficient proof of the correctness of his views to warrant us in accepting them unreservedly, more particularly as the determination of the exact mode of termination of the biliary ducts appears to have hitherto baffled the best observers. Considerable probability is, however, given to the opinions of the author by the facts ascertained with regard to the comparative anatomy of the organ. It is interesting to find that fat enters into the structure of the liver throughout the whole animal series.]

150.—Professor BUDGE *on the Influence of the Nervous Centres and Vagi Nerves upon the Movements of the Heart, Stomach, and Intestines.*—When the medulla oblongata is stimulated by electro-magne-

tism, the heart is rendered quiescent, while the whole body becomes tetanic. On the other hand, when the spinal chord is irritated by the same agent, the contractions of the heart continue, while the voluntary muscles are thrown, as before, into tetanic contraction. If the vagi have been previously divided, the contractions of the heart are unaffected by the electro-magnetic excitation of the medulla oblongata. He found that the application of the excitant, even to one of the vagi, was sufficient to arrest the contractions of the heart during its application; while Professor E. Weber, in his experiments, found it necessary to apply it to both vagi to produce this effect. When he stimulated by this agent the sympathetic nerve alone, he found, as the brothers Weber had previously done, that it produced no effect on the heart's action. When the chain of the electro-magnetic apparatus is laid across the heart of a frog, so as to touch the sides of both ventricles, its contractions are increased in frequency, and it is not until this excitation is frequently repeated that the heart becomes still. The same phenomena occur in this last experiment, whether the central organs of the nervous system be entire or previously destroyed. E. Weber has observed the same increase of the contractions of the heart when the electro-magnetic current is sent directly through its substance. Budge has succeeded in arresting immediately the movements of the auricle on applying the chain to its upper wall, a result not observed in Weber's experiments. These effects of the electro-magnetic influence upon the contractions of the heart, when applied to the medulla oblongata, may be explained in one of two ways. 1. By supposing that there is a force capable of restraining the contractions of the heart seated in the medulla oblongata and vagi, which can be raised to increased action by the electro-magnetic stimulation. 2. That this excitant, applied to these portions of the nervous system, debilitates for a time the contractility of the heart. Budge declares himself in favour of the latter explanation.

He also found that the same excitation, applied to the medulla oblongata, cerebellum, and vagi, caused increased contractions of the stomach, small intestines, and caput cœcum in rabbits, an effect very different from what it produces on the heart. When the vagi have been previously divided, these increased movements of the digestive canal are not observed.—*Wagner's Handwörterbuch der Physiologie.* 17th Lieferung, 1847.

151.—*On the Changes which the Blood-Globules undergo in the Spleen.* By Professor ECKER of Basle.—Besides the granules and ordinary splenic cells, there are found in the spleen of the rabbit, sheep, dog, and calf, and more especially in that of the frog and salamander, pale cells of the diameter of 0·007 m. m., containing a blood-globule and a finely granular matter; on adding water to them the cell-wall is sometimes ruptured, and the continued globule discharged, becoming pale and disappearing. Other cells are found varying from the diameter above mentioned up to 0·015, or even 0·030 m. m. They are sometimes round, sometimes irregular; they frequently contain one or more granulated nuclei, and a number of blood-globules, varying from one to ten, or even more; and when the nucleus is absent they are filled with a finely granulated mass. The membrane of the cells is of varying distinctness, sometimes amounting to a mere film. The contained granules are often yellow, brown, or blackish; the blood-globules are mostly shrivelled, and of very various sizes; they are little affected by water. M. Ecker believes that the spleen is the organ in which the blood-corpuscles undergo their last metamorphosis, being in fact broken up into the granular masses above mentioned, which are carried by the vena portæ into the liver, and thence expelled from the system. The researches of M. Kölliker, who has also observed these cells, show that they are present in all vertebrated animals.—*Gazette Médicale de Paris.* No. 7. 1848. *From Zeitscrift für Rationelle Medizin.*

[We have several times seen the pale corpuscles, containing yellow blood globules, described by Professor Ecker, and have much pleasure in confirming his observations. There can be little doubt that the coloured blood corpuscles are formed originally as nuclei of colourless ones.]

152.—*A new Method of determining the whole quantity of Blood contained in the Body of an Animal.* By M. WEISZ of Vienna.—M. Weisz, dissatisfied with the older and faulty methods employed to effect this object, proposes a plan which appears likely to lead to much more accurate results. His method is, in the first place, to draw from the vein of an animal a quantity of blood. Having ascertained the per centage of iron contained in this, he destroys the animal, and calcines its body; he next determines the amount of iron contained in the ashes, and then, by a simple calculation, arrives at the entire

quantity of the blood. It has been objected to this method, that other constituent parts of the body besides blood contain iron, particularly hair, bile, urine, milk, sweat, and the black pigment of the eye. These parts may, however, be easily removed before commencing the process of calcination. Iron also enters into the composition of chyle and lymph, but only in very minute quantity; any possible fallacy may, however, so far as the chyle is concerned, be to a great extent avoided, by killing the animal some hours after a meal, when the quantity of that fluid is about its minimum. M. W. anticipates no difficulty in the practical working of his scheme, from the slight and scarcely appreciable difference in the proportion of iron contained in arterial and venous blood. By the above method, the normal proportion of iron in human blood being already known, the whole amount of blood in the healthy human body may be readily ascertained in cases of sudden death. It possesses another advantage in the facility of its application towards the determination of the quantity of blood contained in individual organs.—*Heller's Archiv.*, 6th Heft. 1847.

153.—*Presence of Copper and other Metals in the Blood and Liver of Man, and the Lower Animals.* By MM. MILLON, DESCHAMPS, and HARLESS.—M. Millon ascertains the presence of different metals in the blood by a very simple mode of analysis. The blood, as it escapes from the vein, is received in about three times its bulk of water, and the fluid poured into a bottle of chlorine, and agitated. It immediately coagulates, becomes brown, and finally grey, and the fluid part is rapidly and easily filtered off. In the filtered fluid he readily determined the presence of copper, lead, manganese, and silica. He further ascertained that the copper and lead are, like iron, attached to the globules, and not distributed through the mass of the blood. A kilogramme of the clot having given 0·083 of a gramme of those metals, while the same weight of serum gave only 0·003, a quantity no doubt due to the solution or suspension of a minute proportion of globules in the serum. It is probable from the facts thus ascertained, that these metals, like iron in the blood, participate in some physiological function, which, however, it is impossible for us at present to define.—*Académie des Sciences*, 10th January 1848.

M. Deschamps, on his part, has endeavoured to trace the source of what he calls the physiological copper, and he concludes from his investigations, that all soils contain copper, derived in all probability from the decomposition of copper pyrites; that vegetables extract a portion of the copper from the soil, which afterwards finds its way into the animal system along with the food, though in the instance of man a certain portion both of copper and lead may obviously be derived from the vessels in which his food is cooked. The copper appears to be contained in the soil as carbonate, and as that salt is soluble in carbonate of ammonia, M. Deschamps considers it to be the substance by the assistance of which the copper is carried into the vegetable system, in which it is permanently deposited by the decomposition of the ammonia, for the formation of the nitrogenous constituents of the plant.—*Académie des Sciences*, 17th January 1848.

Harless has made a variety of very important observations on the blood of the ascidia, and of the cephalopoda generally. He had observed that in these animals, though perfectly colourless in the vessels, the blood becomes deep blue when permitted to escape. The production of this blue colour he found to depend solely on the carbonic acid of the air. When a single bubble of that gas is sent through the blood, the blue colour is produced, and gradually becomes darker as the current of the gas continues; but it is again almost, though not altogether, deprived of its colour by agitation with oxygen. The blood of the Eledone presented these phenomena after being carried from Trieste to Nurnberg. Analysis of the blood by Von Bibra gave the following results:—

100 parts of blood gave of solid constituents,	7·33
... ... ash ...	2·63
100 parts of dry blood gave of ash,	35·88
100 parts of ash gave—	
Chloride of sodium,	73·1
Sulphate of soda,	2·0
Phosphate of soda a doubtful trace.	
Phosphates of lime and copper,	24·9
	100·0

Iron was entirely absent, and appears to have been replaced both here and in the liver by copper. He found in the ash of the liver, 1·12 per cent. of copper, the presence of which was fully determined by a little galvanic circuit of zinc and platinum, by sulphuretted hydrogen, and by the blowpipe. The presence of copper in the liver, recalls to memory the discovery of it in certain biliary calculi by Bertozzi, Heller and Gorup Besanez; but its constant occurrence, and its replacing the iron of the blood, sufficiently show that the opinion put forth by these chemists of the liver being the organ through which

foreign metals are thrown off from the system, is inadmissible. As regards the source of the copper, Harless considers it impossible that it could be derived from the sheathing of ships, as those animals in which he detected it were caught at a distance from harbours in which such vessels lie, and he concludes that it must have been taken in along with their food, which in the cephalopoda consists of crustacea and small fishes. He has found copper in the Cancer pagiurus, Acanthias zeus, and Conger vulgaris, and in quantities always inversely proportional to the iron which they contain.

The blood of the Helix pomatia likewise contains a large quantity of copper, that portion of the ash which was insoluble in water having given 2·57 per cent. of metallic copper. This blood, at least in winter, becomes blue by exposure to the air; but, what is very remarkable, under totally different circumstances from those which produce the coloration in the Eledone, the blue being destroyed by carbonic acid, and restored by oxygen, an experiment which could be repeated many times on the same blood. In the blood of the Helix pomatia, alcohol produces a colourless coagulum. Ammonia destroys and hydrochloric acid restores the blue colour. The colouring matter is precipitated by alum, and rapidly redissolved by an excess of the precipitant, but by the addition of ammonia it is entirely thrown down. The compound of alumina and the colouring matter, gave 29·53 per cent. of a green ash containing a large quantity of copper. An analysis of the colouring matter itself is given; but as the author had not an opportunity of repeating it, it is unnecessary to quote it here.—*Müller's Archiv.* No. 2. 1847.

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

154.—Drs Von Bibra and Geist *on Necrosis of the Jaws, caused by the Vapours of Phosphorus.*—In the manufactories of lucifer matches the disease is most common among the dippers, who are more exposed to the fumes of phosphorus, which, as the fused composition is poured on the slab before them, are evolved in great quantities immediately under their nostrils. The process of counting and packing also causes a considerable evolution of phosphorus fumes, and in Nürnberg the counters and packers are affected like the dippers.

Toothache invariably precedes the more severe affection, and the patient attributes to his carious teeth, symptoms which are often the sign of a deeper malady. In all the patients attacked, however, caries of the teeth was previously observed, and so long as the teeth remain sound the affection does not show itself. The toothache may intermit and recur for a considerable period; the work is continued; and the person remaining exposed to the exciting cause, finds the pain gradually become more constant. It spreads over the whole affected side of the face; the cervical glands swell, and the cheek becomes tumid, red, and tense. The gums of the corresponding alveolar process inflame, an abscess forms, which now discharges fetid pus into the cavity of the mouth; and a sinus being once established, the livid gums retract more and more from the jaw-bone, the remaining teeth become loose and fall out, and more sinuses and abscesses form, through which the probe reaches the bone. In the same manner abscesses may also form externally, and the diseased portion of the bone will now soon appear to have become totally detached from the other portions, and will force its way into the mouth. The disease may terminate in this exfoliation; but if the strength of the patient does not suffice to carry him through, the soft parts become still further involved, and the ravages extend until death terminates the scene.

The constitutional disturbance bears a direct ratio to the extent and stage of the local malady. At first there is but little fever; but there are loss of appetite, thirst, and derangement of the alvine functions, constipation being the most prevailing symptom. The gastric derangement may increase; but this, as well as the febrile symptoms, may disappear, so that there is no constant type or expression of the general sympathy of the system peculiar to this disease.

The head disorders proceed differently, according as the upper or lower jaw is attacked. New bone is thrown out, at first in a fluid state, which, following the law of gravitation, accumulates towards the lower part of the under jaw. In the upper jaw no new substance appears to be ever formed after the bone has become denuded. The superficial portion is invariably of a dingy blackish colour, the lamina vitrea is destroyed, and the spongy substance of the alveolar process is ex-

posed. The bone appears rough, angular, sharp pointed, extremely irregular, as if it were carious ; it is filled with ichorous pus, and, as this is discharged, small particles of bone escape, which give the pus a gritty appearance.

A minute examination of the new bony formation, exhibits the Haversian canals with a larger diameter than those of normal bone. They are empty, and placed at right angles with the general direction of the bone. They interfere with one another, sometimes expanding to form sacs, sometimes contracting, and end with open mouths on the surface, which are more minute in recent deposit, and larger in older layers. The bone corpuscles are rounded off or angular, and their circumference is less decided ; during the progress of the formation of the deposit, they are very large, and their contour proportionably undefined. They appear pitted and dark-coloured ; at first they are lighter, and they have ramifications like those of normal bone, which increase in number with the age of the deposit. This deposit is laminated, and exhibits rents with which the ramifications of the corpuscles are connected. Spots caused by accumulations of earthy matter are visible here and there.

A chemical analysis of the new deposits in several cases, shows that they contain a larger amount of organic, and a less amount of inorganic, constituents than healthy bone.

As regards treatment, antiphlogistic remedies are necessary at first ; afterwards the system should be supported, and exfoliation favoured as much as possible. Surgical interference is useless. The preventive measures consist of good ventilation throughout the manufactories, not taking food in the workshops, and washing the hands night and morning in soda.—*Die Krankheiten der Arbeiter in den Phosphorzündholz-Fabriken. Condensed from Brit. and For. Med. Chir. Review.* April 1848.

[The original work is accompanied by beautiful coloured plates of the disease in the jaws, with drawings of the minute structure of the new osseous texture in various cases. It exhibits the great value of cultivating morbid anatomy and pathology on the basis of rational medicine, and may be considered a model for the production of monographs on individual diseases].

155.—*Ulceration of the Vermiform Appendage of the Cœcum.* By Mr Dumville.—Patient æt. twenty-four, male ; had always been delicate ; he was seized with diarrhœa eighteen months before his death ; this continued for six months ; after the cessation of the diarrhœa he had occasional pains in the abdomen and back. Four days before his death, he was seized suddenly with pain in the right iliac fossa; this became greatly aggravated two days afterwards, and accompanied with symptoms of urgent peritonitis, under which he sank. The cœcum exhibited intense peritoneal inflammation, caused by fœcal matter which had escaped through a sloughing ulcer in the vermiform appendage.—*Report of Manchester Pathological Soc. in Dublin Med. Press,* Mar. 15. 1848.

156.—*Abscess of the Pancreas.* By Dr Fletcher.—The appearance was that of a man much addicted to eating and drinking ; he was corpulent, complained of pain about the epigastrium, and distension after eating, with continual dull pain extending across the belly ; he had obstinate constipation. The urgent symptoms in the case were vomiting and pain, which, together with the constipation, led to the suspicion that some obstruction existed. He became emaciated, and died hectic eight months after Dr Fletcher first saw him. On dissection, liver enlarged, much congested, and having the nutmeg appearance; spleen healthy ; pancreas large and degenerated into a purulent mass, having none of its healthy structure left ; the large extremity had ulcerated into the duodenum at its inferior curve, through which the pus must have passed into the intestines ; the stomach was much distended ; intestines healthy, except the perforation alluded to ; contents of the pelvis healthy.—*Provincial Medical and Surgical Journal.*

157.—*Phosphatic Deposits in the Urine of Children.* By Mr Grantham.—The author has recently attended three children, in one family, whose parents had previously lost other three children.

The general appearance of his patients presented a lax condition of the muscular system, with fair complexion, unequal diffusion of heat, dark eyes, indisposition to exertion, and constipation. They complained of weary and painful sensations in the parts supplied by the lumbar plexus. On examination of the urine, which was of a pale straw colour, having a specific gravity of 1·020, and exhibiting no deposit after standing, an undue proportion of the mixed phosphates was found in the urina sanguinis, but not in the urina potus. The treatment consisted in abstinence from sugar, fruit, &c., the tepid

bath, flannel clothing, and the exhibition of the nitro-muriatic acid, followed by steel.—*Medical Gazette*, Dec. 17, 1847.

[The above cases are worthy of notice, on account of the comparative rarity of phosphatic deposits in the urine before the age of puberty. The report, however, is not altogether satisfactory; the ages of the children should have been mentioned, and also the length of time during which the phosphatic impregnation was observed.]

III.—PRACTICE OF MEDICINE.

158.—HEBRA *on Skin Diseases.*—(*Continued from* p. 66.)

THE 6TH CLASS, HYPERTROPHIES.

Each organ may be so affected. Hence the various divisions:—

A. *Hypertrophia epidermidis.*

a. Without affection of the papillæ.

1. *Tyloma.*—Horny plates seated on the surface of the skin.

2. *Clavus.*—Plates entering into and branching in the epidermis.

3. *Lichen pilaris.*—Caused by the twisting and contortion of the hairs in their endeavours to reach the surface through hardened epidermis. The resulting papillæ resemble the skin in colour. Treatment—Baths and oleaginous inunction.

b With hypertrophy of the papillæ.

4. *Pityriasis.*—The first grade of

5. *Ichthyosis*—Formed by a want of due relation between the production and scaling off of the epidermis.

6. *Veruca.*

7. *Nævus verucosus.*

B. *Hypertrophia pigmenti.*

a. Without desquamation of the epidermis.

1. *Lentigo*—But a stain around a follicle.

2. *Chloasma*—The same, but larger.

3. *Melasma*—The same, darker, from a greater amount of pigment.

4. *Nævus spilus.*—Congenital abnormal coloration of the skin.

b. With simultaneous desquamation of the epidermis.

5. *Pityriasis versicolor.*—The chief remedy is washing with a solution of borax, ʒ i to ℥ vj of water; or corrosive sublimate.

6. *Pityriasis nigra.*

C. *Hypertrophia corii.*

Elephantiasis.

D. *Hypertrophia folliculorum.*

The hypertrophied follicles form firm white semicircular elevations above the surface of the skin. Condylomata may probably be included here.

E. *Hypertrophia partium cuti adnexarum.*

1. *Trichaura.*—Hypertrophy of the hair bulbs.

2. *Politrychia.*—Over numerous hair follicles.

3. *Dermatokeras.*—A thorn-like projection of single hairs, which yet remained within the follicles.

4. *Polynychia.*

5. *Onychauxes seu gryphosis.*

7TH CLASS, ATROPHIÆ.

A. *Atrophia epidermidis.*

Hebra, under this head, includes excoriations, and distinguishes three grades:—

1. Slight ruffling of the epidermis.

2. Epidermis forcibly removed; exudation of plasma, forming a yellow, or clear brown crust.

3. The corion also being injured, blood becomes mingled with the plasma, colouring the crusts dark brown.

The author remarks that Hebra has been falsely led to include excoriation under this head by the use of the German expression, "Massenverminderung,"—diminution of volume; for, although atrophy be indeed such, it is generally held to include only those cases arising from imperfect nourishment, and not those caused by injury.

B. *Atrophia pigmenti.*

Leucopathia.

C. *Atrophia cutis.*

A consequence of many skin diseases; *e. g.* the scars after *Favus.*

D. *Atrophia folliculorum.*

E. *Atrophia cuti adnexarum partium.*

a. *Pilorum.*

α. *Pigmenti pilorum.*

1. *Poliosis.*

β. *Atrophia pilorum ipsorum.*

2. *Alopœcia* (var. *senilis, præmatura, circumscripta et syphilitica.*

b *Unguium.*

1. *Onychatrophia.*

THE 8TH CLASS, NEOPLASMATA.

A. *Epidermidis.*

Isolated condylomata and carcinomatous vegetations.

B. *Fibrarum telæ cellulosæ.*

1. *Molluscum simplex.*—Uniform swellings without contents on the back and hairy scalp.

2. *Acne rosacea.*—First, formation of new vessels; on the ends of these vessels papulæ form, which increase in size,

and may assume a proboscis-like form; occur in cases of habitual congestion, particularly in drunkards. Treatment—Altered mode of life, and washing with a olution of alum or tannin, 15 gr. to ʒ vj.

C. *Fibrarum telæ fibrosæ.*

1. *Cicatrices.*

2. *Cheloidea.*—A cicatrice-like production, without previous injury; usually of an oval or square form, with numerous extensions and superficial vessels. Occasional passing pain is present.

3. *Callus* —recently frequently observed in prosectors, commencing with follicular inflammation (furunculus); a small crust is formed, and in consequence of frequent soiling during dissection, epidermic and corial vegetations are formed, under which plasma becomes collected, sometimes purulent. These formations may attain the size of half-a-crown, and one or two lines in height, and are accompanied by violent pain.

D. *Telæ Adiposæ.*

1. *Lipoma.*

2. *Nævus lipomatodes.*

E. *Teleangiectasies.* Readily degenerate to *Fungus hæmatodes.*

a. Congenital—*Nævus vascularis.*

b. Acquired.

1. *Frambœsia.*

2. *Vegetationes syphiliticæ,* vascular and cellular new formations.

3. The first stage of *Acne rosacea.*

F. *Cholesteatoma*—The yellow brown surface of many sores.

G. *Osteoids*—Production of bone in the skin.

H. *Melanosis*—Deposition in the corion of the peculiar black pigment of the choroid and lungs; such melanotic parts readily degenerate to carcinoma.

The 9th Class, Pseudoplasmata.

1. *Carcinoma.*

2. *Tuberculosis cutis.*—A white spongy papula becomes developed in the follicle, the skin is perforated, a sanious fluid trickles out; the tubercular mass is situated at the base of the follicle.

The 10th Class, Ulcera cutanea.

A. *Ulcera idiopathica.*

1. Arising from scratching, *Ulcera psorica, impetiginosa,* &c. &c.

2. As a consequence of chronic dermatitis, also following erisypelas, furunculi, &c.

3. As a consequence of the capillary stasis caused by insufficiency of the venous valves. *Ulcera varicosa, arthritica, physconica.*

4. *Ulcera syphilitica primaria.*

B. *Ulcera symptomatica seu dyscrasica.*

1. *Syphilitica secundaria.*

2. *Scrophulosa.*

3. *Scorbutica.*

4. *Canceratica.*

The 11th Class, Parasitæ.

A. *Dermatophytæ.*

1. *Favus*—A yellow crumbly mass, projecting above the cutis, with a peculiar smell of mouldy bread, not seated in the skin (after removal depression is visible), the sanious, and afterwards purulent collection beneath it, and the absence of vesicles or pustules, all form certain marks to diagnose it from *Tinea.* The disease arises from diet, and from no dyscrasia, and is not contagious.

Hebra cannot yet recognise the vegetable character of *Alopœcia circumscripta* nor *Mentagraphita.*

B. *Dermatozoa.*

1. *Pediculi.*

a. *Humani capitis*—Always combined with *Achores.*

b. *Humani corporis*—Excoriation over the whole body.

c. *Humani pubis*—Produce a papular eruption.

2. *Acarus folliculorum*—Found on every dead body on the skin behind the ear.

3. *Sarcoptes hominis.*—(*To be concluded in next Number.*)

159.—*Diseased Conditions of the Mitral Valve.*—Incompetency of this valve is generally accompanied by narrowing of the auriculo-ventricular orifice. The valvular lesion under consideration is not unfrequently accompanied by a pseudo-chlorotic state, distinguishable from true chlorosis by the concomitant enlargement of the spleen. In these cases the patients complain of pains in the shoulders, which, according to Jaksch, persist until the system is improved by the use of chalybeates. Jaksch mentions the cases of three individuals who, from early youth, had laboured under this affection of the valves, and in whom the phthisical constitution ultimately became developed. He attempts to explain the presumed connexion between these diseases, by supposing defective nutrition, owing to the imperfect manner in which blood is propelled through the aorta.—*Hannoversche Annalen,* 1847. *Clinical Notes taken in the Hospital of Prague.*

160.—*Diseased Conditions of the Aortic Valves.*—Incompetency of these valves is constantly attended by large arterial pulsation. In simple contraction of the aortic orifice again, while the systole of the heart is of longer duration than in the former case, the pulse is almost always small and filiform. When the heart's action, however, is sufficiently slow to

allow a tolerably ample current of blood to flow through the contracted orifice, the pulse may be fuller.—*Ibid.*

161.—*Pericarditis.*—It is important to notice that the pains accompanying chest diseases are often referred by the patient to situations inferior, in point of position, to those organs actually affected. This accounts for the frequency of liver affection as a clinical disease, and the rarity of its detection on post-mortem examination. The pains of pericarditis are mostly referred to the scrobiculus cordis or hypochondrium. In one case where Jaksch, misled by these symptoms, diagnosed inflammation of the diaphragm, copious pericarditic effusion was found after death.—*Ibid.*

162.—*Endocarditis.*—Depositions in the spleen almost always accompany endocarditis, and these correspond in character with the endocardial exudations, being purulent if the latter are purulent, and so on. Jaksch states, that the endocarditis following acute rheumatism, very frequently gives rise to pyæmia. That the formation of aneurism may sometimes be induced, when the texture of the heart has been weakened by carditis or endocarditis, appears evident from the details of a case, in which inflammatory exudation on the lining membrane of this organ co-existed with inflammatory softening of its whole structure at the apex, and in which, at this point, a considerable degree of attenuation had taken place, which might no doubt, after some time, have gone on to rupture.—*Ibid.*

163.—*Perforating Ulcer of the Stomach.*—Of the patients labouring under this disease, noticed by Jaksch, 33 had acute tubercle of the lungs, 26 chronic tubercle of the lungs, and 43 pneumonia. He therefore presumes that some relation exists between the affection in question and diseases of the lung. The same physician gives the following sketch of the symptoms commonly observed with this kind of ulceration. After intense mental or bodily exertion, or the use of some stimulating liquor or article of food, the patient complains of violent pain, extending upwards from the pit of the stomach, which often disappears after vomiting. The tongue still remains clean, the appetite is variously altered, and the bowels are for the most part obstinately costive. Sometimes the symptoms assume more of the character of those which accompany mucous gastritis. There is a dull, persistent pain in the epigastrium, pyrosis, indigestion, vomiting, and tumefaction of the abdomen. Jaksch, in speaking of the treatment of these cases, recommends the use of milk, veal soup, and chicken soup as articles of diet. He also recommends, as palliative remedies, leeching and counter-irritation of the epigastric region, anodynes, the acetate of lead, and iron.—*Ibid.*

164.—Dr HUGHES BENNETT *on the Treatment of Phthisis Pulmonalis by Cod Liver Oil.*—The effect of the oil in many cases of phthisis is very striking, and is well seen in hospital and dispensary practice. Individuals presenting emaciation, profuse sweats, constant cough and expectoration, as most prominent symptoms, with a degree of weakness that prevents their standing alone, after a few weeks' use of it are enabled to get up with ease and walk about, with a visible improvement in their general health, and an increased amount of flesh. The physical signs of the disease may continue unaffected for some time; but if the treatment be continued, the moist gurgling râles are exchanged for dry blowing sounds, which become more and more persistent, pectoriloquy is merged into bronchophony, the respiration is easier, and a check is evidently given to the ulcerative process, and the formation of purulent matter in the air passages. In this state, patients often feel themselves so well that they insist on leaving the hospital, or give up their attendance on the dispensary. Dr Bennett has frequently found it impossible to prevail on such persons to continue the treatment, and the consequence is, that, again returning to their often unhealthy employment and bad diet, and exposed to the other causes favourable to the production of the disease, the distressing symptoms again recur. Several cases, with one or more caverns in the lungs, have in this manner returned to the Infirmary from four to seven or eight times during the last six years, and on each occasion have gone out in their own opinion perfectly cured.

Notwithstanding the difficulties which have presented themselves in bringing about a complete cure of the disease, Dr Bennett has succeeded, in several cases, in ascertaining that caverns have completely healed up, every symptom and physical sign indicating their presence having disappeared, and only slight dulness on percussion, and increased vocal resonance remaining as a proof of the puckering and induration of the pulmonary parenchyma attendant on the cicatrix. He gives two unequivocal cases where this occurred, and alludes to others which he purposes publishing at some future time.

Most cases of phthisis pulmonalis, especially in the advanced stage, are affected with more or less dyspepsia, which renders the stomach irritable, causes total loss of appetite, and is often the cause that prevents nourishment from being taken. In many instances there is no difficulty in employing the oil under these circumstances, but in others it cannot be retained on the stomach. It will then be necessary to calm the irritability of the organ, and the best remedy for this purpose, according to Dr B.'s experience, is naphtha. It is to the power this substance possesses of checking vomiting, and thereby allowing nourishment to be retained, that he attributes the advantages which have attended its use in the practice of Dr J. Hastings, and others. The diet should always be nutritive, without being stimulating; and counter-irritation to the chest is an excellent auxiliary. This treatment should be perseveringly persisted in; whilst, to prevent fresh exudations of tubercular matter, an equable temperature is of the highest importance. To equable temperature must be ascribed the advantages of favoured localities for phthisis, and with proper precautions it can be very well maintained in this climate.—*Bennett on Cod Liver Oil.* Edinburgh, 1848.

IV.—PRACTICE OF SURGERY.

165.—*Two Successful Cases of Galvano-Puncture in Popliteal Aneurism.* —A sailor, who had already been cured of a popliteal aneurism of the left side by a strict observance of Valsalva's treatment, was admitted into hospital on account of a similar tumour in the right popliteal space, the size of which is not mentioned. On the 19th of November 1846, Dr Palmer employed the galvano-puncture in the following manner: —A tourniquet being placed on the femoral artery, four needles, two and a half inches in length, were introduced into the tumour, two above and two below, at the distance of an inch from each other. During the operation, the direction of the currents was three times altered by changing the relation of the poles. The galvanism was continued altogether for thirty-five minutes. An immediate diminution in size, and nearly total disappearance of pulsation, resulted. Ecchymosis, and subsequently sloughing of the integuments, occurred. During the second week after the operation, fetid purulent matter escaped from the punctures—pulsation had entirely disappeared. On the eighteenth day a quantity of dark grumous blood escaped from the same openings, the sac was entirely emptied, and cicatrization gradually took place. Apparently, however, before the wound was healed, upwards of two months after the operation, the patient died of phthisis. On dissection, all that remained of the popliteal tumour was a sac of the size of a hazel-nut, containing a solid whitish yellow clot; the arterial trunk, with the vein which closely adhered to its coats, being obliterated for a short way above and below the tumour. On the left side all traces of the aneurismal tumour had disappeared, the artery being obliterated from two inches above the division of the femoral into deep and superficial, to the ankle.

The second case reported is that of a man twenty-eight years of age, in whom the aneurism had existed for a year before the application of the galvanism in May 1847. The same method was adopted by Dr Lisio as in the above case. The pain, however, was so acute, and the patient so intractable, that the action of the galvanism could be maintained only for twenty-three minutes. As the current was continued, the tumour became red, increased in heat, hard and painful, but it at the same time sensibly diminished in size, and pulsation became more and more feeble. For a short time pulsation had almost entirely ceased, but in about a fortnight it again increased. It then disappeared entirely and reappeared alternately for some time. The tumour, however, continued to shrink in size. At the end of twenty-seven days the patient left the hospital. In the month of August the tumour had almost quite disappeared, but pulsation was distinctly felt in two different points, corresponding apparently to the situations of the popliteal artery and an enlarged collateral branch.—*Annali Universali di Medicina* Jan. 1848, and *L'Union Médicale*, March 7, 1848.

166.—*Operation for Strangulated Umbilical Hernia.* By Mr G. B. Childs. —In a discussion which ensued at the Medico-Chirurgical Society (Feb. 23), a plan proposed by Mr Gay was spoken of, in which the object of the operator is to get at the stricture without at all exposing the hernial tumour. The following

operation has since been performed by Mr Childs, in which Mr Gay's proposal was followed.

The hernial tumour, which was of two years' standing, had become strangulated on the evening of the 7th of March. It was at least eight inches in its longest diameter; lay principally to the left of the umbilicus, on the abdominal parietes, which it depressed to a depth that made the distance between them and the integuments very considerable; and obviously consisted of a large mass of omentum as well as intestine. An operation for its relief was immediately required, and that proposed by Mr Gay adopted, on the grounds that, from its great size, the corpulency of the patient, and the extent of wound necessary for its performance in the ordinary way, hardly any but a fatal result could be anticipated from it.

The patient was first placed under the influence of chloroform, and then a wound through the integuments and superficial fascia, not more than an inch in length, was made on the right side, just beyond the edge of the hernial mass. The finger was directed through the wound, and after separating some few bands of cellular and other tissues, which feebly obstructed its course, the neck of the sac was reached at a depth of at least four inches. The umbilical ring forming the stricture, was then felt constricting the neck of the sac, to which it was adherent, by means of some strong bands. These were broken down with the finger, but not without some difficulty, owing to the great quantity of fat, and consequent depth of the wound. A director was then insinuated between the sac and the ring, guided by the finger, which still remained in the wound, and the stricture divided. After breaking down some further adhesions, the parts were liberated, and the contents of the sac immediately returned. The patient had her usual truss applied at once, and no bad symptoms occurred to prevent her complete recovery.

The usual fatality attending operations for umbilical hernia, would, in the prognosis of the present case, have excited grave doubts as to the result had the old operation been adopted; and Mr C. thinks that the simplicity of the principle upon which the new operation is based, the little difficulty in ordinary cases of practising it, and the lessened probability of its being followed by any severe symptoms, form very decided arguments in its favour.—*Lancet*, March 18, 1848.

167.—*Venereal Ulcers on the Tongue.* By the late JOHN PEARSON, Esq.—According to Mr Pearson, these are by no means common in syphilitic diseases. This morbid alteration begins rather beyond the middle of the tongue, in the direction of the central line. It appears first as a soft tubercle, and enlarges in length towards the base of the tongue. The edges have a sort of mulberry appearance, and the ulcer discharges an offensive matter. Sometimes the edges of the tongue, the uvula, or arches of the palate, have an excoriating or aphthous appearance. These symptoms sometimes occur without any other venereal symptom, but they are more commonly associated with blotches on the skin.

At other times there will be an ulcer on the side of the tongue, with callous irregular edges, accompanied with sore throat, or a sore on the tip of the tongue, with smooth callous edges, very painful, especially during the night; or there may be tubercles on the side of the tongue, resembling those which appear on the inside of the thighs and scrotum, when they excoriate each other.—*Provincial Medical and Surgical Journal*, No 6, 1848.

168.—*On Spermatic Discharges.* By B. PHILLIPS, F.R.S.—Mr Phillips has on several occasions addressed communications on this subject to the *Medical Gazette*, in which he advocates the use, in some cases, of caustic applied to the surface of the urethra, as advised by Lallemand. He has now, however, from the experience of a much larger number of cases, formed the opinion that this measure is generally not required. When these discharges are not the result of a continued habit of masturbation, or of any accidental cause of irritation,—*i. e.* when they are strictly involuntary,—he has found them rarely to persist beyond the age of twenty-five, and even when much more frequent than usual, he does not consider them likely to be productive of serious consequences. The evils complained of by patients are generally in great part imaginary, and have reference more to the dread of future consequences than to any present physical disorders. The proper cure is to be found in moderate sexual intercourse, and, where this cannot be recommended with propriety, Mr Phillips thinks that the great majority of cases will undergo a spontaneous cure after a time, and that in the mean time the continuance of the discharges is not likely to be fraught with any bad consequences. It is often difficult to convince the patient of this; but it is highly necessary to do so, in order to get rid of the

bad effects which occur in such cases from despondency. The use of tonics and stimulants, and indeed of medicinal agents generally, is deprecated by Mr Phillips on the ground that it tends to excite expectations of rapid cure, which will probably be disappointed, and thus give rise to increased mental depression.

The use of caustic is generally restricted by him to those cases in which the mucous membrane of the urethra is the seat of increased sensibility or chronic discharge, indicating a diseased condition independent of the seminal discharges; he considers it, however, a perfectly safe application. Finally, in cases where the habit of masturbation is kept up, no treatment, not even that by caustic, will be of the least avail until it is abandoned; and it is better that such patients should not submit to treatment, till they have succeeded in curing the habit which is the source of the disease. — *Medical Gazette*, March 24, 1848.

169.—*Tincture af Iodine as a Collyrium for promoting Absorption of Hypopion.* By Dr Rivaud Landrau of Lyons.—Dr Landrau has obtained good results from the use of tincture of iodine in the internal ophthalmias, accompanied with effusion of purulent matter into the anterior chamber. By means of dropping into the eye an iodureted collyrium, he has succeeded in promoting the absorption of obstinate hypopions. He orders the eye to be bathed three times a-day, with a collyrium composed of twelve drops of the tincture of iodine in seventy grammes (2½ oz.) of distilled water. In five cases of acute ophthalmia, with iritis and purulent effusion into the anterior chamber, which the author relates, this collyrium, employed after having first subdued the inflammation by means of a strict antiphlogistic treatment, caused a rapid absorption.—*Journal de Médecine de Lyon, in Annales d'Oculistique*, January 1848.

170.—*Congenital Blindness in Nine Children of the same Family.* By M. Pauli.—Rodolph Médian and his wife, both rather more than fifty years of age, and always enjoying good health, have had nine children who were born blind. The ancestors of these unfortunates had all good sight, as far as could be recollected, except the maternal grandfather, who became blind at an advanced age; it was impossible to learn any thing positively as to the nature and cause of his blindness.

The father Médian has black hair; the mother is fair; five children, who have the hair dark and the irides brown, are affected with amaurosis. The other four, who have fair hair and blue irides, and also amaurotic to a slight degree, have a milky cataract. Three of these blind children are daughters, two of whom are fair and one dark; of the six boys, two are fair, the others have the hair almost black. All the nine are healthy, and of a good constitution.—*Clinique de Montpelier, in Annales d'Oculistique*, January 1848.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

171.—*On Turning as an Alternative for Craniotomy and the Long Forceps in Deformity of the Brim of the Pelvis, &c.* By Professor Simpson.—In January 1847, Dr Simpson brought this subject under the consideration of the Obstetric Society of Edinburgh, and we gave an abstract of his opinions on this important practical question, and the details of a case of its employment in our Number for March 1847, p. 718. In a paper published in the July Number of this *Journal*, Dr Simpson again briefly discussed and stated the principles of the practice. In a series of seven or eight essays, published in the *Provincial Medical and Surgical Journal* during the past and present year, Dr Simpson has treated the subject at full length and in all its bearings. On the present occasion we will notice merely some of the points and propositions which Dr Simpson has considered.

We may premise, that when, in contracted pelvis, craniotomy or the long forceps are used, the contraction is almost always at the brim; and in the conjugate diameter of the brim from the projection forwards of the promontory of the sacrum. It is in such cases Dr Simpson proposes to substitute turning for craniotomy and the long forceps.

The great objects and advantages of the practice, Dr Simpson states to be "the substitution of the extraction of the infant by the feet for its extraction by the crotchet; the delivery of it by the *hand* of the accoucheur instead of its delivery by *instruments*; the *lateral* compression of the child's head by the contracted sides of the pelvis, instead of its more dangerous *oblique* or longitudinal compression by the long forceps; and, above all, the transient and not necessarily fatal *depression* of the flexible skull of

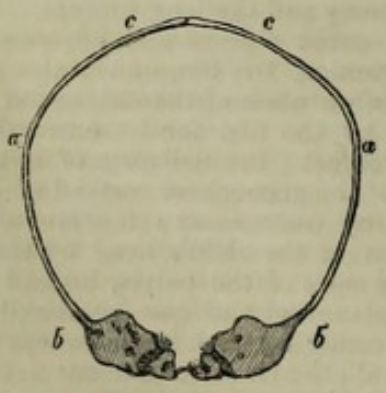
the fœtus for the destructive and necessarily deadly *perforation* of it."

In a chapter devoted to the statement of the "Evidence suggestive of the Practice," Dr Simpson shows, by a variety of illustrative cases extracted from Dr Smellie, Dr Lee, &c., that in some cases of deformed pelvis the labour has proved both easier and safer when the child happened to present and pass footling, than when, in other labours in the same mothers, the head of the fœtus happened to form the presenting part; and that occasionally, when in all previous labours the child had been sacrificed when it presented by the head, a living infant had at last been born when it chanced to come down and pass through the contracted pelvis as an original footling presentation. From these facts, Dr Simpson argues, that in some distorted pelves the passage of the child by the feet or pelvic extremity affords to it and the mother some special facility of transit. Upon what, in such cases, does this greater facility and safety of footling, as compared with head presentations depend?

In a chapter on the "Theory or Principles of the Proposed Practice," Dr Simpson enters at length into the solution of this last problem. Our space obliges us to content ourselves with giving the conclusions only, at which he arrives. For the details we must refer to the original paper. He shows, that in the usual form of contracted pelvic brim, requiring embryulsio or the long forceps, when the child passes as a footling instead of as a head presentation, it may escape with life and be delivered more easily, in consequence of the mechanism of the footling labour being more favourable and advantageous, chiefly on the following grounds :—

1. The fœtal cranium is, vertically, of a *conical* form, enlarging from below upwords, its bimastoid diameter (*b b*) being

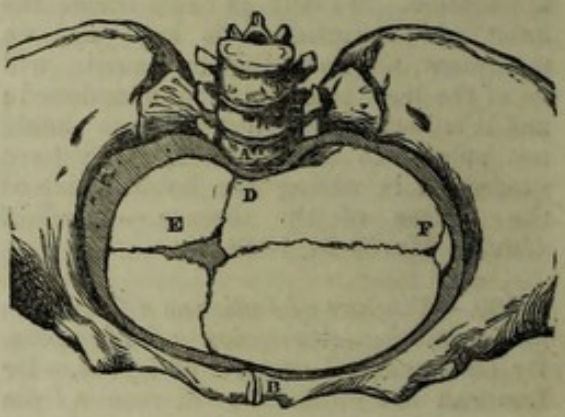
Fig. 1. *Vertical section of fœtal skull, showing its conical form.*



usually from half an inch to three quarters of an inch less than its biparietal diameter (*a a*); and hence, when the child passes as a footling presentation, the lower and narrower part of the cone-shaped head is generally quite small enough to enter and engage in the contracted pelvic brim.

2. The hold which we have of the protruded body of the child, after its extremities and trunk are born, gives us the power of employing so much extractive force and traction at the engaged fœtal head (E D F), as to make the elastic sides

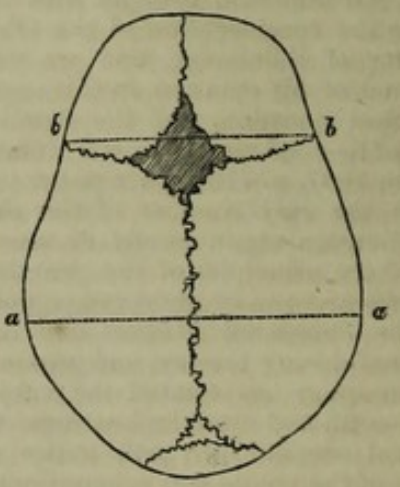
Fig. 2. *Showing the compression and indentation of the fœtal cranium in a contracted brim.*



of the upper and broader portion of the cone,—namely, the biparietal diameter of the cranium—become compressed, and, if necessary, indented, between the opposite parts (A, B) of the contracted pelvic brim, to such a degree as to allow the transit of the entire volume of the head.

3. The fœtal cranium, besides being of a conical form when looked at vertically, shows also the same configuration when viewed antero-posteriorly, its bi-temporal (*b b*) being about half an inch narrower than its bi-parietal diameter (*a a*); and

Fig. 3. *Outline of the fœtal head as seen from above.*



when, in a footling presentation, the head

is dragged downwards into a distorted pelvis, it generally arranges itself or may be artificially adjusted so that its narrow bi-temporal diameter, instead of, as in head presentations, its broad bi-parietal diameter, becomes engaged, and passes through the contracted conjugate diameter of the pelvic brim.

4. The arch of the cranium is more readily compressed to the flattened form and size required for its passage through a contracted brim, by having the compressing power applied, as in footling presentations and extraction, directly to its sides or lateral surfaces, than by having it applied, as in cephalic presentations, partly to the lateral and partly to the upper surfaces of the arch.

5. Turning, instead of craniotomy, in distorted pelvis has this advantage; that, while it gives the child a chance of life, it adds also to the chances of recovery and safety of the mother; for, *cæteris paribus*, delivery by turning can be practised far earlier in the labour than would be at all considered justifiable for the destruction of the infant by perforation; and, as Dr Simpson shows, artificial delivery is always attended with greater danger to the mother, in proportion as it is performed at a greater distance of time from the commencement of labour.

In one of his subsequent chapters, Dr Simpson shows from the recorded experience of Velpeau, Chaussier, Smellie, Denman, Lachapelle, Duges, Jacquemier, &c., that, as he stated in our Journal in March and July last, the neck of the living child is so strong as to allow us to exert such a degree of traction upon the obstructed head, that the sides of the fœtal cranium may become not only greatly compressed, but even depressed or indented under it, without necessarily destroying the life of the child; and he cites a variety of cases and observations from the above authors in proof of this remark. From the various cases which Dr Simpson cites we will quote one (a case incidentally recorded by Dr Denman) as highly illustrative of the principles and advantages of this proposed change in the operative treatment of one of the most important classes of cases that are met with in midwifery practice. "Many years ago (observes Dr Denman) I attended a patient in two labours, in both of which there was a necessity of delivering with instruments, on account of the smallness and distortion of the pelvis, and neither of the children could be preserved. In her next pregnancy I made a proposal to bring on premature labour, to which she and her friends would not consent, and I was dismissed from my attendance. In the course of twelve or fourteen years she had five more children, not one of which was born living. In the forty-sixth year of her age she proved with child, and again applied to me. When her labour came on, the first stage was suffered to proceed without interruption, but when the membranes broke I without delay passed my hand into the uterus, and easily brought down the feet and body of the child; but the head being stopped by the narrowness of the superior aperture of the pelvis, I was obliged to exert, and continue much force, before it could be extracted. The child was born with very little or no appearance of life, but, by the strenuous use of the common means recommended for this purpose, it was recovered. On the left parietal bone there was a depression of considerable extent, and, to my apprehension, of full one inch in depth, occasioned by the projection of the sacrum, but the depressed part gradually rose. In the course of a few months the bone regained its natural form, and the child was for several years in good health, with its faculties perfect. The woman recovered without any untoward circumstances."

[Various old authors, besides Dr Denman, have recorded individual cases, like the above, of deformity of the pelvic brim, in which they extracted the child by turning; but the operation was followed with doubt, and rarely; because the *principles* of its advantages and mechanism were not seen or understood. In detecting and generalizing these principles, and in showing the possibility and safety of early. substituting lateral compression, and, if necessary, depression of the infant's head for the long-delayed perforation of it, and inevitable death of the child, Dr Simpson will probably produce a happy revolution in the treatment of this important class of cases. We will revert to other points in a future Number.]—*Provincial Medical and Surgical Journal*, 1847-8.

172.—*Extra-Uterine Fœtation.* By Dr Duckert, Van Deen, M. Payan and Mr Hyde.—A strong woman, thirty years old, had already borne three children without aid. In the eighth month of her fourth pregnancy she was tossed in the air by an ox. After this supervened all the symptoms of rupture of the uterus. Three weeks after the accident an abscess formed below the navel, which burst of itself, and gave issue to matter, along with parts of the fœtus and placenta. In about five weeks the abscess healed up, and she

was able to leave her bed.—*Schmidt's Jahrbuecher* 1847, No. 12, p. 326.

Van Deen's patient, on arriving at the fourth month of pregnancy, was seized with acute peritonitis, from which she recovered. At the period of her expected accouchement she felt violent motions of the child, and had at the same time a bloody discharge from the vagina, which lasted for three days. On the third day her breasts became turgid, and she experienced the ordinary milk fever. Subsequently, she recovered completely; her menses flowed regularly, and she bore two children. Six years after the ventral pregnancy and retention of the fœtus above described, she died of a violent attack of peritonitis. On the autopsy the almost mature fœtus was found lying in a cyst between the bladder and uterus. In some places its soft parts had disappeared, and in others become encrusted with calcareous matter. It was also partly broken up, some of the bones having escaped through ulcerated openings into the intestine.—*Viertel-jahrschrift für Prakt. Heilkunde*, II. Bd. 1847.

Mr Hyde's patient was seized (without apparent cause) with symptoms of violent peritonitis, which subsided under treatment, and some time after which an abdominal tumour was discovered, which increased gradually, and was in due time ascertained to contain a fœtus; the uterus being found undeveloped. At the close of the ninth month of gestation, pains supervened, but soon again disappeared. She died about two months afterwards; and, on the *post-mortem* examination, the fœtus was found in the abdominal cavity in a state of decomposition. In the middle half of the Fallopian tube was found an ulcerated opening, through which the ovum had probably escaped into the abdominal cavity, and caused the peritonitis at a very early stage of pregnancy.—*British Record of Obs. Med.*, p. 68.

Dr Payan's case was that of a woman, æt. thirty-two, three months advanced in pregnancy. Suddenly, and without apparent cause, she was taken with violent pain in the hypogastrium, burning thirst, and feelings of great depression. She was then seized with faintings, in one of which she died, about ten hours after the commencement of the symptoms.

On opening the body, a large quantity of coagulated blood was found covering the uterus, which was somewhat enlarged, and presented at its upper part a prominent tumour, transparent in some parts, and in which was found the embryo. The cavity itself of the womb was a little enlarged, and covered with a sort of imperfectly organized false membrane, which almost completely filled it. It did not contain a fœtus nor a single drop of blood.—*Archives Générales de Med.*, Feb. 1848, p. 257.

[Our readers who are interested in the subject of extra-uterine fœtation we would refer, for cases similar to the preceding, and for much valuable general information on the whole subject, to the excellent essay of Dr Campbell, entitled a Memoir on Extra-uterine Gestation.]

173.—*Kiestein in the Urine, a Test of Pregnancy.* By Dr GOLDING.—The chief advantage which this test of pregnancy might be expected to afford the obstetrician and medical jurist, lies in its being often available very soon after the commencement of gestation,—in some cases as early as the third or fourth week. It is generally allowed that, in most pregnant women, the urine, after it has stood twenty-four or thirty-six hours, presents on its surface a fatty iridescent pellicle, of a somewhat cheesy odour. The pellicle is very rarely observed after lactation has been commenced. There are, however, several sources of difficulty and uncertainty in applying this criterion in practice, which induce obstetricians to place very little confidence in it. For instance, our author points out that, sometimes, it is apparently absent during the whole period of pregnancy, or only during a part of it; and that sometimes it is so indistinct as to be with difficulty discovered, either from its quantity being extremely small, or from the coexistence with it of other matters, which obscure or destroy its characteristic mode of appearance.—*Brit. Record of Obstet. Medicine*, No. 7, &c.

174.—*Assafœtida in Morbid Pregnancy.* By Dr G. LAFERLA.—Considering debility and inertia of the uterus to be a frequent cause of the death of the fœtus, Dr L. proposes the use of assafœtida internally and in repeated doses, to restore to the uterus the necessary vigour and tonicity, without exciting it to contraction. At the same time he pays particular attention to the hygienic circumstances of the mother, and to this last is probably attributable his success in the cases that have fallen under his care.—*Révue Medico-Chir.*, 1847.

175.—*Maternal and Infantile Mortality in the Dublin Lying-in Hospital.* By Dr CLAY.—The Dublin Lying-in Hospital was founded by Dr Moss in 1757; from

that period down to 1847, it has been under the charge of fourteen different physicians, or masters, as they are termed, who generally have held this important and lucrative appointment for seven years each. The following table shows the number of women delivered during each mastership, and the proportion of mothers and of children lost under the charge of the different successive physicians of the hospital. The per centages present, says Dr Clay, "an almost undeviating uniformity;" eighty or ninety years ago the mortality under the two first masters, Dr Moss and Sir Fielding Ould, being nearly precisely the same as since 1833 under the two last masters, Dr Kennedy and Dr Johnson.

Table of the Maternal and Infantile Mortality of the Dublin Lying-in Hospital under different Masters.

Name of Master.	Number of Deliveries.	Number of Mothers lost.	Number of Children lost.
Dr Moss, . .	915	14; or 1 in 65	46; or 1 in 20
Sir F. Ould, .	3,800	49; or 1 in 77	197; or 1 in 19
Dr Cullum, .	4,724	65; or 1 in 73	258; or 1 in 18
Dr Jebb, . .	5,903	63; or 1 in 93	269; or 1 in 22
Dr Rock, . .	7,088	54; or 1 in 131	411; or 1 in 17
Dr Clarke, .	10,787	124; or 1 in 87	580; or 1 in 19
Dr Evory, . .	11,357	86; or 1 in 132	600; or 1 in 19
Dr Kelly, . .	14,790	163; or 1 in 90	974; or 1 in 15
Dr Hopkins, .	18,727	217; or 1 in 86	1063; or 1 in 17
Dr Labatt, .	21,867	309; or 1 in 70	1535; or 1 in 14
Dr Pentland, .	12,885	198; or 1 in 65	827; or 1 in 15
Dr Collins, .	16,391	158; or 1 in 103	1017; or 1 in 16
Dr Kennedy, .	13,167	224; or 1 in 58	651; or 1 in 20
Dr Johnson, .	13,699	179; or 1 in 76	863; or 1 in 16
Total, . .	156,100	1903; or 1 in 81	9291; or 1 in 17

The 156,100 women delivered in the hospital have given birth to 82,267 boys, and 76,169 girls, or the proportion of male to female births has been as 12 to 11; twins occurred 2400 times, or in the proportion of 1 in 65 of the deliveries; there were thirty-two triplet cases, and one case of quadruplets.

In the Registrar-General's returns we have the proportion of maternal deaths in childbed in England and Wales published from 1839 to 1842. During these four years 2,024,774 women were delivered, and 11,598 of them died. Hence, the proportion of mothers dying in childbed during these years in England and Wales, was 1 in every 174 deliveries. It is, however, to be recollected, that always and every where the results of private practice are more favourable than those of hospital practice.—*British Record of Obstetric Medicine* for April 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

176.—*Therapeutic Action of Cod Liver Oil.* By Dr Hughes Bennett.—Dr Bennett believes that the therapeutic action of the oil is dependent essentially on its being a fatty matter, perhaps more easily assimilated to the economy than any other kind of fat. He thinks the views of Ascherson fundamentally correct, with this difference, that instead of oil and albumen uniting to form elementary cells, they only produce elementary molecules and granules, from which nuclei and cells are formed. To him it seems certain, that in chronic rheumatism and tubercular diseases, the albuminous compounds are in excess, and the oily compounds are diminished in the economy. The direct addition of the latter, therefore, is the most rational method of supplying the wants of the system.

It may reasonably be argued, that if the theory of its action as fatty matter be correct, any other kind of oil would prove just as serviceable, and certainly there are many much more agreeable to the palate. Experience, however, has decided this question in the negative. The reason of this probably is, that continued doses of the purest vegetable oils, as that of the olive and almond, are more or less purgative, and thereby diminish, instead of improving the strength. It may also happen that the pungent properties of cod liver oil may have a favourable influence in retaining it on the stomach, and rendering it digestible. Lastly, it seems

reasonable that an animal oil should be much more easily assimilated to the system than a vegetable one.

Since the publication of Dr Bennett's work on cod liver oil, in 1841, the chemical views of Liebig and others have come into notice, and it is a remarkable fact that they perfectly harmonize with the histological and morphological theory therein advanced. For, whether we regard the oil as a carbonized principle of the food, as furnishing an element for respiration, or as necessary to the formation of elementary granules in a nutritive blastema, it seems equally fitted to serve the end in view.

That a purely chemical theory, however, is defective is proved by the fact, that *every* carbonized material is not fit for the purpose. We cannot produce an increased nutrition in rheumatic or phthisical constitutions by alcohol, sugar, or starch, notwithstanding their chemical composition is so similar. The chemists may argue that these are converted into fats; and in the physiological condition so they are. In a pathological condition, however, when the digestive powers are enfeebled, this does not take place; and, in giving an animal oil ready made, we save the alimentary organs the trouble, as it were, of doing this. Hence, in constitutions which cannot digest food, or convert it into the oily element, the introduction of cod liver oil, in large doses, causes the necessary principle easily to be imbibed into the lacteals, where, uniting with the albumen, it constitutes the elementary granules so necessary to nutrition.

It is on this account, that in every disease of a rheumatic or tubercular nature, attended with impairment of nutrition, emaciation, weakness, &c., cod liver oil is directly indicated. It operates by imparting to the system one of the great elements necessary for the nutrition of the animal economy, in cases where that element is essentially defective. In the hands of the rational practitioner, it is destined to be an important means of curing a class of diseases, hitherto considered of the most dangerous and fatal nature. As our knowledge of morbid processes improves, as the microscope and organic chemistry open up to us the primary alterations producing lesions of the body, the great importance of attending to the part played by the oily principle, as one of the essential elements of nutrition, will become apparent. Then, when pathology is made the companion of physiology, and both constitute the foundation for a rational system of therapeutics, the use of cod liver oil will be found as beautiful in theory as it has already been found benefical in practice. —*Bennett on Cod Liver Oil.* Edinburgh, 1848, 8vo.

177.—*Quinine in Intermittent Fever.* By M. BOUCHARDAT.—M. Bouchardat conceives that intermittent fevers may be usefully arranged under four forms or varieties, according to the intensity of the disease, and the corresponding effect of quinine on its course and duration. The *first form* includes those obstinate cases which require large doses (15 to 30 grs.) of quinine for their temporary cure, but in which, in spite of the methodical use of the remedy, the fever continues to recur for years. This variety is found in Italy, North of Africa, &c., and is contracted, according to Bouchardat, by a lengthened residence in the neighbourhood of marshes, the water of which contains sulpho-salts in solution. To the *second form* belong those cases which require, but may be effectually cured by large doses (15 to 25 grs.) of quinine. An intermittent of this kind prevails at Tours, and has been well described by M. Bretonneau, who observes that small doses are here insufficient. They habituate the patient to the action of quinine, irritate the stomach, and render it difficult to obtain the full action of large doses. The *third form* comprises those mild cases in which small doses (1 to 5 grs.) are sufficient, not only to arrest the fever, but also to prevent its return. Lastly, he includes in a *fourth form*, the numerous cases in which change of residence, or admission into hospital, is sufficient to remove the disease. —*Gazette Médicale de Paris*, January 1848.

[This classification of intermittents is certainly of considerable practical value, and serves to establish the principle, that the dissimilarity of action of the same remedy may indicate differences in diseases apparently identical occurring in distant parts of the globe. The cases of intermittent fever observed in Paris and Vienna, belong to the third and fourth forms of M. Bouchardat. Thus, the practice of Skoda of Vienna, which consists in giving three doses of quinine of two grains each, at intervals of an hour previous to the usual period of accession of the paroxysm, rarely fails to effect a cure in two or three days. On the second or third day he sometimes increases the third dose to four or six grains. The form of intermittent is, however, so mild, that we have repeatedly seen cases in other wards of the same

hospital recover without any treatment whatever. On the other hand, the experience of physicians in Italy, Africa, and some parts of North America, has shown that small doses of quinine are quite inefficient in the treatment of the intermittent fever prevalent in these parts of the world.]

178.—*Poisonous Properties and Therapeutic Action of the Sulphate of Quinine.* By Dr Baldwin.—In certain forms of intermittent fever, quinine, as mentioned above, requires to be exhibited in large doses. It is very important to know, however, that this heroic treatment can only be conducted safely within certain limits. Many, believing in the perfect harmlessness of the drug, have fearlessly administered doses varying from half a drachm to three drachms; but the observations of Dr Baldwin show that this practice is attended with danger, and, in one instance which came under his own eye, a much smaller dose occasioned death. Children present greatly less tolerance of the remedy than adults. In the fatal case, eight grains given in two doses, with an interval of three hours between each dose, to a child of six years, brought on dilatation of the pupils, extreme restlessness, convulsions, blindness, and death. In another case reported by Dr B., sixty-eight grains introduced into the system in the course of twenty hours, induced the train of symptoms characteristic of the poisonous action of this drug, viz. tremors, slow and irregular breathing, restlessness, dilatation of the pupils, blindness, and convulsions.

Several authors (Mérat and de Lens, Duval and Trousseau) mention cases in which serious effects have ensued from the immoderate use of quinine. Melier (Mém. de l'Acad. de Méd. tom. IX.) says, that the following effects have been distinctly observed to result from large doses of quinine in man; delirium and coma, pneumonic symptoms, hæmaturia, amaurosis, deafness, convulsions, paralysis, and death.

Startled by the serious results occasioned by the use of quinine in the cases above noted, Dr Baldwin commenced a series of experiments on animals with the view of determining its poisonous action. He found that the symptoms developed in animals by poisonous doses of quinine, were general restlessness, speedily followed by "muscular agitation, or tremulous movements of the body and extremities, with a constant motion of the head resembling somewhat paralysis agitans. When under the full operation of the poison, the power of locomotion, and even of standing in the erect position, was altogether lost, and the extremities apparently paralysed." Great excitement of the vascular system is said to have been present, the pulse rising to 110, and in some to 240 beats in the minute, accompanied with great oppression of breathing and frothing at the mouth. The pupils were much dilated, and, as far as could be judged, vision was entirely lost—convulsions were observed in every case but one. "In a few instances the subject seemed as if stunned by some sudden blow, or a violent fit of apoplexy; the latter effect was only observed when it was given to young dogs by the jugular vein or peritoneum." Purging was present in some cases, and when the medicine was given by the stomach, vomiting invariably ensued unless the œsophagus was tied.

The time required to produce death varied greatly; in some instances 15 to 20 grains proved fatal in a short period; while in other animals, on administration of 120 grains, death occurred only after a long period; peculiar idiosyncrasies—as in the human subject—appearing to favour or retard its action as a poison. The quinine was in some cases introduced into the stomach, in others injected into the peritoneum and into the jugular vein; its effects were equally exhibited by each mode of administration, but not with more certainty or force when given in one way than in another. The chief post-mortem appearances were "a dark, fluid, and defibrinated condition of the blood," a congested state of the lungs, and "a vascular and highly injected state of the stomach and bowels," and congestion of the vessels of the brain.

The results obtained in Dr Baldwin's experiments coincide with those obtained by others.—(*Melier, Mem. de l'Acad. de Méd.* tom. X. *Giacomini, Dict. de Méd.* Vol. XXVI.)

It appears, then, that both upon man and animals, sulphate of quinine may exercise decidedly deleterious effects, and the important question now arises,—In what dose are we justified in administering this important drug, which will secure to us its full therapeutic action, and yet not be so large as to produce its toxicological results? In estimating this, we must guard against being guided by the results of individual cases; for experience has distinctly shown, that a dose which one individual may take without inconvenience, may prove much too large, and even fatal,

to another. Thus, numerous cases are recorded where one and two, and even three drachm doses have been administered without producing very serious results; while, in a case recorded by Trousseau (*Traité de Thérapeutique*), forty-eight grains nearly proved fatal; and instances of individual susceptibility of this kind might easily be multiplied.

The question of the dose, according to Dr Baldwin, can only be answered by a careful examination of the diseases to which quinine is applicable, as he believes that in many of these a tolerance of the remedy exists, which requires, and will bear larger doses for their removal, than other forms of disease in which such tolerance does not exist.

In *intermittent, remittent,* and *continued* fevers, the system presents great tolerance of quinine, and in these diseases large (one to two drachm) doses may be prescribed without much probability of the production of its toxicological effects. At the same time it may happen that the prescriber of these large doses will meet occasionally with one of those peculiar idiosyncrasies in which not even the existence of one of these diseases can produce any great tolerance of quinine, and either death or most distressing symptoms may supervene. We are, therefore, not warranted in giving these large doses until a trial of smaller doses has shown their inefficiency. Dr Baldwin concludes, from extensive experience in the treatment of severe malarious fevers, that doses of ten to fifteen grains are sufficient in the vast majority of cases. A few may require more. (*See the Observations of Bouchardat,* quoted above.)

In *intermittent affections* and *periodic neuralgia,* the tolerance of quinine is much less than in the fevers, 3 to 6 grs. being the quantity required, and which is best borne.

In *acute rheumatism and hemorrhages* small doses are quite imperative, as no more tolerance exists than in a state of health, and serious, even fatal, consequences have followed its use in heroic doses.—*Southern Journal of Medicine and Pharmacy, America,* November 1847.

[In the practice of M. Briquet, who was the first in France to recommend the use of large doses (30 to 100 grains daily) of the sulphate of quinine in the treatment of *acute rheumatism,* several deaths occurred, which were distinctly attributable to the medicine employed.—*Trousseau, Traité de Thérapeutique.*]

179.—*Adansonia Digitata—a Substitute for the Sulphate of Quinine.*—M. Duchassaing was induced, in consequence of the high price of sulphate of quinine, to try the efficacy of the bark of this tree, the febrifuge properties of which had been indicated by Adanson, its discoverer, in the severe intermittent fever prevalent in Guadaloupe. Numerous trials justify him in strongly recommending the drug, which is cheap, and has moreover an agreeable taste. It succeeded in several cases where large doses of quinine had failed. An ounce of the bark, in the form of decoction, forms a sufficient dose.—*Gazette Médicale,* March, 1848.

180.—*Baths of Corrosive Sublimate in Chronic Affections of the Skin.* By M. DUCLOS.—The author of this paper relates several cases illustrative of the value of these baths in syphilitic diseases of the skin, in chronic eczema, and generally in all chronic non-febrile cutaneous affections of young children. For each bath the proportions recommended are, for an adult,

Corrosive sublimate, 3 drachms, 45 grs.
Alcohol, - - 2 oz.

for a child, Corrosive sublimate, 15 grs.
Alcohol, - 3 drachms.

The child's bath is directed to contain two and a quarter gallons of water. The duration of the bath is from half an hour to an hour, and it may be repeated every day, or only every second, third, or fourth day, according to circumstances.—*L'Union Médicale,* 18th January 1848.

[We have seen these baths extensively used at the hôpital Necker, Paris, both in adults and young children, and can assure the reader, that the fears, which the practice at first naturally excites, are groundless, proper precautions being taken to prevent the child swallowing any of the fluid. They occasion heat and prickling of the surface, and a cutaneous eruption of a lichenoid character is frequently produced. A few patients, especially after a long bath, have displayed unusual drowsiness. They form the most efficacious treatment with which we are acquainted, for the syphilitic diseases of the skin of young children, ten to twenty baths being generally sufficient to obtain a cure. In chronic non-febrile rheumatism, Professor Trousseau has found them often of great service.]

181.—*Modus Operandi of Alum.* By M. MIALHE.—Alum belongs to the class of medicines termed by Mialhe *coagulants,* or those agents capable of entering into chemical combinations with the albuminous elements of the blood, and forming with them an insoluble compound.—(*Traité*

de l'Art de Formuler, p. 25.) Alum, penetrating into the tissues, is first decomposed by the alkalies of the blood, so as to form an insoluble sub-salt, which is deposited in the tissues, filling their network, and, so to speak, tanning them. A new portion of alum, being no longer modified by the alkalies already saturated, then acts by fluidifying the albumen and stimulating exhalation. Lastly, the alum-albuminous fluid, taken into the circulation, again becomes solid when it meets the alkalies contained in the mass of the blood, and in this way is explained the agency of large doses in arresting hemorrhage. Thus, in a small quantity, alum is a local astringent, in a larger quantity, it becomes an energetic local fluidifier, and after absorption a general hæmastatic.—*Med. Chirurg. Rev.*, Oct. 1847, *from L'Union Médicale.*

182.—*Chloride of Gold in Granular Inflammation of the Conjunctiva.*—Dr W. Clay Wallace recommends a solution of six or eight grains to an ounce of water, as much superior to the nitrate of silver for the cure of chronic granular inflammation of the eyelids; in recent cases, he says, it is inferior to the first-mentioned application.—*American Journal*, Jan. 1848.

VII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

183.—*On the Diseases to which the Famine of last year gave Origin, and on the Morbid Effects of Deficiency of Food.* By Dr Donovan of Skibbereen. (*Continued from* p. 54.) On Fever.—The causes which produced the fever of 1846-47, seemed to be starvation, want of clothes and cleanliness, overcrowding, &c. Dr Donovan discusses these various causes *seriatim*.

Starvation.—Dr Donovan, notwithstanding the doubts entertained by many, has been convinced that famine is, *per se*, capable of creating a peculiar and highly contagious febrile disease, which, when communicated to the well fed, may induce in them fevers of different types, from the high inflammatory to the low typhoid, according to the constitutional peculiarities of the subjects attacked. The morbid condition here alluded to, and which resulted from insufficient or unwholesome food, exhibited many of the symptoms of fever. There were offensive effluvia from the body of the patient; the teeth were covered with sordes; the countenance was anxious and febrile; but there was not, as in ordinary fever, a disrelish for food; on the contrary, the appetite was in these cases generally craving, and in scarcely any instance was there any disturbance of the sensorial functions. That this disease was produced by want of food was proved by the fact, that it was most general wherever starvation prevailed most, and that food was found to be its best remedy. It did not appear until provisions became enormously dear, and starvation general, and it then spread throughout the country in so sudden and universal a manner, as to prove clearly that it must have diffused itself independently of its slow propagation by contagion. That it was contagious, however, seemed to be proved by particular instances which Dr Donovan relates, as well as by the general fact, that almost every person actively engaged in the administration of relief to the poor was attacked with fever.

Want of Clothing and Cleanliness.—In the autumn and early part of the winter of 1846 a fever prevailed, clearly traceable to want of cleanliness. The people were then in want, but not in starvation; but their clothes were all pawned to procure food; shirts were worn for months together; the straw used for bedding was seldom changed, and this state of filth led to obstruction of the cutaneous exhalents, and brought on high febrile action, which was not relieved until the functions of the skin were restored, which was generally by a critical profuse diaphoresis about the fourteenth or fifteenth day.

Overcrowding.—Dr Donovan considers this to be one of the most active causes in propagating fever, and rendering it malignant. He quotes examples of it in other cases, and mentions instances in which it had been very evidently observed by himself. The symptoms of the two fevers mentioned above were as distinct as the causes which produced them, and required very different plans of treatment. The fever from want of cleanliness in the autumn and winter of 1846, was characterised by high febrile excitement, very rapid pulse, quick breathing, intensely hot skin, headach, in many cases distressing vomiting, and in numerous instances jaundice, supervening suddenly, and disappearing generally on the third day without leaving any bad effects. The jaundice was not a formidable symptom, only one patient affected with it having died. Head symptoms very rare, and

petechial eruptions little observed in the poor, but more common in the better classes. Intense rheumatic pains were frequent.

The famine fever of the end of 1846, and beginning of 1847, was scarcely marked by any undue vascular excitement. The pulse was quickened, but very feeble; tongue slightly furred and dry—then dusky; teeth lightly covered with sordes. The appetite was not impaired; there was not much tendency to vomiting; but diarrhœa was frequent. Head symptoms were not observed, even petechiæ were rare; but sloughs on the parts of the body exposed to contagion were very common. There was such a strong disposition to relapse, that it seemed to constitute a necessary stage in the disease; few patients escaped, and some lingered on for months with excessive attacks of fever.

There were no peculiar *post-mortem* appearances in the active fever described above. In the cases with jaundice which proved fatal, the icterus arose from the congested state of the duodenum producing obstruction of the common choledic duct.

In the pure famine fever, the appearances were much the same as in those who died of starvation, except that there was in the fever cases more softening of the mucous membrane, in one instance with gastro-enteritic symptoms. There were several crimson-coloured blotches scattered over the inner surface of the stomach.

The treatment of these two kinds of fever was very different. In the first, bloodletting was used freely in persons of all ages, and it was generally followed by profuse diaphoresis, which relieved all the symptoms. It was not contra-indicated even where the patients had suffered from want, provided the reaction were of a sthenic character. In other respects the treatment was of the expectant kind. In the second species, the lingering asthenic famine fever, the treatment consisted in overcoming the irritability of the stomach by sinapisms, checking the diarrhœa by astringents and opiates, and administering food. That the supplying of food was the most effectual means of cure, is shown by a tabular statement, exhibiting the rapid decrease of mortality which took place on the introduction of a temporary relief act, which came into operation on the 10th of May 1847. During convalescence in these cases, the use of quinine was very beneficial in preventing relapse. —*Dublin Medical Press*, March 1, 1848.

184.—*New Article of Vegetable Food.* By M. LAMARE PICQUOT.—A commission of the French Académie des Sciences have reported regarding a memoir of M. Lamare Picquot, relative to a new alimentary plant which he has collected in North America, and which he has designated by the pronominal name of *Picquotiana*.

The plant belongs to one of the great sections of the Linnæan genus *Psoralea*, and resembles the P. esculenta of Parsh, but differs from that species in the appearance of its leaves and the form of its calix. The reporter, M. Gaudidiane, was inclined to have inferred it to a new genus, by the name of *Picquotia* or *Picquotiana*, but that similar botanical characters are found in another species of Psoralea, *P. cavescens*. The plant, like P. esculenta and allied species, is furnished with tuberous roots, which vary so much in their form, that M. Gaudidiane is inclined to believe that M. Lamare Picquot has probably found several distinct species or varieties of useful plants of this same genus, which are included under his name of Picquotiana; but the want of flowering specimens prevents this botanical question from being settled. But it is a matter of some interest in relation to the probability of its being successfully introduced into European culture.

The roots appear to be perennial, a circumstance which might interfere with their culture, from the length of time they would require to be brought to maturity, were it not that they appear to form in each annual layer, young as well as old, a large amount of well elaborated fecula, disseminated through an azotiferous parenchyma, which is quite free of all noxious qualities. These plants are found in North America between the 32d and 50th degree of latitude, more especially in the plains between the Upper Mississipi and Missouri, where they are in extensive use by the Indian natives as articles of food. The commission of the Académie are of opinion from analogy, that the plants may be successfully grown in Europe, especially if seeds or plants were brought as nearly as possible from the sources of the Mississippi and Missouri. And those which grow naturally between the 35th and 45th parallels of latitude, would probably thrive well in the south of France and Algiers.

M. Payen, who has analyzed the Picquotiana, found in 100 parts of the root nearly 28 of brown bark, 25 of woody fibre and cellulose, and 47 of sifted farina, and in some specimens as much as 60 or 70 per cent of this farina.

The composition of the farina is, azo-

tised matters, 4·09,—ashes 1·61,—starch, with traces of cellulose and fatty matter, 81·80—water, 12·50. The dried roots contain about 70 per cent of interior matter, consisting of two-thirds of farina and one-third of fibrous matters. The farina, mixed with an equal part of wheat flour, forms good bread, whilst the cortical portions are readily eaten by cattle.

The starch grains of these roots are characterised by a concave helum, situated at one end of the grain, and surrounded by several rounded mamellated projections.—*Comptes Rendus*, Mars 13, 1848.

[The report does not give us any idea of the size of these roots. Many North American species, such as *Apros tuberosa*, have amylaceous roots, but these have in general been found so small as not to be worth cultivating.]

185.—*Oil Cake as Human Food.* By Dr Pluskal.—The poor in Austria have been led, by the scarcity of food, to use rape oil-cake as a substitute for bread stuffs. It was used mixed with two-thirds of wheat flour, and made into dumplings. Three cases are given where this produced symptoms of gastric disturbance, with vertigo and fainting.—*Œsterreichische Wochenschrift*, No. 13.

186.—*Animal Jelly for Exhausted Cases.* By Dr Taussig.—Take of brown cinchona bark (cinchona fusca); of sarsaparilla bruised, each two drachms; ivory shavings; deers' horn shavings, of each two ounces; veal chopped, half a pound; put in three pounds of water to two pounds; then add an egg beaten up with its shell, boil for five minutes, and drain through cloth. It forms a firm jelly, of which the patient may take a table-spoonful three times daily in flesh broth.—*Œsterreichische Wochenschrift*, No. 32, 1847.

[There is no special advantage in the Huamalies bark recommended. Red or yellow bark would be better, and the bone shavings may be omitted without loss.]

187.—*Epidemics must be suppressed in the Places where they originate.*—Little is known of the immediate chemical or vital causes of epidemics; but in given circumstances, where many are immersed in an atmosphere of decaying organic matter, some zymotic disease is invariably produced; where there is starvation, it is most frequently typhus; cold, influenza; heat, it is cholera, yellow fever, plague. At the mouths of the Ganges, of the Nile, of the Niger; in London, particularly up to the 17th century; in camps, in barracks, in ships, in prisons formerly; in Ireland, in Liverpool, in all our towns now, the circumstances in which zymotic diseases become epidemic may be witnessed. A city breathing an atmosphere perfectly pure may not be exempt from every epidemic; but observation has shown that such irruptions are unfrequent, and fatal to few persons of strength or stamina. Internal sanitary arrangements, and not quarantine or sanitary lines, are the safeguards of nations. A salubrious city in an epidemic—like a city built of stone in a conflagration—is exposed to danger and injury, but not to the same extent as the present cities of Europe, which are left without any adequate regulations for the health and security of their inhabitants.

The great historical epidemics have diminished in intensity, and there appears to be no reason why they should not be ultimately suppressed, with the advances of the population among which they take their rise. Their origin is obscure; but influenza appears generally to become first epidemic in Russia,—cholera in India. It is in India that the source of the latter disease must be attacked. If the health of India become sound, Europe might be safe, and hear no more of the epidemic which is now traversing Russia. The attention of the Indian authorities has for some time been directed to the subject. The other nations of Europe are beginning to take an interest in public sanitary improvements; and any plans found to succeed in England, will no doubt be carried out as speedily as possible in all parts of her Majesty's dominions; for the vast population that owns her sway is intimately united. Asiatic cholera has taught us, that the lives of thousands in England may depend on the condition of the pariahs of Jessore.—*Registrar-General's Report, and London Medical Gazette*, November 5, 1847.

188.—*On the Alterations in the Proportions of Male and Female Legitimate Births in some Departments of France.* By M. Giron de Buzareingues.—The proportion of female legitimate births to male in the whole of France from 1802 to 1834, was 937 to 1000; from 1834 to 1843, it was as 941 to 1000. The examination of the numbers in the above series of years, however, shows in individual departments a much greater variation. Thus, in fourteen departments, viz., Allier, Charente, Dordogne, Gers, Indre et Loire, Maine et Loire, Sarthe, Vienne, Haute-Vienne, Ain, Charente-Inférieure, Eure, Haute-

Saône, the proportion of females has declined since 1834; in the three departments, Corrèze, Creuse, Lot et Garonne, it has increased; as also in the six departments, Bouches-du-Rhône, Côtes-du-Nord, Eure et Loire, Hérault, Rhône, Seine.

The author formerly (Révue Médicale, 1838) gave us the result of his observations, that where the occupations are chiefly laborious, the proportion of male births is above the average, but that the contrary is the case where the majority of the population had lives of less laborious exertion and more comfort. He finds the above results to corroborate this view. In the first series of departments, the population is chiefly agricultural. The second series has been emptied in part of its labouring population since 1834, by the great demand in Paris for its stone-masons; while the third contains in its towns a large population of manufacturers and seamen.

The conclusion from these facts is, that manufacturing industry, and every thing which is opposed to the full muscular development of the male part of the population, determines a relative increase of female and decrease of male births; while field-labour and every thing which in a high degree favours muscular exertion, has an opposite effect. The relative increase of female births for the whole of France is explained upon this theory by the extension of manufacturing industry, the diminution of laborious occupations, the increase of luxury, and the more numerous conveniences of life.—*Schmidt's Jahrbücher*, 1847, No. 10; *from Révue Médicale*, June 1846.

VIII.—FORENSIC MEDICINE AND TOXICOLOGY.

189.—*Charge of Murder of a Child by Drowning—Acquittal on the Plea of Insanity.*—Mary Sweetlove, a married woman, the wife of a baker at Sandwich, was charged before Mr Justice Coleridge at Maidstone, with throwing her infant into a rivulet, where it was drowned. The evidence showed unequivocally that she had drowned the child. It appeared that she had been reduced to great distress, and having received warning from the landlord of the house where she was residing that he could keep her no longer, she went out and threw the child into the water. Witnesses stated, that she appeared immediately after in a wild and excited state, and that for some time before the fatal occurrence her mind had been affected. Mr Emmerson, a surgeon, who saw the prisoner immediately after her child was found drowned, expressed an opinion that she was then in such a state of mind as to be unconscious of her actions. The jury acquitted her, and she was ordered to be detained during her Majesty's pleasure.—*London Medical Gazette*, March 24, 1848.

[There is no sufficient evidence here of insanity. The circumstances of distress in which the prisoner was, had no doubt unhinged her mind. But the number of cold-blooded murders is but few; so few as hardly to endanger materially the public safety. It is against murder, committed under the influence of some strong excitement, that the public requires to be protected. Is it possible that a woman, on the point of committing so great a crime as the murder of her child, should present a calm exterior to the bystanders, or that she should be upbraided with the commission of such a crime without considerable disturbance of her feelings? It seems manifest to us that this woman committed murder, and that the distressing condition to which she was previously reduced, was a proper ground for a recommendation to mercy by the jury, but not of acquittal.]

190.—*Acquittal from the charge of Murder on the ground of puerperal Insanity.* This was a charge against Martha Prior, a married woman, thirty-seven years of age, for the murder of her infant, thirteen days old, by nearly cutting off its head with a razor. From the evidence of a surgeon, Mr Bull, of Felstead, it appeared that, about a week after her delivery, the prisoner was found to be affected with illness, there being very great prostration, the eyes vacant and wild, the countenance haggard, and her whole state so suspicious that he gave directions that she should be kept perfectly quiet, that the child should not be given to her, and that she should not be permitted to be alone. It appeared in evidence, that in consequence of the surgeon's directions, the prisoner was watched by two women for two or three days; but that, on the thirteenth day after her delivery, being left in the house with no other person but a girl of thirteen, her daughter, and the infant, she succeeded by threats in forcing the girl to bring the infant to her in bed, and also a razor, with which she immediately

nearly severed its head from the body. The women who had watched her spoke to the incoherence of her thoughts, and the surgeon was of opinion that, at the time the prisoner destroyed the child, she was not aware what she was doing, or, if she was, that she was incapable of controlling her actions.

The jury found a verdict of not guilty, on the ground of insanity.—*London Medical Gazette*, March 24, 1848.

[We find Lord Denman in his charge to the jury in the above case, saying, "He must express his opinion that the judgment of the medical gentleman had been very rashly formed. How could one person dive into the mind of another, and express an opinion with regard to its being in an unsound state, when there was no evidence of any alteration of conduct, or any circumstances in the case to show alienation of mind? He said this on account of the great danger that would prevail to human life, if people were to be taught that a sudden impulse was to be an excuse for a crime, and that the atrocity of the offence itself was to be adduced as an argument in support of such a supposition. He could not help thinking, that such opinions were too often given by scientific men, upon too slight foundation for the safety of the public; but as he felt that, in this instance, there was no doubt that the jury would act upon the testimony of the medical gentleman who had been examined, it would be useless to proceed any further with the inquiry." We agree with Lord Denman, that the plea of insanity in excuse for crime is sometimes abused, and that the abuse of this plea endangers the safety of the public. But we cannot help thinking that his lordship has hurt the cause he advocates, by making his observations on a case that did not warrant them. It is unquestionably an evil, that the mere atrocity of a crime should be regarded as of itself sufficient to uphold the plea of insanity. But in the case before us, the state of things is in reality altogether different — though no act of violence is proved besides the act of killing the child, there is independently of that, what amounts to the strongest probability of insanity; namely, the period after delivery within which the child was destroyed, the circumstances which led the surgeon to direct the prisoner to be watched, and the infant kept from her; and lastly, the evidence of the women accordingly employed to be with her, that her thoughts were incoherent. When the unconcealed mode in which the act of killing was performed is taken into account, together with the above circumstances, we think there can be no doubt of the soundness of the surgeon's opinion, that the prisoner was under the influence of mental aberration at the time when she destroyed her child. Lord Denman dwelt on the circumstance, that a quarter of an hour elapsed between the time when she got the child beside her, and the asking for the razor, as incompatible with the idea of a sudden uncontrollable impulse to kill it; but the slightest acquaintance with the history of insanity as regards contrivance, is sufficient to remove all difficulty on this head].

191.—*Trial of Ann West at Nottingham on a charge of causing Abortion.*—The prisoner was a midwife, or pretended midwife, and the chief evidence against her was the mother of the child. Though she was acquitted, some points of the trial deserve attention. According to the testimony of the mother, the prisoner informed her that she was in the habit of procuring abortion, and that her charge was a sovereign. Thomson, the mother, afterwards went several times to the prisoner's house, on all of which occasions she was operated on by her, the operation consisting in forcing up some instrument, which was held by the prisoner. She was at last delivered of a male child some time in the sixth month of her pregnancy; the child was born alive, and lived for five hours. There was medical testimony to the effect that there were no marks of violence upon the child, and that death was caused by its premature delivery. The presiding judge (Mr Justice Maule) gave it as his opinion, that though the infant lived five hours, it was a case of murder if the prisoner had caused the premature delivery.—*London Medical Gazette*, March 17, 1848.

[It does not clearly appear, from the account of the trial, on what ground the prisoner was acquitted. The testimony of the mother, Thomson, was partly corroborated by another witness, and it was deposed in evidence that the prisoner had boasted of having done the same act for persons similarly circumstanced, a hundred times over. If the fact was distinctly established, that the prisoner had received 17s. 6d. for services in the sixth month of pregnancy, it was a most important corroborative circumstance against her. It was not shown in the defence, for what services the prisoner as a midwife received this reward. From the report of the trial before us, it is impossible to judge how far the preparation of the case on the part of the prosecution,

and that on the part of the defence, were well balanced, but we have seen complaints of late by the English judges, of insufficient preparation of criminal cases, owing to penuriousness in the authorities. If this be the case in trials of such a nice nature as this, with the ingenuity of counsel on the opposite side, it is offering a direct premium to crime.]

192.—*Method of Recognising the Presence of Blood on Clothes.*—Fibrin has the property of attaching itself to the texture of clothes. Sulphuric acid has the property of dissolving textures made of hemp or linen without altering the fibrine. If, then, a texture of this sort is suspected of being stained with blood, it is to be plunged in concentrated sulphuric acid, which dissolves the texture, and leaves the fibrinous part of the blood presenting a network, where may be distinguished the impressions made by the texture on which the blood was fixed.—*Journal de Chimie Médicale, and l'Union Médicale*, Mars 14, 1848.

193.—*Fatal Instance of Poisoning by Sulphuric Acid.*—By G. Corfe, Esq., Middlesex Hospital.—A man, forty years of age, was brought to the hospital three hours after having swallowed, intentionally, half a pint of vitriol, procured at an oil shop. He had vomited immediately, and soon after was in great agony. Before he was sent to the hospital, he had swallowed large draughts of magnesia and water. When brought to the hospital, his countenance was of a bluish tint, not unlike a man half-strangled; his extremities were cold and mottled; his pulse small and feeble; his mouth and clothes covered with some white fluid; the epithelium of the lips and tongue was only partially removed; its destruction over the fauces was more apparent. The warm-bath, numerous leeches, followed by a poultice to the throat; ice to be kept constantly in the mouth; six ounces of bi-carbonate of magnesia, in two pints of thick barley-water, to be sipped; a large oil enema; turpentine epithems to the feet, and two grains of calomel, a quarter of a grain of tartar emetic, and three grains of tragacanth every four hours, were the curative means prescribed. In five hours he was found tranquil and sleepy, but had vomited a large quantity of bloody mucus; his vital powers began to fail, and he died seventeen hours after he was brought to the hospital. The post-mortem examination was made the day after his death. The œsophagus, fauces, and alimentary canal were first laid open, when it was found that the epithelium was quite detached and corrugated from the base of the tongue to the cardiac opening of the stomach The mucous membrane throughout was entire, but of a scarlet redness. The interior of this tube presented the exact similitude of a snake's back. The interior of the stomach was as though a thick coating of black pitch had been laid over it with a brush. This blackened surface was not charred blood, as it did not communicate any stain to the fingers, but really a destruction of the whole tissue of this viscus. Six inches below the pyloric end of the stomach, the same condition of the mucous surface was observable. Just at the middle of the duodenum, the peritoneal coat over the space of a shilling was white, and nearly destroyed by the action of the acid from within. That spot of this bowel where the bile duct enters was perfectly untouched by the acid; so that the shining mucous surface of health exhibited a striking contrast to the frightful ravages of this corrosive poison around it. A curious appearance was also observed along the valvulæ conniventes of the duodenum, and a portion of the jejunum; these surfaces were studded with numerous bells or bubbles of air, in size and appearance like carnelian beads. The destruction of the epithelium and the effervescing effects of the antidote, had, during the efforts of vomiting, driven the disengaged gas under the mucous membrane, and caused this singular appearance. The effects of the corrosion were visible as low down as the ileum. None of the fluids found in the several viscera affected litmus-paper. The blood was black and clotted in the left auricle, but the ventricle was empty and rigidly contracted.—*Medical Times*, Jan. 15, 1848.

194.—*Magnesia as an Antidote to Arsenic.*—On the 27th October last, at eleven o'clock forenoon, a lady in Paris took poison by eating a piece of bread and butter sprinkled with the powder of arsenious acid. Four hours after she took a cup of coffee, which produced vomiting. Between six and seven in the evening Dr Chammartin was called in, who found the patient suffering under all the symptoms of arsenical poisoning. He prescribed hydrated magnesia; 300 grammes (between nine and ten ounces) of gelatinized magnesia were administered in four doses in the course of two hours, giving rise to liquid alvine evacuations. The patient recovered. M. Bussy cites this case in answer to the objections made by M. Caventou against the use of magnesia.—*Union Médicale*, Fevrier 12, 1848.

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I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

195.—*On the Effects of Nichol's Apparatus on Double Refracting Structures.* By SIR D. BREWSTER.—Having lately had occasion to examine some very minute crystals, and also some animal and vegetable fibres that possessed the doubly-refracting structure, Sir David Brewster was surprised to find that, by the use of the polarizing apparatus, he could eliminate two kinds of indistinctness which affect the vision of microscopic objects. The interposition of a Nichol's prism, or of an analyzing rhomb of calcareous spar, however skilfully formed, between the eye and the object, has always been considered as deteriorating the microscope, and the observer is justified in removing it in ordinary cases, when he wishes to obtain the most perfect definition which his instrument can give. When the object, however, has a doubly-refracting structure of the slightest kind, so as to act upon polarized light, the polarizing apparatus is of vast service in developing its form and structure, not merely its doubly-refracting structure, but that form and structure which it exhibits in common light. The preceding observations are of course applicable only to those microscopic objects which depolarize light; but there is scarcely an animal or a vegetable fibre which does not possess this property. The minutest hair of the smallest animal which can be procured depolarizes light; and if a case should occur where the depolarizing structure exists, and could be rendered visible by doubling the thickness of the fibre, we might obtain this effect by making the polarized light pass twice through the fibre by reflection, and thus exhibit itself luminously on a dark ground.—*Phil. Magaz.* March 1848.

196.—*New Method of determining Phosphoric Acid.* By M. RAEWSKY.—The determination of the quantity of phosphoric acid is one of the most difficult processes in chemical analysis, and a simple and rapid method, to supplant the extremely tedious and troublesome processes now in use, is of great importance for facilitating the analysis of substances in which that acid occurs. M. Raewsky's process consists in precipitating the phosphoric acid in the state of phosphate of peroxide of iron. When this is done in an acid solution by means of acetate of peroxide of iron, the phosphate which falls is perfectly pure, and has the formula $Fe_2\,O_3\,PO_5$. All that is necessary then is to determine the quantity of iron present, and from it calculate the quantity of phosphoric acid. For this purpose, the author employs the following method:—The washed phosphate of peroxide of iron is dissolved in hydrochloric acid, the iron reduced to the state of protoxide by means of sulphite of soda, and its amount determined by the quantity of a normal solution of permanganate of potass, which it is capable of decolorising, according to Margueritte's method. This method is very rapid, and admits of a high degree of accuracy. MM. Pelouze and Dumas, who were commissioned to report upon the method to the Academy of Sciences, state that the error does not amount to more than $\frac{6 \text{ or } 8}{1000}$, which is certainly as high, or even a higher degree of accuracy than can be obtained by the methods now in use.—*Comptes Rendus*, April 24, 1848.

[This method appears likely to be of great service in the analysis of many animal substances, and we have therefore thought it right to call the attention of our readers to it. For the full details we must refer to the paper itself, as well as to that of M. Margueritte on the determination of iron, in the *Annales de Chimie et de Physique*, 3d Series, Vol. xviii. p. 224.]

197.—*On the Preparation of Creatine.*

By Dr GREGORY.—Dr Gregory recommends the flesh of the cod and skate as the best source of creatine, which, though yielding two or three times less than that of fowls, is nevertheless five times as economical. The method of preparation is precisely that of Liebig, but Dr Gregory has obtained it from the flesh of several animals not experimented upon by Liebig, in quantities of which a table is given in the paper.—*Journal of the Chemical Society of London*, No. I. p. 25.

In another paper on the same subject, read to the Royal Society of Edinburgh, Dr Gregory states it as his opinion, that creatine is, in part at least, destined for excretion, in support of which he brings forward exactly the same arguments as those adduced in our review of Liebig's "Chemistry of Food," in our Number for September last, in favour of the same view.—*Proceedings of the Royal Society of Edinburgh*, vol. ii. p. 160.

198.—*On the Mode of Propagation of Various Entozoa.* By M. EMILE BLANCHARD.—The author has investigated with great care the entozoa inhabiting the bodies of domestic animals, particularly the "Douve du Foie," (*Fasciola hepatica*, Lin.), which is found in the liver of cows and sheep, particularly in some parts of Germany. He has assured himself, by the examination of a large number of cattle, that these parasites do not occur in the liver in any other than the adult condition, or at least very nearly full-grown. In the biliary ducts, on the other hand, the ova are to be found in great numbers, and in passing towards the inferior extremity of the intestinal tract these appear to undergo a process of incubation, being more advanced as they pass downwards. The intermediate stages between the ova and the adult animal are never to be found. It is, therefore, nearly certain that the ova pass out of the intestines with the excrements, and undergo development in some other situation, apart from the body of the infested animal; and that, after attaining nearly their full growth, they are received along with the food into the stomachs of other individuals, and thence pass again to the liver, where they propagate a new race.

M. Blanchard has also remarked, in regard to other entozoa, their occurrence only in the adult condition in the parts principally infested. This is the case with the *Amphistoma conicum*, which inhabits the first stomach of cows and oxen, with the *Brachylæmus variegatus*, which occurs in the lung of the *Rana esculenta*, and the *B. cylindraceus*, in that of the *Rana temporaria*. The *Tænia* and *Bothriocephalus* (tapeworms) of the human subject, are, on the contrary, to be found in every stage of growth, a whole family sometimes occurring in the intestines of one individual.

The intermediate stages of growth of the above-mentioned entozoa are still unknown; but from the extreme variety of forms known to be assumed by some of the *Trematoda* at different stages of their development, it may be supposed, without much improbability, that we are already familiar with the younger conditions of some of them, and have recognised them as different species. M. Blanchard directs particular attention to the enormous numbers of the ova of these animals, as showing that a vast majority of them must be abortive, probably in consequence of not meeting with the proper conditions for their development.

The author has examined a very large number of fœtal animals, the adults of which are apt to be infested with the above parasites; but has never, in any instance, found a fœtus so infested. He directs attention to this fact as strongly indicating the necessity of the introduction of the ova from without, probably along with the alimentary matters. — *Comptes Rendus*, March 1848.

199.—*On the Physiological Peculiarities of Albino Animals.* By M. SICHEL.—M. Sichel states, that about twenty years ago he made the singular physiological observation, which he has confirmed lately, that cats whose hair is entirely white, without mixture of any other tint, and without spots of any other colour, with the iris of a blue or grey-blue, are always deaf. All kinds of sounds which ordinarily frighten this animal, such as the cracking of a whip, the clapping of the hands, the barking of a dog, &c., may be made in their immediate neighbourhood without their hearing it, provided that it be not of a kind to transmit vibrations through the ground, such as stamping with the feet, or the blow of a hammer, &c. If the fur have the slightest spot of darkish, greyish, brownish, or reddish tint; and if the iris, instead of being blue or greyish-blue, be yellow, or mixed with a deep tint approaching the red or the brown, the auditive functions are normal. The blue tint of the iris is rare in the feline tribe, and is not found in general except in young individuals. This tint may become deeper as the animal grows older, and then, although the white colour of the fur is not changed at the same time, the sense

of hearing is restored. In the numerous cases of albinism in men and in animals which he has had occasion to examine, he has never observed any defect in the sense of hearing, and this imperfection is only observed in these white cats with blue or bluish irides. In an article "upon the different actions of certain exterior agents upon animals of different colours," in Casper's *Wochenschrift*, No. 18, 1846, Heusinger has collected a number of pathological anomalies, sufficiently curious, resulting from the total or partial white coloration of the hair. Thus certain plants produce poisonous effects upon individuals with white hair, or spotted white, among sheep, pigs, and horses, to the exclusion of individuals with black hair belonging to the same species. Upon cows spotted white, baldness, and other diseases of the skin, have attacked only the white spots. The above facts show that the absence or modification of the pigment in the mammalia, may exercise often a real and profound influence upon the functions, not only of the skin, but also of the other organs, as of that of audition. It has been for a long time known, that in man in the normal, as well as in the diseased state, other organs in the body, besides that of the skin and hair, present different manifestations of activity in the blonds and brunettes.—*Annales des Sciences Naturelles*, October, 1847.

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

200.—*Simple Follicular Glands in the Appendix Vermiformis.* By Dr Gerlach of Mayence.—The mucous membrane of the vermiform appendage is studded with small points, which give it a perforated appearance when held against the light. These are the openings of glands, which are easily visible in young subjects by the unaided eye. They consist of simple cœcal sacs, which are firmly imbedded in the submucous cellular tissue ; and are very analogous to those discovered by Sprott Boyd in the stomach. These glands are also found in abundance on the surface of the cœcum, in the neighbourhood of the opening of the vermiform appendage, and become fewer in number according as they are removed from this point. Their secretion is highly acid, and is probably the cause of the acidity which, according to Tiedemann and Gmelin, characterises the alimentary matters in the cœcum. It is well known that these physiologists conceived that a second digestion takes place in the cœcum; and the analogy of the glands above described with those of the stomach, together with the acid nature of their secretion, appear to Dr Gerlach to support this view.—*Zeitschrift für Rationelle Medizin*, Heft 1, 1847.

201.—*On a Peculiar Alteration in the Shape of the Blood Corpuscles of Mammalia.* By J. Lindwurm.—When the blood of man or of the calf is treated with concentrated mucilage, the corpuscles become smaller and somewhat obscure, with finely granular (crenated?) edges. If, when thus altered, a saturated solution of common salt, or a little strong syrup, be added to them, their edges become distinct, and they assume the form of oval or considerably elongated flat plates, decidedly greater in size than the normal blood corpuscle. When seen edgeways, they appear as linear bodies pointed at the ends. The length of the corpuscles thus altered is 1-140th to 1-170th, their breadth 1-400th of a line.

This effect of reagents differs from all previously observed, in not being referrible to the laws of endosmosis and exosmosis. It is not presented, so far as hitherto observed, by the blood of birds and reptiles ; nor do any other reagents, or any other mode of adding the above, effect similar changes in human blood. The altered corpuscles are dissolved by acetic acid, in the same way as the normal.—*Zeitschrift für Rationelle Medizin*, 1847, Heft. 2. [Henle has tested the correctness of the above observation.]

202.—*Movements of the Small Bones of the Ear.*—In an account of the movements undergone by the small bones of the ear, and their utility to the sense of hearing, Edward Weber offers an explanation of the rounded appearance presented by the external surface of the membrane of the fenestra rotunda when the membrana tympani is pushed inwards after death, and of its concave appearance when the membrana tympani is drawn outwards. He observes that the articulation between the head of the malleus and the body of the incus is such, that the former bone cannot be moved alone by the membrana tympani, but that both move together as one bone. He states that their axis of movement is the line drawn from the

slender process of the malleus to the short process of the incus; on these two processes adherent to the wall of the tympanum the bones turn, as on a pivot. Thus it happens that when the membrana tympani is pushed inwards, the stapes is pressed within the fenestra ovalis by the long process of the incus; when, on the contrary, the membrana tympani is drawn outwards, the stapes is carried out from the fenestra ovalis. The stapes could not exercise these movements completely if the cavity of the labyrinth was bounded entirely by firm and unyielding walls, for the fluid within it is almost incompressible. But by the pressure of the fenestra rotunda this difficulty is avoided. The fluid which fills the vestibule communicates with that in the cochlea, particularly with that of the scala vestibuli, which again freely communicates with that of the scala tympani; so that when the membrane of the fenestra ovalis is pushed inwards towards the vestibule, the consequent pressure on the contained fluid will be communicated to the membrane of the fenestra rotunda, which will be pushed outwards. In this way the movements of the membrana tympani produce indirectly the flux and reflux of the fluid of the labyrinth from the fenestra ovalis to the fenestra rotunda, by percussion, and by the yielding of the lamina spiralis of the cochlea.—*Baly and Kirkes' Supplement to Müller's Physiology, and Archives d'Anat. Physiol.* January 1846.

203.—*On the Irritability of the Muscles in Paralysed Limbs.* By Dr MARSHALL HALL.—(Proceedings of the Royal Medical and Chirurgical Society of London.) In the *Periscope* of our Number for January (p. 516), we analysed a paper of Dr Todd on this subject, and gave a summary of the views of Dr Marshall Hall. The opposition of Dr Todd to the views of Dr Hall, has induced the latter to present to the Society the present paper, in which he maintains, that the difference between Dr Todd's experimental results and his own, are owing to the employment by the latter of the strong and reiterated impressions of the electro-galvanic apparatus, instead of the simple current of the Cruickshank battery, which was always employed by him (Dr Hall). Cases are adduced showing the different, and sometimes opposite, effects of these two agents. Dr M. Hall contends, that it is only by applying a simple current of low intensity, and gradually increasing its force till the muscles become affected, that the muscular irritability can be truly tested. The strong and interrupted shock of the apparatus used by Dr Todd produces a complicated effect, in which the nervous centres play a prominent part, and which is therefore unsuited for testing muscular irritability. The effect of the weak current is quite different from reflex action, being confined to the muscles through which the current directly passes. Besides, if the brain of a frog be destroyed, and the nervous trunks of a limb be removed on one side, the limbs of the two sides are equally affected, although the one is subject to the conditions for reflex action, and the other not. Dr Hall recurs to the opinion formerly expressed, that the brain in its normal state is an exhauster of muscular irritability, which accumulates therefore to an abnormal extent in parts not subject to cerebral influence, when the other conditions are the same. He gives several additional cases, in some of which the diagnosis between cerebral and spinal paralysis was made by means of the galvanic test.

In the course of the discussion, Dr Todd stated, that he thought the peculiar effect of the weak current on the muscles of the paralysed limb was owing to the excitation of reflex actions, which, it is well known, are often more easily induced by slight stimuli, such as titillation of the skin, than by stronger ones. He thinks that the weak currents are probably insufficient to penetrate the limb, and produce impressions only on the cutaneous nerves. [This, however, is shown to be incorrect by Dr Golding Bird.] Dr Todd believes the galvanic current to act primarily upon the nerves, and only secondarily through them on the muscles.

Dr Baly enunciated Volkmann's law, showing the power of volition to modify and neutralize involuntary muscular action; and this without any apparent exertion of voluntary effort. Thus, in the tetanus produced by strychnia, he had on one occasion observed, that convulsive action was induced by an unexpected stimulus; while the same stimulus, when the individual was forewarned, produced no effect whatever. Many other conclusive instances were given of this remarkable fact. Dr Baly conceives, that, in the case of paralysed and sound limbs, the inferior irritability of the latter by galvanism, may in some cases be owing to the control of volition. He seems to view the actions excited by galvanism as being reflex.

Dr Golding Bird gave various illustrations of the mode of action of electric currents of small intensity, showing that their action on the molecules of matter (and therefore probably on the muscular

irritability), is often greater than more rapid and intense currents. Thus, gunpowder may be fired by a feeble current, while it is merely scattered by the direct passage of the charge of an electric jar.

The rest of the discussion has comparatively little scientific interest.—*Med. Gazette*, April 7, 1848.

[In reviewing the whole of this controversy, it appears to us that some important results have been established for science. The following points seem to be placed beyond doubt.

1*st*, That in some cases of hemiplegia, galvanic currents so weak as not to affect the sound side, produce muscular contractions in the paralysed.

2*d*, That in other instances the reverse of this is the case.

3*d*, That strong or rapidly interrupted and repeated currents produce results in some instances quite opposed to those of weak currents.

4*th*, That the control of the brain over the sound side may have the effect of neutralizing involuntary, as well as of causing voluntary muscular action; and that this may occur without any marked external sign of volition, either in the expression of the features, or in the motions of the part affected.

The last of these points appears to be not wholly acquiesced in by Dr Marshall Hall, who supposes that the exercise of a voluntary control over involuntary action implies a counter-exertion of muscular power. This, however, is clearly proved by numerous facts not to be the case. On the other hand, Dr Marshall Hall has satisfactorily shown the movements produced by the weak current to be independent of reflex action; and his preference of the weak to the strong current, as a test of irritability, appears also to be well founded.

It is not by any means clear that the muscular irritability, as tested by galvanism, is independent of the condition as to excitability of the peripheral nerves of motion, which Dr Hall has left entirely out of the question. Neither has the influence of the brain upon the sound side been sufficiently understood in relation to this subject. We cannot therefore admit that Dr Marshall Hall has been successful in establishing his theory, until experiments have determined the amount to which the circumstances above mentioned interfere with the results.]

204.—*New Method for the Quantitative Determination of Urea.* By M. E. Millon.—For determining the quantity of urea, the author makes use of the nitrite of mercury. This salt dissolves in nitric acid without undergoing decomposition, and the nitrous acid, although it does not escape, continues to act upon urea, and converts it entirely into nitrogen and carbonic acid. In order to determine the quantity of urea in any urine, a definite quantity of it is mixed with the solution of nitrite of mercury, and the carbonic acid which escapes is absorbed by potass, and weighed. This weight, multiplied by 1·371, gives the quantity of urea present. This method is of great value, both from its accuracy and its rapidity, as each determination only requires about half an hour, and not more than a few minutes of actual attention.

In the course of his examination of the urine, the author has remarked a curious relation between the density of the urine and the proportion of urea, which may be thus stated: The figures which express the excess of density of the urine above that of water, express also the quantity of urea in 1000 parts. Thus, for instance, in a urine, the density of which was 1011·6, we found 11·39 of urea in 1000 parts. This is true, however, only of healthy human urine, and is not more than an approximation, and sometimes not a very close one.

The author has found in the urine of the rabbit from 3·01 to 6·14 parts of urea in the 1000, and in the stag from 92·08 to 111·09. He also gives the following determinations of urea in different diseases:—

	Density.	Urea in 1000 Parts.
Pneumonia (second stage),	1015	39·75
Do. . .	1025	45·94
Articular rheumatism,	1028	43·11
Double pneumonia, .	1017	42·90
Do. . .	1024	39·40
Phthisis (third period),	1043	24·25
Diabetes, . .	1037	8·25
Do. (accession of febrile symptoms),	1039	21·50
Diabetes, . . .	1035	5·57

—*Comptes Rendus*, vol. xxvi.

205.—*Urea in the Vitreous Humour of the Eye.* By M. E. Millon.—The vitreous humour of the eye of the ox contains 1·63 per cent. of solid substances. Among these, Berzelius has distinguished common salt, a little albumen, and a matter soluble in water; but the author has observed the presence of urea in the proportion of no less than from 20 to 35 per cent. of the dry residue. The vitreous humour in man and the dog has the same composition as that of the ox; and the

author considers it to contain nothing but common salt and urea. The aqueous humour also contains urea and common salt.—*Comptes Rendus*, vol. xxvi. p. 121.

206.—*Urea a Normal Constituent of the Blood.* By J. C. STRAHL.—The author took four ounces of the blood of a dog, mixed it with three times its volume of absolute alcohol, and filtered off the fluid from the coagulum. The alcoholic fluid was evaporated to 1-16th, and mixed with oxalic acid, and crystals of oxalate of urea were distinctly observed under the microscope, with a magnifying power of 80.—*Preussische Vereinzeitung*, Nov. 1847.

III.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

207.—*On Open Foramen Ovale, and its connexion with Cyanosis.* By Dr MAYNE of Dublin.—The author founds his observations on a very rare and remarkable case, of which he gives a detailed account. The foramen ovale in this case was so large as to allow a half-crown piece to pass with ease, and there was no Eustachian valve. The left auriculo-ventricular orifice was contracted so as barely to admit the points of two fingers, and the mitral valve was shortened so as to permit of regurgitation. These lesions were accompanied by immense hypertrophy of the right ventricle, with enlargement of the right orifices, and dilatation of the pulmonary artery and veins; while the left ventricle was very much diminished in thickness and size, and all the great vessels of the systemic circulation were diminished in calibre; the abdominal aorta admitting the little finger with difficulty, and its arch and the venæ cavæ being contracted in proportion. The valves of the aorta and pulmonary artery were healthy. The right auricle (which received the contracted venæ cavæ) was considerably dilated; the left auricle (into which the dilated pulmonary veins entered) was of natural size. There was apoplectic engorgement of the lungs.

The symptoms of these remarkable lesions were dyspnœa and palpitations on exertion, cough, and perpetual sweating. There was great indisposition to exertion, and the patient (a female) declared that death would be the consequence of any attempt at exercise. The quantity of food consumed by her was so small as to excite general surprise; she did not, however, become very emaciated even at the close of her life. The chest was examined frequently during two years, and always with the same results. There was extended dulness in the cardiac region, and a bruit heard over a limited space in the neighbourhood of the fourth costal cartilage on the left side; this bruit was inaudible both at the apex and in the line of the aorta. The rythm of the heart was natural. The respiratory sounds were every where excessively feeble, and this character was constant. At no time during the progress of the case, had the patient been affected either with dropsical symptoms or with cyanosis. She died suddenly at the age of twenty-nine, a few hours after a trifling exertion.

Dr Mayne remarks that, in this case, the obstruction at the left auriculo-ventricular orifice must have caused the current of blood to pass by the open foramen ovale from the left into the right auricle, instead of from the right to the left, as is usually the case. The absence of cyanosis is thus readily accounted for; instead of the pulmonary blood being partially circulated in the systemic vessels, the converse was the case, and the system was robbed of already aerated blood, a portion of which passed through the lungs a second time. The large size of the pulmonary vessels, and the diminished calibre of the systemic trunks, is evidently explained by this state of the circulation; and the feebleness of the respiratory murmur, may perhaps be owing to the circumstance, that a certain portion of the blood passing through the lungs had already undergone aeration, and, therefore, a smaller supply of air was requisite for the completion of the process.

The occurrence of contraction of the left orifice of the heart, in connexion with congenital patency of the foramen ovale, is rare in comparison with contraction on the right side. The latter condition is the most frequent cause of cyanosis.—*Dublin Quarterly Journal*, Feb. 1848.

208.—*Case of Rupture of the Chordæ Tendineæ of the Tricuspid Valve.* By Dr R. B. TODD.—This unusual lesion occurred in a man aged twenty-one, who died in King's College Hospital, London. Three years before admission he had been stabbed in the right side in a riot, and suffered great alarm; after this he had a pleuritic attack, for which he was largely bled. From this time till admission, he had frequently passed large quantities of blood by stool and by vomiting. General

anasarca had existed for a month before admission.

The liver and heart presented signs of enlargement on admission; there was crepitation, with feeble respiratory murmur in the back; the breathing was rapid; the pulse small and compressible. There was a loud systolic murmur at the apex of the heart, and over the sternum; also another less loud (probably anemic) at the base, which was prolonged into the aorta. The second sound was feeble. The patient died, five days after admission, of increased dropsy and dyspnœa.

The lesions in the heart were confined to the right side, which presented considerable hypertrophy, with dilatation. The anterior division of the tricuspid valve lay loose in the cavity of the ventricle; the chordæ tendineæ were torn across; and the musculi papillares, from which they sprang, were shrunk and atrophied. The ends of the ruptured tendons were swollen into little knobs, like the swollen ends of the nerves of stumps after amputation. There was no thickening of the lip of the valve. The aorta and its branches were small.

The state of the musculi papillares and tendinous cords shows the lesion to have been of considerable duration. It appears not impossible that it may have originated at the time of the riot. The united influences of fear and of a struggle might cause a temporary check to the respiration, sufficient to account for impeded circulation in the lungs; and hence the blood in the right side of the heart would be driven back upon the auriculo-ventricular orifice and its valve, causing a violent strain upon the latter. The hæmatemesis and the enlargement of the liver probably arose from the same condition; viz. engorgement of the systemic venous circulation consequent upon the regurgitation. The state of the veins of the neck could not be determined, owing to the anasarca. The stethoscopic examination was also necessarily very incomplete. — *Dublin Quarterly Journal*, February 1848.

209.—*On Cerebral Congestion in its relations with Hemorrhage and Softening of the Brain.* By M. Durand Fardel.—The following conclusions are arrived at by M. Durand Fardel, in a memoir upon this subject read to the Academy of Medicine in Paris. Cerebral congestion terminates almost always in one of three ways. It is dissipated spontaneously, or as the result of a proper treatment, or it leads to cerebral hemorrhage, or ramolissement. The state of the walls of the cerebral vessels, the existence of a partial alteration of the nervous pulp, consisting in a sort of rarefaction of tissue, the presence of anterior lesions of the cerebral substance, such as cysts, cicatrices, &c., can, without doubt, exercise some influence relative to such or such a result of cerebral congestion. It may be established in a general manner, that advanced age, in concentrating all the physiological activity of the economy towards the brain, or towards the chest, constitutes one of the most powerful predispositions to sanguineous fluxions, to hemorrhages, and to inflammations (ramolissement) of the brain, as it may be seen on the other hand equally to predispose to hyperemias and phlegmasias of the pulmonary organs. If it be true that cerebral congestion plays a principal part in the preparation and production of two of the most common and serious affections of the brain, it follows that the most positive indications exist with regard to the time at which art may interfere, and the hygienic and therapeutic means which ought to be employed in these dreaded affections.—*Gazette Médicale*, May 3, 1848.

210.—*Jaundice of New-born Infants.* By M. Hervieux.—M. Hervieux, in a recent thesis, has endeavoured to supply a more correct account of this disease than that hitherto given, derived from his observation of forty-five cases. He rejects the various divisions of the disease made by authors, as so many hypothetical suppositions, derived from observation of what occurs in the adult; and recognises but one form always appearing during the first month, and attended by the same symptoms and morbid changes. He combats the opinion of M. Leger, that the *induration of the cellular tissue* is always accompanied by jaundice; for in ninety cases of this disease, jaundice only manifested itself thirty-one times, and in forty-five cases of jaundice the induration has also been met with but thirty-one times, showing a coincidence, but not cause and effect. He also denies that *enteritis* is a cause, although a common complication of this as of other diseases of this age. Nor does he admit the engorged or inflamed state of the *liver* as any other than an epiphenomenon, nowise connected with the yellow colour of the skin. Still it is from the disorder in the functions of this organ, in its transition from an organ of hæmatosis to one of biliary secretion, that the icterus arises.

His anatomical observations on the

disease lead him to conclude—1. That all the organic tissues are in different degrees liable to the icteric effusion. 2. The intensity of colour which these tissues acquire is in direct proportion to the amount of their vascularity. He enumerates the various structures; but we will not follow him here, merely observing that the bones, ligaments, and cartilages were, in a certain number of cases, undoubtedly coloured, the sclerotica, however, being found so only once. Not only were the serous and mucous membranes coloured, but the fluids they secreted likewise. The biliary apparatus was found to have undergone just the same changes as it does in scleroma or enteritis—the so-frequent complications of icterus—but neither the biliary ducts nor umbilical veins presented the marks of inflammation described by some. The yellow patches in the parenchyma of the kidney, described by Billard, were of two sorts, the one arising from icteric effusions, the other of a far brighter colour, unconnected with it. The respiratory apparatus furnishes evident marks of colour; but the *nervous system*, and the *brain* in particular, were intensely coloured in thirty-one cases. The hue of the skin is often modified into a coppery or orange colour, by its coexisting vascularity. The conjunctiva, contrary to what has been stated, is *always* coloured, as is also the gingival mucous membrane, and that lining the lower surface of the tongue. The author has never detected the colouring matter in the *urine*, as seen in adults, or a decoloured state of the fæces. The disease commences with the conjunctiva the second or third day after birth, and goes through all its stages in six or seven, or at most fifteen days; exists very rarely beyong the twentieth, and never beyond the thirtieth day. Its complications (from which alone arise any danger in this affection) are purely accidental, being mere coincidences. In these forty-five cases such complications consisted of scleroma thirty-one times, enteritis fifteen times, muguet five times, pneumonia twice, purulent ophthalmia ten times. M. Hervieux, regarding simple icterus as rather the sign of a new function temporarily exceeding its physiological limits, than as a disease, recommends that the case should be left entirely to the resources of nature. —*L'Union Médicale*, 1847, No. 154, *and British and For. Med. Chir. Review*, April 1848.

211.—*On Certain Forms of Alkaline Urine.* By Dr G. OWEN REES.—In a case of extrophy of the urinary bladder, Dr Rees had an opportunity of observing the condition of the urinary secretion before and after contact with the mucous membrane of the bladder. He found that, when tested as it flowed from the extremities of the ureters, it had a normally acid reaction; but that as it trickled, drop by drop, over the mucous membrane of the bladder, it became rapidly alkaline, from the admixture of a copious alkaline mucus which was secreted from the exposed membrane. Dr Rees conceives the alkaline secretion to be thrown out for the protection of the irritable membrane of the bladder, and thinks that a certain number of cases of alkaline urine are due to the stimulating effect of an originally acid secretion upon the genito-urinary mucous membrane, which, from some cause, secretes an excessive quantity of alkaline fluid. He explains the effect of alkaline remedies, in some instances, in removing the alkalinity of the urine, on the supposition that the urine as secreted, being reduced nearly to the neutral condition, is thereby deprived of all irritating properties, and is enabled to pass over the genito-urinary mucous membrane without exciting any alkaline discharge to affect its properties secondarily. The distinction between such cases of alkaline urine and others, is only to be effected by attention to the history and symptoms, and by chemical and microscopical examination of the urine.—*Medical Gazette*, April 7, 1848.

212.—*Lectures on Pathological Chemistry—Chemical Constitution of Bone in Disease.* By Dr GARROD.—In rickets the amount of earthy matter in bones is much diminished. The phosphate of lime, which in health ranges from 45 to 60 per cent., is sometimes diminished to 30, 20, or even 15 per cent. It is not improbable that this disease may be dependent in some cases in a deficiency of earthy salts in the food. Dr Garrod proposes, in addition to the ordinary treatment, the administration of phosphate of lime, dissolved in solution of phosphate of soda. In exostosis and callus, the quantity of earthy matters generally is diminished, while the carbonate of lime appears to be in increased quantity. In caries it is stated that both the carbonate of lime and the earthy salts generally are diminished in amount. In mollities ossium there is also a diminished amount of earthy salts, and a large increase in the quantity of fatty matter, which appears to take the place, in some cases, of the gelatine and chondrin existing in healthy bone.—*Lancet*, May 20, 1848.

IV.—PRACTICE OF MEDICINE.

213.—Hebra *on Skin Diseases.*—(*Continued from* p. 87.)

The 12th Class, Neurosen.

In which no pathological alteration is visible.

A. *Hyperæsthesien.*

1. *Dermatalgia*—Pain in the skin, as if following a prick or blow.

2. *Prurigo latens*—Itching on the hands, feet, genitals, anus, &c., depends often on menstrual disturbances, and is frequent in the climacteric years. Most benefit has been derived from pencilling the part with *Acid. Hydrocyan.*, fomentations with *Aqua Laurocerasi*, and seat baths with *Cicuta*, *Hyoscyamus*, or *Belladonna.*

B. *Anæsthesien*—Are only present in cases of general anæsthesia.

C. *Dermatospasmus* — example *Cutis anserina.*

Syphilitic skin diseases—it is important to be able to recognise them, as a false feeling of shame frequently prevents the confession of previous infection. Hebra adduces three series of phenomena as fixed points for the diagnosis.

First, The symptoms common to all the syphiloids having only a conditional value.

Second, The special application of the former—the peculiar symptoms by which a syphilitic skin disease may be distinguished from its non-syphilitic fellows.

Third, The diseases of other organs simultaneously occurring with these syphiloids, and which cannot here be further entered on.

The signs of the first series are—

a The colour—only characteristic when the disease is of some standing. The original red colour becomes dark-brown red, from the non-absorption of pigment deposited from the blood along with the exudation. Hence, even in healing, syphiloids must pass through the various stages of dark-brown, to clear, pale yellow, yellowish-grey.

b The round form, in such diseases as do not otherwise assume this form—as *Lichen*, *Acne.*

c The peculiar seat. *Psoriasis syphilit.* affects the palms of the hands; others, chiefly those parts where the skin is close to the bones, as the forehead, scalp, &c., and generally they are extended over the whole body (except *Psoriasis*, *Lupus*).

d Itchiness is either awanting or trifling.

e Desquamation is very trifling, as in *Psor. syph.*

f The tendency to liquefaction and formation of crusts is, however, greater.

g The skin has a peculiar cachectic appearance (*Ricord's Syph. chlorosis*).

Hebra divides the peculiar symptoms according to the primary efflorescence.

The first form in secondary syphilis is the *macular syphiloid*, *Roseola syphilitica*, in bright red patches on the back, breast, brow, and face, which, distinct from one another, are either uniform with the skin (*Cutis variegata*), or project somewhat above it from congestion of a collection of sebaceous glands. In time the spots become brown, the healthy skin remaining white—*Ephilides venereæ.* The second form can also pass into the papular syphiloid; the congestion disappears, a considerable elevation of papulæ, the size of lentils or peas, of a pale red or normal coloration. According as these papulæ are larger or smaller, the disease is called *Lichen miliaris* or *lenticularis;* the peculiar colour, the round form, the absence of itchiness, and the trifling desquamation, characterise its syphilitic nature.

If these papulæ tend to suppuration, we have, thirdly, the *tubercular syphiloid*, which may be termed *Acne syphilitica*, and is the most frequent. The tubercles are either disseminated and quite round, or they are collected on one spot—*Lupus;* both kinds tend to ulceration *Syphilidelkosis.* If the papulæ are very large, they are called *Phymata syphilitica.*

The scaly syphiloid, principally appearing as *Psoriasis plantaris* and *palmaris*, has, instead of scales, but slight white elevations; a redder colour, however, than in other *Psoriasis.*

The *bullar* form, *Rupia syphilitica*, is more frequent; a red spot first appears on which a vesicle becomes formed, speedily reaching the size of a walnut or hen's egg; the contents become muddy, purulent, and decrustation begins from the centre, from which a chronic pointed crust arises; on removal of this crust, a deep syphilitic sore or vegetations remain.

The *pustular* syphiloid never forms *achores*, but only psydracious or phlyzacious pustules. *Impetigo* and *Ecthyma* also occur, and show a greater than usual tendency to formation of crusts.

Acne syphilitica is very liable to suppuration and the formation of crusts, and may be ranked among the pustular forms.

The various vesicular, pustular, and bullar eruptions pass so into one another, that they form generally the crust-building syphiloids. The spongy syphiloids—*Vegetationes syphiliticæ seu condylomata*—have either a broad base, or are peduncu-

lated. They are variously named according to their forms.

A syphilitic disease of the nails appears as a horny degeneration, or as a sore under the nails of both the thumbs or great toes, of a semicircular form, enlarging both in width and depth. Hebra recommends as treatment a modified plan of inunction, except in *Rupia*, where, weakened by the excessive exudation, a tonic stimulant plan is best adapted.

In *Psoriasis palmaris* and *plantaris*, local inunction of mercurial ointment every evening, stockings or gloves being worn during the night, and a local bath in the morning, are what Hebra recommends. In the spongy syphiloids he employs either the *Deutioduret. hydrarg.* ℥j to ℥j *axung.*, or *Sublimat. corros.* ℥i to ℥ij to ℥vj *alcohol*, or Plenck's paste, which always attacks only the diseased skin — *Casper's Wochenschrift*, 1847. Nos. 19-21.

214.—*On the Diagnostic Value of Tactile Vibrations (frémissement cataire) in Diseases of the Heart.* By PROFESSOR JAKSCH of Prague.—It is a common opinion, that a fremitus which is felt at the apex of the heart, and which accompanies the diastole, is a pathognomonic sign of an obstructed mitral orifice. Jaksch, while he admits the truth of this law in the generality of cases, believes it not to be universal in its application; and relates two cases where this sign in a marked form accompanied insufficiency of the aortic valves. In one of these cases an aperture of the size of a bean existed in one of the aortic valves; in the other a thickened semilunar valve was partially torn from its base, and played loosely in the aortic opening.

The means of diagnosis between these two conditions will often be found in the pulse, which, in aortic insufficiency, is generally large and sounding (tönend), while in mitral contraction it has not these characters. This, however, is not invariably the case; therefore Jaksch places more reliance on the presence or absence of a strengthened second sound in the pulmonary artery. In contraction of the mitral orifice this is generally present, and there is sometimes an appreciable shock to the finger placed over the third left costal cartilage. In aortic regurgitation, uncombined with mitral contraction, the second sound is absent in the aorta, and not abnormally increased in the pulmonary artery. An important aid in the diagnosis is also derived from percussion of the heart, which in aortic disease is increased chiefly in its longitudinal or vertical diameter; while in mitral contraction, which is attended by dilatation, the transverse diameter is most palpably affected. [Care should be taken, in making this estimate by percussion, to define, in the first instrance, the limits of the liver; which, especially in mitral disease, is often so much increased in size as to interfere with the vertical measurement of the heart.] The impulse of the heart is generally heaving in aortic regurgitation, and feeble in mitral contraction.

Vibrations and sounds frequently arise in the pericardium, which present some of the characters above described; but they are generally distinguishable by the previous and accompanying conditions, these being proof either of the presence of pericarditis, or of the absence of altered form in the heart itself. Further, the pericardial sounds are more evanescent, more irregular in duration and rythmic relation, and more easily altered by position and other circumstances, than those of the conditions above mentioned.

Systolic vibrations in the regions of the heart and great vessels have been observed by Jaksch in the following circumstances:—

1. In contraction of the aortic orifice. Distinguished by increase of the vertical dulness of the heart; propagation of the vibration and sounds along the arteries, and weak radial pulse, with unnaturally strong impulse. The second sound is not strengthened in the pulmonary artery.

2. In dilatation of the aorta immediately above the valves, without dulness on percussion of the upper sternal region.

3. In some cases of dilatation, and,

4. In some of true aneurism of the ascending aorta. In these the upper sternum is dull on percussion.

5. In cases where the aortic orifice is crossed by abnormal tendinous cords in the left ventricle.

6. In perforation of the inner leaf of the mitral valve.

7. In rupture of the tendinous cords, or excrescences on the mitral valve, so as to interfere with the passage of the blood from the ventricle into the aorta.

8. In narrowing of the descending thoracic aorta. Of this last he has observed one instance, in which the calibre was such as scarcely to admit the passage of a goose-quill, and in which a purring tremor, almost as strong as that of a spinning wheel, was communicated to every part of the thorax, and even to the loins and great wall of the abdomen.—*Vierteljahrschrift für die Praktische Heilkunde.* 1847. No. IV.

215.—*Treatment of Chronic Scrofulous Skin Diseases with Cod Liver Oil.* By Dr Hughes Bennett.—The oil has been found very useful in many of the chronic diseases which affect the scrofulous children of the indigent poor. The chronic eczema and eczema impetiginodes in such individuals is scarcely ever to be cured without paying attention to the general health; and here, as in similar cases, the most effective means of nourishment is the oil. The local treatment employed by Dr Bennett is an alkaline wash, composed of two drachms of the subcarbonate of soda, to a pint and a half of water. Where the eruption is in any way circumscribed, an essential condition of the treatment is to keep the surface moist with the alkaline lotion, by means of lint saturated in it, and carefully covered with oil silk.

Tinea favosa consists of parasitic vegetations growing in an albuminous or tubercular exudation on the surface. In the great majority of such cases, the disease will be found associated with a scrofulous constitution, and dependent on a bad diet, and the other depressing causes so common among the lower orders. Dr Bennett has found the following treatment very successful; internally, the cod liver oil in the usual doses; externally, poulticing the elevated crust on the surface for several days, until they soften and come off. Then carefully shaving the head, which usually presents a shining clear surface. Next applying, with a soft brush or dossil of lint, cod liver oil to the whole scalp, morning and night, and covering the head with an oil-skin cap, to prevent evaporation and the access of air. Every now and then, as the oil accumulates and becomes inspissated, it should be removed by gently washing it with soft soap and sponge. The average duration of this treatment is six weeks, which contrasts very favourably with the results of M. M. Mahon's treatment at the Hospital St Louis.—*Bennett on Cod Liver Oil*, Edinburgh 1848.

216.—*Diagnosis of Cerebral Diseases.* —The first step of the diagnosis consists in ascertaining whether the symptoms present a lingering and progressive, or an acute and sudden, character. In the former case the lesions to be expected are tubercles, chronic tumours, cystic and parasitic formations; the characters presented by which are very similar. Apoplexy, when not followed by paralysis or other symptoms, is merely congestive, and has left no permanent lesion behind; but when there occurs secondary paralysis, the formation of a clot may be affirmed. Convulsions or contractions with apoplexy denote, according to Oppolger, rupture of a vessel into the ventricles or superficial parts of the cerebral hemispheres. Convulsions or contractions with headach, and followed by paralysis, are symptoms characteristic of inflammation of the cerebral substance; intense headach with violent delirium, followed by paralysis or coma, are generally found to accompany inflammation of the membranes. It should be kept in mind, that many of the characters of these diseases are simulated by some cases of pneumonia. —*Clinical Notes from the Hospital of Prague. Hannoversche Annalen*, 1847.

217.—*Condition of the Gums in Phthisis.* By Dr Frédericq.—The author's attention was first called to this subject in 1844, when he observed a line of a brick-red colour near the free edge of the otherwise normal gums of a phthisical patient. The line was very narrow, and ran parallel with the edge of the gums, but only opposite the incisors and canine teeth. Since that period, he has examined the gums in numerous subjects of phthisis, and has always found this red line more or less distinctly visible, although sometimes only opposite the inferior median incisors. The researches of the author do not enable him to say whether this sign manifests itself as one of the earliest symptoms of phthisis, nor to declare absolutely that it is seen in no other disease, although he has never yet met with it in such.—*Brit. and For. Med. Review, from L'Union Médicale*, 1848, No. 5.

V.—PRACTICE OF SURGERY.

218.—*On Catheterism of the Œsophagus in Cases of Stricture.* By M. Trousseau. —This mode of treatment, which was revived by M. Gendron (*Retrospect*, p. 69), is highly recommended also by M. Trousseau, who has seen several cases successfully treated by M. Bretonneau, and publishes two cases from his own practice. He uses a delicate whalebone rod not more than a line in diameter, and from twelve to sixteen inches in length; at either end of this is fixed an olive-shaped dilator, somewhat straitened in the middle, so as to permit of being surrounded by a piece

of dry sponge, which is fixed on with sealing-wax, and is made very slightly greater in diameter than the stricture. The sponge is further secured by a thread, the ends of which are left eight inches in length, for a purpose to be presently mentioned. After moistening the sponge with yolk of egg, it is passed beyond the isthmus of the fauces. Traction is then made on the threads, by which means the end of the instrument is made to take the direction of the œsophagus instead of striking the back of the pharynx. So soon as the stricture (which is generally at the level of the larynx) is felt, the instrument is pushed onward, with some force and a rotatory motion, the left hand being used to support the larynx, which would otherwise be pushed down, and would carry the œsophagus with it. It is of importance to pass the obstacle as quickly as possible, otherwise the presence of the foreign body is apt to induce suffocation. When once the passage has been effected, the sponge is again retracted; and this is repeated a second, and perhaps a third time, before finishing the operation. The operations may be repeated twice a-day, gradually increasing the size of the sponge; and, when the passage is so large as readily to admit a sponge of the size of an ordinary bolus of food, the intervals may be much longer. The treatment should be kept up in cases of long standing for several months, or a year; in more recent cases a few weeks are sufficient. M. Trousseau has tried in one case the cauterization by nitrate of silver, as recommended by M. Gendron; but he does not recommend this measure, believing it to be in the œsophagus, as in the case of the urethra, seldom required. —*Révue Médico-Chir*, March 1848.

[It is worthy of remark, that almost all the cases of strictured œsophagus in which this mode of treatment has been of service, have been traceable to diphtherite. This may explain the invariably high seat of the stricture. In strictures with loss of substance, as also in many other cases mentioned by Sédillot (*Retrospect*, p. 69), catheterism would be unavailing; and cauterization in such cases would be a very unsafe proceeding.]

219.—*Treatment of Scrofulous Caries of the Bones with Cod Liver Oil.* By Dr HUGHES BENNETT.—A general opinion prevails among surgeons, that caries of a spongy bone never heals spontaneously. Ths result of this view is, that whenever caries is ascertained to exist in a bone, it is cut off or cut out if possible, and if not possible the patient is left to the operation of nature. It has frequently happened in this latter case, that change of air and an improved diet have led to the most happy results, and that, in spite of theory, the patient has got well. Every surgical practitioner of any experience, for instance, must have met with cases where caries and distortion of the vertebræ have terminated in anchylosis, and the patient regained his health. Many dwarfs are living examples of scrofulous caries having occurred in the spongy portion of bones when young, which has disappeared, leaving them, although deformed, in perfect health. The theory, therefore, to which allusion has been made, is incorrect, and there is little doubt that many cases which have been made the subject of surgical operation, might have recovered without it, by adopting a system of treatment directed against the constitutional affection.

Dr Bennett has seen some remarkable instances of caries and distortion of the vertebræ, which have produced perfect paralysis, and reduced the patient to the last stage of weakness. Under such circumstances the oil has frequently kept up the strength, and the patient has ultimately recovered, as in several instances he has recorded. He saw three cases in the wards of Professor Heusinger of Marburg at once, all of which had paraplegia. The one most recently treated still had paralysis; the other two, who had been under treatment some months, had recovered from the paralysis, could walk without difficulty, and were in every respect nearly well. Two other cases of a similar kind were in the wards of Professor Jaksch of Prague, which he visited shortly afterwards.

The cases recorded are sufficient to prove the powers of the oil, in a class of diseases too frequently considered as hopeless. In none are more beneficial effects produced by it.—*Bennett on Cod Liver Oil*, Edinburgh 1848.

220.—*The Application of Ice in Traumatic Lesions.* By M. BAUDENS.—M. Baudens, senior surgeon of the Military Hospital, Val-de-Grace, has long been in the habit of applying ice, either with or without salt, in the treatment of every description of traumatic lesion, for the purpose of keeping down the abnormal temperature which, in these, is so much higher and so much more persistent than would be supposed by those who had not examined into the subject. Not only is the cure expedited, but the patient's sufferings are much alleviated, while no ill consequence has resulted.

The patient's feelings are taken as the guide, indicating when the pathological caloric has become exhausted; and wet compresses are then gradually substituted. Not only is the ice employed at the commencement of the affection, but throughout its course, even while the wound is in a state of free suppuration.—*Gazette des Hôp.*, 1848, No. 15.

221.—*Guides for performing Partial Amputations of the Foot.* By M. Heurotay.—The author does not consider sufficiently explicit the directions given to find the articulations in the partial amputations of the foot, which were suggested and practised by Chopart and Lisfranc, and he gives the following measurements to guide the operator in these disarticulations:—If the inner border of the foot is measured from the heel to the extremity of the great toe, at a point exactly half-way between the extremities of this line, lies the articulation of the first metatarsal bone with the internal cuneiform. Half-way between this point and the extremity of the great toe, lies the articulation between the first metatarsal bone and the first phalanx of the great toe.

Again, to find Chopart's articulation, a line drawn from the articulation of the internal cuneiform with the first metatarsal bone to the extremity of the heel, is to be divided into three equal parts, and at the junction of the anterior with the middle third, is the point where will be found the articulation of the navicular bone with the astragalus.—*Révue Médico-Chirurgicale.*

[These directions, if correct, will be found useful in performing the partial amputation of the *left* foot, as the operator, standing on the left side of the patient, enters the knife on the inner border of the foot. The guides usually given will, however, be found of more importance in operating on the right foot, in which the incisions are commenced on the outer side. The projection of the head of the fifth metatarsal is here easily felt, and is the guide to the tarso-metatarsal articulation. The articulation through which Chopart's operation is performed, lies half-way between this point and the extremity of the external malleolus.]

222.—*Death from the Admission of Air into a Vein in passing a Seton in Front of the Neck.*—On Wednesday, March 29th, an inquest was held before the coroner for East Surrey, to investigate the circumstances attending the death of William Richards, aged thirty-nine, a coal porter.

The deceased had applied to Dr Willis for advice, a fortnight before the day of his death, on account of laryngitis. Leeches were applied and blisters, and on the morning of his death, the patient came to the house of Dr Willis for the purpose of having a seton introduced. He was set in a chair, and the skin being pinched up with the finger and thumb, a seton needle, armed with a strip of lint, was thrust in two inches and a half above the sternum. At the moment of its entrance, Dr Willis thought he had opened a subcutaneous abscess communicating with the windpipe, as a slight hissing noise was heard. The man instantly became pale and fainted, and then became rigid and convulsed, and it was evident that the hissing noise had proceeded from air having entered a vein. Dr Cormack from Putney was consulted, and the patient was bled from the arm, which produced temporary amendment; but he died between six and seven hours after the accident.

Mr Syme, examined at the inquest, concurred in the above opinion as to the nature of the case, and approved of what had been done in the way of treatment. He had examined externally the wound of the seton with reference to the situation of the large vessels, and was satisfied that it was so remote from them, that they could not by possibility be implicated. Dr Cormack corroborated Dr Willis' testimony.

The jury returned the following verdict:—"Accidental death from the entrance of air into a vein in the neck during an operation performed by Dr Willis; but the jury cannot separate without expressing their opinion, that such operation was cautiously and skilfully performed; and, as it appears by the evidence adduced, the said operation was fully warranted by present practice."—*Provincial Med. and Surg. Journal*, April 19.

223.—*Fracture of the Orbit from a Lead Pencil.* By Mr Hughes Hewett.—A child, two years old, fell on crossing the room with a lead pencil in her hand.

The pencil penetrated the right orbit, having pierced the eyelid just below the supra-orbital ridge. The eye did not appear injured in any way, and there were no symptoms of concussion. Considerable force was required to extract the pencil, which had penetrated to the depth of about two inches. Fomentations were applied to the wound, which closed in twenty-four hours. The child ate its dinner much as usual soon after the acci-

dent, and slept well during the night. Next morning it was drowsy. On the following day she had a convulsion, twitching of the muscles of the face, legs, arms, &c., after which she rapidly lost consciousness, sight, and hearing. On the fourth day she had constant *subsultus tendinum*, and could not be roused at all. On the sixth day *trismus* came on, and she died early on the morning of the seventh day.

On examination of the body, there was a fracture of the roof of the orbit, the point of the pencil having entered the brain. There was complete softening of the anterior lobe (the part of the brain in the neighbourhood of the injury), and extensive subarachnoid effusion of greenish yellow lymph, mixed with serum.—*Dublin Med. Press*, April 12.

224.—*On the employment of Flour in Erysipelas.* By Dr FAVROT.—Dr Favrof, after testifying to the unsatisfactory results obtained from the nitrate of silver, sulphate of copper, &c., in erysipelas, details some cases in which he has found the application of *flour* of the greatest advantage. Resorting to it in his first cases, after the various other means had been tried in vain, his success was so great as to induce him to employ it in future at an earlier period, which he did with equal benefit. With this means, indeed, English surgeons are familiar, and the late Mr Earle was especially in the habit of attaching considerable importance to its use, but only in superficial erysipelas, and then rather as affording great relief to the irritated skin than as possessing any marked curative power. The cases related by Dr Favrot are, however, of a far more serious character than this, being examples of deep-seated erysipelas, and attended sometimes with great and alarming constitutional symptoms. The parts being completely smothered in flour, and this repeated every quarter of an hour, a remarkable amendment in these symptoms speedily took place, the patients also expressing their sense of comfort.

M. Huguier, at the author's request, employed the remedy at the Beaujon, and with the same results. M. Favrot, though unwilling to speculate upon the subject, is disposed to refer the benefit to the fact of the exclusion of the air from the inflamed surface.

Another number of the journal from which we are quoting, contains a note from a Dr Wolf, confirmatory of Dr Favrot's statements, in which he also states that Vogt, Schwartze, and other German writers, some time since, expressed highly favourable opinions of the same means.

M. Malgaigne, too, adds his testimony, stating that he has employed flour not only in erysipelas, but also in various deep-seated inflammations and extensive burns; and in most of these cases with undoubted advantage.—*Brit. and For. Medico-Chirurg. Review, extracted from Révue Médico-Chirurgicale*, Vol. ii.

225.—*Stony Cataract.* By Dr AL. MAGNE.—M. Magne extracted from a man's eye, æt. forty-seven, and who had been cataractous for twenty-five years, after an injury, a stony cataract. The operation was performed at two different periods (September and October 1847), and the following is his description of it:—

"The posterior capsule was entirely stony, with the exception of a very small central point; the anterior capsule presented the same alteration, except that the central point was larger; it presented four very distinct stony plates, the thickness of which was at least equal to that of a hen's egg. The colour was of a chalky white, passing into yellow. When the fragment was placed in water, the appearance exactly resembled that of a pilgrim's shell. As for the lens, it no longer existed, having been already absorbed, as was shown by the irregular puckered and wrinkled form of the centre of the anterior capsule." M. Orfila found the cataract to be entirely composed of phosphate of lime, and a very small quantity of animal matter.—*Gazette Médicale*, 5 Avril 1848.

VI.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

226.—*Unavoidable Hemorrhage—Cases in which the Placenta was naturally Expelled, or spontaneously Extracted before the Fœtus.* Drs WALLER, RAY, PAVESI, STOKES, and MEADOWS.—Dr Waller, in some clinical observations upon placenta prævia, details the particulars of six cases in which that organ was either expelled before the child by the unaided efforts of nature, or extracted artificially in order to save the life of the mother.

1. In the first case the woman had arrived between the sixth and seventh months of pregnancy. The placenta was attached nearly to the whole circumference of the os uteri. The hemorrhage

was very trifling. When strong pains supervened the placenta was spontaneously expelled, and soon followed by the fœtus, which presented by the back.

2. In this case the placenta was expelled nearly an hour and a half before the child. The fœtus had been long dead; there was, therefore, no circulation through the placenta, and consequently no hemorrhage. Mother recovered.

3. Dr Waller was sent for in this case by Messrs Powell and Goddard. The placenta had been entirely removed. No hemorrhage followed its extraction. The child presented by the arm, and embryotomy was required to effect its delivery, which was accomplished with difficulty. The mother died at the end of a week.

4. Mr Doughty requested the assistance of Dr Waller in this case. The patient had been bleeding for some hours, but no serious symptoms of exhaustion had come on. The placenta had been attached all around the os uteri, but a small portion was detached anteriorly, and thus formed an aperture through which the funis descended. Before turning, Dr Waller detached the placenta entirely from its connexion with the uterus. No hemorrhage followed the separation, and shortly, the child was delivered. It lived. The mother made a good recovery.

5. A case of partial placenta prævia.— The arm of the child presented. The os uteri was rigid, and only partially open. As there was no possibility of turning, the placenta was detached and dilatation waited for. No hemorrhage occurred, and, in less than twelve hours afterwards, turning was had recourse to, and the child extracted. The woman died of muco-enteritis in the course of the week.

6. Dr Waller saw this case with Mr Hall. She was just entering the ninth month of gestation, and had previously borne children. The placenta was attached over the entire circumference of the os uteri, which was rigid and just beginning to dilate. Turning was impracticable. The hemorrhage was severe. The placenta was therefore entirely detached without rupturing the membranes. The hemorrhage entirely ceased. More than twelve hours after, the child, presenting by the feet, was delivered with a little assistance. The mother recovered. —*Medical Times*, Vol. 1847-48.

7. A case is related by Dr Ray of a woman, aged twenty-eight, in labour with her third child. She had previously miscarried twice. He found her in a state of the deepest prostration from loss of blood. Having witnessed in a previous case the immediate cessation of the hemorrhage on the expulsion of the placenta, and believing that increase of exhaustion from further loss of blood, or from emptying the uterus, might probably be fatal, he resolved to extract the placenta. Hemorrhage continued during its separation, but ceased with its removal, and no coagula formed afterwards in the vagina, although the labour continued five hours after the operation, when the child was delivered after having had the head broken up.—*Medical Gazette*, January 21, 1848.

8. Mr Stokes of Nailsworth, relates the case of a young woman in labour with her first child, to whom he was called. She had been flooding for a considerable time, and, on arriving beside her, he found her in deep prostration from loss of blood. He separated the placenta, and administered stimulants internally, which had the effect of arresting the bleeding, and of restoring uterine pains. Delivery by turning was at last found necessary. She recovered. — *Lancet*, April 1, 1848.

9. Dr Meadows of Ottley was called to a woman, æt. thirty-eight, in labour with her third child. She was in a complete state of exhaustion, and almost insensible, slight labour pains having come on about two hours previous to his arrival, with excessive hemorrhage. The os uteri was well dilated, and the placenta attached all round. The hand was introduced, and the placenta withdrawn. The hemorrhage immediately ceased. After a dose of ergot, pains returned, and expelled the child under a head presentation. She recovered.—*Lancet*, Jan. 1, 1848.

Removal of Double Placenta before the Delivery of the Second Child in Cases of Twins.

10. Dr Pavesi relates a case of hemorrhage produced by the insertion of the common placenta of twins upon the neck of the uterus. After the birth of the first child, the author extracted the placenta common to both. Both children lived.—*Annali Universali di Medicina*, Feb. 1848.

11. Dr Ray relates a case very similar to the preceding. The woman was seized with violent flooding at the seventh month of pregnancy while walking in the fields, and was scarcely able to reach her home, which lay at a short distance. The membranes were ruptured at the side of the presenting placenta, and the first child delivered by a foot, which presented. On discovering the presence of a second infant, Dr Ray ruptured its bag of mem-

branes, and the gush of waters washed out the placenta which was common to both children. The second child presented by the head, and was born by the natural efforts. After the expulsion of the common placenta, pains did not return for two hours, and it was three hours after its expulsion before the child (which was still) was born. The mother recovered.—*Medical Gazette*, January 21, 1848.

[These cases are additional illustrations of the important practical fact, pointed out by Dr Simpson (See our *Journal* for March 1848), that the hemorrhage in placental presentations stops when the placenta is *completely* detached. Within the last few days we have seen a case of severe unavoidable hemorrhage in a woman seven months gone with child, in which Dr Simpson successfully separated and removed the placenta; the hemorrhage ceasing.]

227.—*Internal Uterine Hemorrhage before and after Delivery.* M. Van Hœsendonck, Dr Johnson, Dr Davies, Dr Tyler.—*Before Delivery.*—In M. Hœsendonck's case the female had not yet reached the full term of her second pregnancy. She was very plethoric, and while engaged in severe work before a large fire, suddenly felt ill and fell down, crying out that she was dying. Her pulse was small, and she was covered with a cold sweat; and, although stimulants were freely used, she continued in a fainting state. On applying the hand to the right side, there was felt a large soft tumour newly formed.

Labour was immediately induced by rupturing the membranes, and a dead child was delivered by the forceps. A firm clot of blood weighing a pound was evacuated; and when the hand was introduced to take away the placenta, it was found partly detached.—*Révue Medico-Chir.* January 1848.

In M'Clintock and Hardy's excellent practical work, we find, as related by Dr Johnson, two rare cases of hemorrhage between the placenta and uterus, which proved fatal to both of the mothers. In neither of them was there any external hemorrhage, and the separation of the placenta seemed to have been produced in one of them by external violence, whilst in the other it was apparently of spontaneous origin. On the *post-mortem* examination, nearly the same appearances were found in each. The placenta, except at its extreme margin, was entirely detached from the uterus, and the cavity or interspace between the two contained an enormous quantity of partially coagulated blood.

After Delivery.—Dr Tyler relates two cases of internal hemorrhage occurring after delivery. They present no points of great interest. The first was opportunely treated with cold applications and internal irritation, and the woman recovered. The other case proved fatal.—*British Record of Obstetric Medicine*, Feb. 1, 1848.

In Mr Davies' case the patient had been for two and a half hours delivered of her first child when he discovered that she was in a state of syncope, evidently arising from loss of blood, and yet the linen about her person was perfectly dry. By timely attention, the uterus, which was considerably enlarged, was made to contract, and expel a clot of immense size. This woman made a slow and bad recovery.—*Brit. Record of Obst. Med.* No 7.

[Internal uterine hemorrhage after delivery, is an occurrence by no means so rare as the particular notice of the above cases would seem to indicate. But it is of so much importance pathologically and practically, and at the same time so much forgotten and neglected, as to justify us in detailing them. They warn us, in plain terms, against placing any reliance in the vaginal plug as a means of arresting hemorrhage connected with delivery. The plug cannot hinder, in any degree, the occurrence of hemorrhage internally, but rather tends to produce it. It has no influence in stopping the flow of blood, but merely prevents its appearance externally. And its discharge or retention is not a matter of indifference, inasmuch as its accumulation in the uterine cavity, as may happen after plugging, necessarily involves an enlargement of that organ,—a circumstance which all accoucheurs agree in considering as a strong predisponent to hemorrhage, the very accident which some imagine the plug to have a power to arrest.]

228.—*Difficult Labour from Cicatrices of the Vagina.* Dr Purefoy.—The first case is that of a woman, æt. forty, who had previously been delivered by craniotomy in a protracted and severe labour, and after which the vagina sloughed, giving rise to a vesico-vaginal fistula. In this, her second confinement, there was found, on examination, a thin, sharp, rigid and nearly circular cicatrix at the upper part of the vagina, forming a stricture of this part, and completely preventing any deeper examination. The cord, however, was felt to be prolapsed, and the arm presenting.

Subsequently, this stricture was found to be connected with the os uteri by intimate adhesion. Repeated attempts with the finger succeeded in dilating it, and at last the hand was passed into the uterus, the child turned and delivered, after a labour of about two days' duration. It was only seven and a half months old. Violent inflammation of the uterus with fever set in, and the patient sank at the expiration of a month, worn out by repeated rigors, hectic fever, sloughing and suppuration of the vagina, with obstinate diarrhœa, and attacks of bilious vomiting.

In the other case, the woman was in labour with her third child. Of her second child she was delivered with great difficulty, by the aid of instruments. In the seventh month of this her third pregnancy, she underwent much fatigue, and labour pains supervened. On being examined, the fœtal heart was found pulsating, and the breech presenting at the os uteri. The pains caused her excessive suffering. After labour had continued nearly two days, a dead child was born. She made a good recovery.—*Dublin Journal of Medical Science*, May 1848, p. 560.

229.—*New Method of inducing Premature Labour.* Dr Kiwisch.—This new plan is said to have been discovered by Dr Kiwisch, and tried with success by M. Bartsch and M. Klein. Some time ago it was proposed to induce premature labour by injecting fluids of various kinds between the membranes and the uterus; but the present plan consists in the injection of a stream of warm water into the vagina, making it impinge upon the os uteri. This form of local douche is continued from six to twelve minutes, and repeated every six or eight hours till labour comes on.

We give no further details of a process which, we doubt not, will never come to be resorted to in practice, on account of its inefficacy.—*Memoriale della Medicina Contemporanea — Annales de Thérap.* March 1848, p. 477.

230.—*Removal of Uterine Polypi.* Dr Hamel, Dr Mitchell, and Dr Flumiani.—A woman, aged fifty, still menstruating, was the subject of repeated and severe hemorrhage, which she attributed to the period of life she had reached, and which was making serious inroads upon her general health. On submitting to a vaginal examination, there was found a very large pediculated fibrous polypus; but it was impossible to determine where the pedicle was attached, on account of the narrowness of the vulva, although M. Hamel had incised the hymen to assist him in his exploration. The size of the tumour was such as to render it impossible to bring it out externally without lacerating the vulva. The pedicle was ligatured by the ordinary serrenœud, and divided in the course of two days, when the softened polypous mass was removed by aid of tenaculum forceps.—*Gazette Médicale de Paris*, April 1848, p. 269.

Dr Mitchell's patient was a lady of delicate constitution, who had borne five children, and who was believed to labour under prolapsus of the uterus. On examination, he found lying in the vagina a globular tumour of the size of an orange, with a pedicle of about one-third the thickness of the polypus, and which was encircled by the mouth of the uterus. By the aid of the speculum the pedicle was ligatured by the double canula of Gooch. It was nine days before the pedicle was cut through, and during that time the woman suffered severely from hemorrhage, and other distressing symptoms.—*British Record of Obstetric Medicine*, No. I. Jan. 1848.

Dr Flumiani's patient was forty-two years of age, had been several years married, but had had no children. Till she was forty years of age her health was always good; but then it began to fail, and she was troubled with repeated uterine hemorrhages. At the same time she felt a tumour rising above the pubes, but did not pay much heed to it. At last, she called in the aid of Dr Flumiani, who found her complaining of obstinacy of the bowels, frequent hemorrhages, incontinence of urine, and various symptoms of general ill health.

On examination, he discovered within the uterus a tumour, smooth on the surface, of an egg-shape, and of the size of the head of a mature fœtus. He at once made deep incisions into its substance, to accelerate its breaking down, and, by this means, he also evacuated some blood contained within it. On the following day he returned to complete the operation. The woman was placed on her back with the pelvis on the edge of the bed, the thighs separated and supported, as in a case of instrumental delivery. The forceps were introduced so as completely to grasp the tumour. It was then dragged down so low that the pedicle could be felt, which was then cut through with scissors, and the polypus removed. The uterus immediately returned to its natural position. No hemorrhage followed; and the woman,

previously in a deplorable condition, regained good health.—*Annali Universali de Medicina*, Oct. 1847.

231.—*Strumous Disease of the Uterus.* Dr LEVER.—In this woman, æt. fifty-eight, menstruation had ceased for some years, but for the last twelve months there had been some sanguineous discharge from the vagina at intervals of about a month. For some time before death, she complained of irregularity in the action of the bowels, with pain during their movement. She also complained of a feeling of bearing down, with pain over the pubis and in the hypogastrium generally. On examination per vaginam, the uterus was found slightly prolapsed, the os free from disease, the body enlarged. During the exploration she complained of no pain except when the womb was pressed back upon the rectum. An examination per rectum detected a tumour lying between the uterus and gut, which was extremely painful on the slightest touch.

On the post-mortem examination, a small tumour was found in the right mamma. It was covered with a thin glistening membrane, and, on being cut into, presented a red granular friable mass, like the cut surface of the spleen. A large tumour was found between the rectum and uterus, softening at one spot, and having a disposition to open into the gut. Internally it was of a light yellow colour in the centre, deepening into a dusky red towards the periphery. The uterus itself was large, having several irregularly rounded elevations on its surface. The parietes of the organ were thick, but not tough, and of a port-wine colour; and in them were found many whitish friable pinhead granules, evidently separated by the liquifying process from some masses in the uterine walls of the same character as the larger tumour. When gentle pressure was made on the fundus of the organ, a curdy matter escaped through the os. On opening the cavity, it was found to be occupied by a quantity of fluid similar to that which could be readily squeezed from a soft flabby spleen.—*London Medical Gazette*, April 14, 1848.

VII.—PSYCHOLOGICAL MEDICINE.

232.—*On the use of Protracted Baths in the Acute Forms of Madness.* By M. A. BRIERRE DE BOISMONT.—The following are the author's conclusions to two memoirs on this subject. 1st, The acute forms of insanity, and of mania in particular, may be cured in a period of time varying from one to two weeks.

2d, The treatment to be employed consists of baths (prolonged) and a continuous stream of water.

3d, The relaxation of the circulation and respiration, the introduction of a great quantity of water into the system, gradual and general cooling, demonstrate that these baths have an action essentially calming and sedative.

4th, The duration of the baths should in general be from ten to twelve hours; they may be prolonged to fifteen or eighteen hours.

5th, The stream of water should be kept up during all the time the bath is applied; it may be suspended when the patient is tranquil.

6th, The bath ought to be given at the temperature of from 28° to 30° C. (82° 86° F.), and the stream at 15° C. (43° F).

7th, Of the forms of mania, that which yields most to the action of baths and irrigations is acute mania; next follow simple acute delirium, delirium tremens, the madness of puerperal women, and monomania with acute symptoms; but in most of these forms, the cures are neither so rapid nor so permanent as in acute mania.

8th, The period of convalescence ought to be strictly attended to, in as much as relapses are by no means of rare occurrence, whenever the individuals are exposed to the influence of the same causes which have produced the disease.

9th, When acute mania borders on acute delirium, with an ataxic form, and rejection of drinks, the treatment is ineffectual.

10th, Chronic mania, or prolonge acute chronic mania, with agitations, have been improved but, not cured by this treatment.

11th, From the facts contained in the two memoirs, we may assert, that the cures of acute forms of insanity, and of mania in particular, are more numerous and expeditious by means of protracted baths and irrigations than those obtained by other treatments; since, whilst by the latter the medium duration of treatment is about six weeks, it is no more than eight days when baths and irrigations are employed.

12th, These baths, &c., appear to us to promise great benefit in cases of hysterical affections, and in many other nervous diseases accompanied by excitement.

13th, The prolonged baths have no inconvenience; the fatigue they may induce is easily dissipated; they do not deprive the system of any important principle; and they do not leave behind any of those confirmed debilities so often observed after abundant venesections, and the fatal termination of which has more than once been dementia.

14th, The employment of protracted baths is no novelty in science; but, till this moment, the mode of employment, which can be tried every where, has not been applied to the treatment of special cases. Their union with the stream of cold water, however, constitutes a new method.—*Gazette des Hôpitaux.*

233.—*Morbid Appearances found in the Insane.* By Dr Skae.—Of 28 bodies examined, 2 were cases of mania; 5 monomania; 2 delirium tremens; 13 dementia; and 4 general paralysis. Opacity of the arachnoid membrane was present in 15, of which 1 was a case of mania; and 1 of delirium tremens; 3 were cases of monomania; 6 dementia; and 4 general paralysis. Subarachnoid effusion was present in 3, viz., in 1 of the cases of monomania, and in 2 of those of dementia. In one of the cases of delirium tremens, the cerebrum presented an anemic condition; in two of the cases of general paralysis, it was of a violaceous tint; and in all the four it was adherent to the pia mater. In one case, small fibrous tumours were found in the choroid plexus; this was a case of dementia. In eight cases, no morbid appearances were appreciable in the brain, viz. in 1 of mania; 2 of monomania; and 5 of dementia. In several of the cases examined, it appeared to me that the cortical substance was diminished in depth, but the want of precise information as to the normal thickness of this portion of the cerebral substance, and the difficulty of determining with accuracy its precise depth in any one section that can be made, prevents me, as yet, from pronouncing a positive opinion on this point. The medullary substance was, in several instances, remarkably firm, and of a putty-like or somewhat leathery consistence, being firm, tenacious, and to a certain extent elastic. This was remarked in one case of monomania, but more particularly in several cases of general paralysis, so far confirming the views of M. Foville, that morbid changes in the white substance, consisting mostly in hardening, produced by the adhesion of the planes or fibres of the cerebral substance to each other, are directly connected with disorders in the motive powers.

In one of the cases of general paralysis, in which there was amaurosis, the optic nerves were found very distinctly atrophied along their whole course, as far back as their origin in the corpora geniculata.

In one of the fatal cases, in which death was occasioned by peritonitis, it was found that a strangulation of the ileum had taken place, by a loop of it having passed beneath a band of condensed cellular tissue, the result probably of a previous attack of peritoneal inflammation; sloughing had taken place above the strangulation, with extravasation of the contents of the bowel into the peritoneal sac.—*Physician's Annual Report of the Edinburgh Asylum*, 1847.

[We have often remarked that the lesions described in connexion with insanity, are exactly the same in their nature as those seen in a variety of other cases of cerebral disease. Whether, therefore, any morbid changes exist which are peculiar to mental derangement, is a point still to be determined. Nothing has so much surprised us as the fact, that no one, so far as we are acquainted, has ever attempted to observe the alterations which the minute structures of the brain undergo, with the microscope, in establishments for the insane. Assuredly if changes exist any where, it is only by such means they can be discovered. And yet the magnificent establishments scattered all over the country, and the splendid opportunities which exist for histological research on this most interesting topic, are rendered of no avail to the cause of science. The fact is, our different superintendents, instead of cultivating the domain of histology and modern pathology, have devoted their principal attention to statistics, which, although they lead to nothing, make a great appearance of exactitude, and look well in the report.]

234.—*Curious Cases in the Royal Edinburgh Asylum.* By Dr Skae.—An intelligent and industrious man, who has long occupied himself in the early part of each day with theological composition, and in the afternoons with active employment in the garden, had preserved a rigid and unbroken silence for a period of nineteen years. He lately succeeded in reasoning himself out of the delusions which led to this taciturnity, and after formally intimating in writing his desire to speak and explain his past conduct, which he accordingly did, he has since continued to speak freely on all occasions.

Two cases occurred, among many others, strongly illustrative of the power which the insane have, under the influence of strong motives, to conceal the delusions and hallucinations which they harbour; and, as this fact is interesting in a medico-legal point of view, they deserve to be recorded. In one, a female of very strong passions, there were a variety of hallucinations both of vision and hearing. People's faces appeared to her to change both their form and colour; she heard voices, and held converse with imaginary forms. Under the influence of an ardent wish to obtain her discharge, she declared that she had got entirely rid of all her false impressions; she even went so far as to explain that a lecture on ventriloquism, which was delivered to the inmates on one occasion, had been the means of explaining to her how she might have been deceived with regard to the fancied sounds. It would have been difficult for a stranger to have discovered in her any trace of insanity, yet, after maintaining her propriety of conduct, and preserving her secret for some time, she suddenly gave way to violent passion on finding that she was not immediately to obtain her liberation; and, in the midst of this ebullition, gave full indications that all her hallucinations still maintained their place in her mind.

The other case was one of still greater interest. It also occurred in a female, of amiable dispositions, fond of reading, industrious in her habits, and mild and gentle in her ordinary demeanour. She harboured the illusion that, although in her body and person she was J. A. L., yet, that her body was the actual residence of the Divine Spirit which had been incarnate in our Saviour, and was now incarnate in her. With singular inconsistency, she wrote a novel, and at all times readily joined in the song or the dance. An attempt was made, by powerful moral agency, to uproot the delusion, and apparently with perfect success. She for a time defended her position with great obstinacy and cleverness, and seemed immovable; but the combined influence of reasoning, ridicule, and addresses made to her other intellectual and moral faculties, at last led her to renounce and repudiate her illusion. She came herself to look upon it with ridicule, and appeared to be completely free from its influence. Some time afterwards, when preparations were being made for her removal, the disappointment of some expectations which she had been led to entertain regarding the kindness of her friends on leaving the Institution, brought back all her former symptoms, combined with others of a similar character; and from her own statement in subsequent conversations, it appeared almost certain that her illusions had never really been dispelled, but were only held in abeyance and concealment for the purpose of gaining esteem, and obtaining her discharge.—*Physician's Annual Report of the Edinburgh Asylum*, 1847.

235.—*On the Use of Chloroform and Ether in Puerperal Insanity.*—As it is a great object to break the *continuance* of the sleeplessness of insanity, the occasional use of the *chloroform* vapour will be found valuable. We have had an opportunity of seeing more than one case in which it not only induced sleep, which had previously been absent for four or five nights and days, but the patient, on recovering from its effects, was found to be quite tractable and free from violence. The inhalation of ether had been tried by M. Cazenave of Pau, in the case of a lunatic female who had rested neither night nor day for five months, and in which it induced tranquillity. M. Jobert, in a similar case, exhibited it with the good effect of inducing sleep, and restoring, temporarily, a state of rationality. M. Bouvier tried ether, also, in a case of puerperal mania, with very beneficial results. In this case there had been no sleep for a fortnight before using the ether; its use was followed on two occasions by "*un calme de quelques heures.*" We are bound, however, to add, that in some cases in which it had been tried by other practitioners, no beneficial effect was produced.—*Journal of Psychological Medicine*, April 1848.

236.—*True Religion not a Cause of Insanity.* By Professor IDELER.—An important distinction is to be drawn between these deranged affections of the mind resulting from the influence of false religion upon the understanding, and the healthy effect of legitimate Christianity upon the feelings and actions of man. During the course of our experience, we have never seen a case of insanity which could be clearly traced to true religion—we mean, the religion as inculcated by the great Author of Christianity—the religion that teaches 'peace and good-will towards men'—which advocates the noble sentiments of love and charity—which inculcates the feelings of 'preferring others to ourselves'—the religion which represents LOVE, MERCY, and FORGIVENESS as the pre-eminent attributes of the Godhead—the religion whose tendency is to

induce us to take lowly views of ourselves, to humble human pride, to produce a cheerful, serene, and happy state of mind —the religion which enables us to bear with fortitude 'the whips and scorns of time, the oppressor's wrong, and the proud man's contumely.' We cannot believe that the influence of such a religion can be otherwise than sanitary in its effects on the human mind.—*Journal of Psychological Medicine*, April 1848.

237.—*Hereditary Insanity.* By Dr Rud. Leubuscher.—Is mental disease transmitted more frequently from the mother than the father? This question, considered in its strictest sense, might show that insanity depends mostly upon conditions which are either limited to the mother or father exclusively; that it is connected with this or that system and organ; or, finally, that the influence of one or the other parent predominated in the act of procreation. We thus see how a question of this nature opens the way to a whole series of others, and how cautiously we ought to proceed in giving a decisive reply, lest we involve ourselves in a mass of hypotheses, in our attempt to explain the subject under consideration. Even Esquirol established the proposition, that mental disease was more frequently transmitted from the mother than the father—an opinion that has continued in force, and has been very nearly considered as a settled fact, by Baillarger. Another point, tolerably well attested by experience, and scarcely to be refuted on theoretical principles, has again been generally advanced—namely, that insanity is not so frequently transmitted to the offspring when it does not show itself in one or the other parent until after the birth of the former, excepting where the disease is based on hereditary disposition, and appears to have been simply retarded in its manifestation. It would be very important to learn how far it is necessary to extend our investigations amongst the relatives of a patient, and through how many generations the disposition may be transmitted: but these are points into which statistical inquiries do not, and cannot enter.—*Journal of Psychological Medicine*, April 1848.

238.—*Influence of Events and Political Emotions on the Development of Mental Alienation.* By M. Belhom.—In a memoir read to the Academy of Medicine in Paris on this subject, M. Belhom arrived at the following conclusions. That one of the moral causes which influence the development of mental aleniation is, without doubt, the perturbations which revolutions give rise to; that insanity attacks most frequently individuals predisposed; that its form is acute, and consequently more susceptible of cure; that the treatment which succeeds best, is a sedative treatment, and especially prolonged baths with cold affusions on the summit of the head; that derivatives from the intestinal canal and skin cause a favourable termination; and, lastly, that a moral treatment well regulated favours cure.—*Gazette Médicale*, May 3, 1848.

239.—*Frequency of Gangrene of the Lungs among the Insane.* By Dr Fischel of Prague.—In the course of six years (1840-1845) there were examined in the Pathological Theatre at Prague 3437 bodies, of which 3102 were from the hospitals, and 335 from the asylum for lunatics. Among the former, gangrene of the lung occurred 55 times, viz. in 1·6 per cent. of the cases; in the latter 25 times, viz. 7·4 per cent. This proportion is the more trustworthy, that it is pretty nearly the same in each of the six years referred to.—*Präger Vierteljahrschrift*, 1847. Band 1.

VIII.—MATERIA MEDICA AND THERAPEUTICS.

240.—Chloroform. *Preparation.* By Professor Bottcher.—Equal parts of chloride of lime and acetate of soda are distilled to dryness in an iron retort. But little chloroform is obtained in the first distillation; but a large quantity of dilute acetone, which is mixed with chloride of lime, and again distilled. But the whole acetone is not decomposed in this operation, and it is consequently necessary to mix the products with more chloride of lime, and to distill again. The product is rectified over caustic lime. This method is said to effect a great saving.—*Polytechnische Notiz-Blatte*, No. I., *and Chemical Gazette*, No. 132.

Properties.—According to Dr Dubini, chloroform possesses remarkable antiseptic powers, and is well adapted for the conservation of anatomical and pathological preparations; the colour, form, flexibility, and volume of which it retains. His observations cannot be considered as satisfactory, as they embrace too short a

period, only a few weeks ; but this property probably merits further investigation.—*Gazzetta Med. Lomb.* 10, 1848, and *L'Union Méd.*

Physiological Action. Dr Snow attributes the greater activity of chloroform compared with ether to its sparing solubility in water. He has examined a number of volatile liquids, and has found that their narcotic power is in an inverse ratio to their solubility in water. The more soluble the agent is, the greater is the quantity of it required to produce a given effect. The following table exhibits a number of the liquids in the order of their solubility, and of their narcotic strength—the last being strongest :—

Alcohol, Pyroxilic Spirit, Acetone,	soluble in all proportions.
Acetate of Oxide of Methyle,	50
Acetate of Oxide of Ethyle,	15
Sulphuric Ether,	10.....2300
Nitrate of Oxide of Methyle,	6
Iodide of Ethyle,	1
Chloroform,	0·5.....144
Bromoform,	about the same.
Bichloride of Carbon	0·4.....100
Bisulphuret of Carbon	0·13.....50
Benzin, Metacetone,	also very sparingly soluble.

The first column shows the quantity of liquid by measure, that 100 parts of water would dissolve ; the second the quantity of vapour.

Dr Snow ascertained the relative strength of these vapours by inhaling small quantities himself, and by experiments on animals.

According to Dr S., the full narcotic effect of chloroform will not be obtained unless the air inspired contain at least one cubic inch of chloroform vapour for every hundred cubic inches of air. If, from any cause, the proportion of vapour become less, no amount of its consumption will produce the desired effect.—*Med. Gazette* for April.

Dr Flagg concludes, from numerous experiments with *sulphuric ether*, that there is a particular point of etherization which leaves the patient in possession of all his faculties except the sense of pain ; and more especially the sense of touch, and the power of distinguishing temperatures are as acute as under ordinary circumstances. He considers this fact a strong argument in favour of the view of a double system of sensory nerves ; "one to carry to the brain the idea of *touch*, the other of *pain*."—*American Medical Examiner*, Jan. 1848.

Dr Nevins considers, that as the general safety and utility of chloroform is now completely established, it is useful to direct attention to its occasional *unfavourable effects*. He has received communications respecting its action from several public hospitals, as well as from many private individuals, from which it appears that *vomiting* is frequently present, and may occur, although the stomach is at the time of administration quite empty. *Headach* was another not uncommon result, continuing in some cases for several hours. *Convulsions* of variable severity are said to have been very frequently present, but never occasioned any permanently injurious effects. They usually occur at an early period of its administration, and disappear when narcotism is completely developed. In some cases, however, they are present, while the patient is fully under its influence. *Prostration* occurred to an alarming degree in several instances, but all recovered ultimately. In one or two cases, on the other hand, in which the patients were reported to have been pulseless and moribund from uterine hemorrhage, or prostration otherwise induced, they rallied under the influence of chloroform, and operations were safely performed. The risk of *secondary hemorrhage* was not increased by the use of chloroform.

Children may be submitted to its influence with safety. Dr Roche operated satisfactorily for nævus upon a child not three months old, to whom he had given fifteen drops of chloroform ; it continued under its influence six minutes. The report of a successful operation upon an infant six months old, is referred to by Dr Nevins.—*Med. Gazette*, March 3.

Fatal Cases.—In a discussion on the use of chloroform in midwifery, which took place at the Westminster Medical Society on the 22d of April, Dr Reid stated that he was aware of its having proved fatal to a lady to whom it had been administered on account of neuralgia. —*Lancet*, April 29. The "Cincinnati papers stated that a post-mortem examination was made in the case of Mrs Simmons, who died while under the influence of chloroform. The body was found in a healthy condition, and showed no indications of any disease that could have caused her death." It was supposed to have been administered in too concentrated a form.—*Lancet*, April 15.

Dr Glover has replied to Dr Simpson's remarks on the cause of death in the case of Hannah Greener (see *Retrospect*, p. 50).

He has made comparative observations on animals killed by the inhalation of chloroform and by drowning, from which it appears, (1) that the blood is not necessarily fluid in the heart in asphyxia produced by drowning, nor is it always coagulated in death from poisoning by chloroform ; (2) that reddening of the larynx and epiglottis, and congestion of the brain, may occur in chloroform poisoning, and are not characteristic of asphyxia from drowning ; (3) that the post-mortem appearances in both cases are very similar, with the exception of the pulmonary congestion, which is denser, more uniform, and of a lighter red colour in animals killed by chloroform. Dr Glover still maintains that the girl died from "congestion of the lungs, occasioned by the inhalation of chloroform."—*Lancet*, April 22.

Therapeutic Action. Four cases of *delirium tremens* are referred to by Dr Nevins, in all of which chloroform produced the best results, the patients immediately fell into a tranquil sleep, which lasted from one to four hours.—*Med. Gaz.*, March 3. It failed, however, to give relief in a severe case detailed by Dr Hooper.—*Lancet*, April 1.

In *mania* Dr Nevins observes, that experience has not been so favourable. Two of his informants mention having used it with benefit in three cases of high maniacal excitement. In about twelve other cases reported to him, no permanent benefit, and scarcely even temporary relief, was obtained.

Mr Sibson has employed it in several cases of facial *neuralgia*. The pain usually disappeared before unconsciousness was produced, and on its return was readily removed by a second inhalation. The chloroform was useful, not in curing the disease ; but in aiding the effect of other means, as quinine, belladonna, &c., the employment of which was directed according to general principles. When the neuralgia arises from, or is associated with cerebral affection, choloroform is contra-indicated, according to Mr Sibson's experience.—*Med. Gaz.*, April 1848. Mr Moffat failed to afford even temporary relief in a case of severe neuralgia of the neck ; but we suspect that an inferior preparation was employed. Two cases of tic douloureux are referred to by Dr Nevins, in which it was used with immediate relief, and no return of the pain for several days.—*Med. Gaz.*, March 3.

No advantage has been derived from its employment in two cases of *chorea*.

In the case of a female, forty-three years of age, affected with *catalepsy*, its employment was highly serviceable, enabling the practitioner to administer medicine by the mouth, which was previously impracticable, on account of the existence of trismus. She had been in the cataleptic state for sixteen hours, and turpentine enemata, &c., had failed in obtaining improvement. Under the chloroform, the iris regained its mobility, and the limbs, with every voluntary muscle in the body, became obedient to the will. She again relapsed into her former state ; but from that time gradually recovered.—*Prov. Med. Jour.*, April 19.

Two cases are detailed of its successful employment in *puerperal convulsions* (Fearn, Richet), and we have heard of several others. We regret our inability to quote a second cure of *acute traumatic tetanus* by its means. In one case it palliated the distressing symptoms, and afforded much relief to the unfortunate patient.—*Prov. Med. Jour.*, April 19.

Taken internally in the dose of five to fifteen drops, mixed with mucilage, Dr Nytterhœven found it useful in combating the wakefulness which accompanies the chronic complaints of old people. It provokes quiet sleep, without occasioning cerebral congestion, diminishes to a slight extent the force and frequency of the pulse, and neither disorders the stomach nor constipates the bowels. After a few days' use, the dose must be increased to obtain the same hypnotic effect.—*Archiv. de Méd. Belge*, January 1848.

241.—*Clinical Notes taken in the Hospitals of Paris and Vienna.* By Dr Alex. Fleming.—*Administration of Calomel in very small and frequently repeated doses (à doses réfractées).*—In the wards of Professor Trousseau, at the Hôpital Necker, Paris, I had frequent opportunities of witnessing the complete success of the following method of administering calomel. In *acute* diseases, as rheumatic fever, puerperal peritonitis, iritis, &c., a mixture of one grain of calomel and one drachm of sugar is divided into twenty-four powders, one of which is taken every hour. The same treatment is continued two, three, or more days, or until the gums are touched. This usually occurs in forty-eight hours, and sometimes even in twenty-four hours, or after the administration of only one grain of calomel. It is rarely necessary to continue the use of the powders during the third day.

The advantages of this method are—(1) the system is brought under the influence of mercury as rapidly and as certainly as by any other mode of administering the drug ; (2) the mercurial action

never proceeds further than is intended, and the serious consequences of excessive salivation are entirely avoided. The therapeutic effects of calomel, when thus given, are in every respect similar to those obtained by large doses (Trousseau, Dubois).

In the treatment of puerperal fever, Professors Trousseau and Velpeau insist strongly on the necessity of rapidly inducing mercurialism. With this view, large doses of calomel were administered internally, and, at the same time, mercurial ointment, to the extent often of a pound daily, was rubbed into the skin. Although they had reason to believe that this heroic medication frequently saved the lives of their patients, they had often to deplore the baneful effects of excessive mercurial action; viz. gangrenous inflammation of the vulva, serious lesions of the mouth, &c. For the last two years, Trousseau has adopted the method *à doses réfractées* in the treatment of this disease, and is convinced that he thus obtains all the good, and completely avoids the evil effects of the remedy.

In *chronic* diseases, or where it is desired to bring on mercurialism gradually, the same dose (1-24th of a grain) may be given every third or fourth hour, when tenderness of the gums will probably not appear before the fifth or eighth day.

In the treatment of constitutional syphilis, lupus, &c., Hebra of Vienna prescribes corrosive sublimate in a similar manner. One grain of the bichloride is dissolved in twelve ounces of water, and of this solution half an ounce is taken thrice daily. In the cases which I observed of this mode of treatment, salivation presented itself rarely before the eighth day, more commonly about the eleventh or twelfth day.

The merit of having first directed attention to this mode of administering calomel is due to Dr Law of Dublin, whose paper on the subject, which appeared in 1839, seems not to have attracted much attention in this country. Dr Douglas Maclagan informs me, that he has had occasion more than once to verify the statements of Dr Law. I have myself, during the last six months, adopted the practice in about twelve instances with success, in so far as regards the physiological action of the drug.

I think it right to place in connexion with the above, the views of Mialhe on the changes which calomel undergoes in the stomach previous to absorption, and which certainly enable us to understand the *modus operandi* of Law's method of exhibiting calomel.—(*Traité de l'Art de Formuler*, p. 5.) It has long been known, that, placed in contact with a solution of an alkaline chloride, as common salt, accompanied or not with muriatic or other acids, calomel undergoes a partial transformation into the bichloride and metallic mercury, and as calomel itself is insoluble, and consequently incapable of absorption, we must attribute its remote physiological action to this change.

The interesting experiments of Mialhe show that the quantity of corrosive sublimate formed, bears no proportion to the amount of calomel employed; but is in exact relation to the quantity of alkaline chloride present in the solution.

Thus, the quantity of alkaline chloride present in the stomach at any one time, being generally not more than sufficient to convert a very small quantity of calomel into bichloride, it is immaterial, in so far as absorption is concerned, whether one grain or one drachm of calomel is administered, as in either case the quantity of bichloride formed is the same. The frequent administration of small doses, as in Law's method, has the advantage of exposing the calomel to the action of a large quantity of the gastro-intestinal fluids.

According to this view, the exhibition of common salt with the calomel ought to increase its activity in a marked degree, and perhaps the cases of so-called idiosyncrasy, where a small quantity of chloride has given rise to severe salivation, may find in this circumstance a rational explanation. On the other hand, the changes in chemical composition which the gastro-intestinal fluids undergo during disease, will modify powerfully the action of calomel. Ptyalism is said to be easily induced in seamen. Is this owing to an excess of chloride of sodium in their gastric and intestinal fluids, on account of their eating salted provisions? The difficulty of salivating children at the breast, by the exhibition of calomel, is well known. Mialhe ascribes this to the feebly saline nature of their aliment.—(*To be continued.*)

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

242.—*On the Minute Anatomy of the Thyroid Gland and Supra-renal Capsules.* By Professor ECKER of Basle.—On making a section of the *Thyroid gland*, it is found to consist of rounded solid granules or lobules, visible to the naked eye, of a reddish-yellow colour, and from one-fourth to half a line in diameter. These bodies, with a loose cellular tissue which encloses them in its meshes, but from which they can easily be separated, constitute the entire apparent structure of the gland. On making a thin section of one of these bodies, and placing it under the microscope, it is seen to present an areolar tissue, consisting of numerous bundles of fibres passing in all directions, crossing each other frequently, and enclosing in its meshes round or oval closed vesicles, which are evidently the most important part of the glandular structure. Along with the fibrous tissue are numerous vessels, whose capillaries form a network in close approximation with the external surface of the vesicles above mentioned. These vesicles are formed by a delicate and structureless membrane, which is completely closed on every side; they have a diameter of from 0·05 to 0·10 of a millimetre. Their contents consist of free fatty granules and oil globules, along with granular nuclei or cytoblasts, and occasionally complete cells. Reference will presently be again made to these structures.

The *Supra-renal Capsules* are surrounded by a fibrous investment, copiously supplied with blood-vessels, which pass every where into the gland. On section they appear composed of two substances, the cortical and the medullary. The latter contains the greater number of vessels, and in its centre is the wide supra-renal vein.

The cortical substance of the gland is made up almost entirely of closed glandular sacculi, enclosed in the areolæ of fibro-cellular tissue, in the midst of which run the blood-vessels and nerves. These sacculi are placed together in rows or columns, which are arranged parallel to each other, and disposed in a direction radiating from the capsule of the gland to its central or medullary substance. These rows of sacculi are collected into compartments, which are separated from each other by the above-mentioned bands or septa of fibro-cellular tissue. The appearance presented by this arrangement of the sacculi in columns, is as if each row constituted a single tubule; but by lacerating one of the fibrous septa forming the compartments, some of these apparent tubules will often break up into several portions, each of which is then perceived to be a distinct sacculus. It is merely by their aggregation into columns, therefore, that the tubular appearance is produced. Moreover, several of the individual sacculi may be sometimes observed scattered apart singly, in an undisturbed section of the cortical portion of the gland. These lie especially at the periphery, and at that part of the cortical portion which adjoins the medullary portion. These scattered sacculi have been sometimes taken for the closed and rounded extremities of displaced tubules.

All the sacculi, both those which are isolated and those which are aggregated into rows, present when examined separately a rounded or oval form. The smallest measure from 0·017 to 0·022 of a millimetre; the large oval ones from 0·062 to 0·125 in length, and from 0·025 to 0·0062 in breadth. The membrane of which each sacculus is composed is frequently quite distinct without the addition of any reagent, though, if obscure, its presence may be in all cases rendered manifest by the addition of potash. It is a simple structureless layer. The contents of each consist of a fine molecular

substance, of nuclei and nucleated globules imbedded in it, and of granules of fat. The presence of the latter gives a peculiar yellowish appearance to the sacculus, which is thereby strongly contrasted from the medullary portion of the gland. In the smallest of the sacculi, which are situated near the margin of the medullary substance, there is observed only a single nucleus, imbedded in finely granular plasma. These sacculi thus resemble simple cells, though they differ from the cells in the parenchyma of the medullary portion of the gland, and from the nucleated globules in the interior of the larger sacculi, in being larger, and in not losing their membrane by the action of potash, which the latter cells do. The larger sacculi contain two, three, or four nuclei; the largest of all contains as many as twenty, or even more. These different forms probably only represent so many different stages of development from a single nucleated cell. The large number of nuclei in the bigger ones probably arises from an endogenous formation of them as the cells grow, and are developed into true sacculi.

The *medullary portion* never contains sacculi, either in man, or in any mammalian except in the horse, in which animal the author has met with them. It is essentially made up of a network of fibres, derived from the bundles of fibro-cellular tissue which were mentioned as proceeding from the capsule of the gland. In the meshes formed by this network are contained a large quantity of the before-described finely granular or molecular material, together with nuclei and nucleated globules imbedded in it. Blood-vessels and numerous nerve-fibres are distributed through the medullary substances.

It appears from the above description, that both the thyroid gland and the supra-renal capsules consist essentially of a structure similar to that of all true glands, viz. a homogeneous membrane in contact with nuclei and cells. This membrane does not, however, communicate with any excretory duct, as is commonly the case in glands. In the thyroid body it assumes a simple vesicular form; in the supra-renal capsules a similar membrane is disposed in the form of elongated sacculi. [In the thymus gland, as Mr Simon has shown (*Physiological Essay on the Thymus Gland*, 1846), a similar structure exists in the more complicated form of an elongated tube, into which open numerous ramified follicles.] In the spleen, a vesicular structure exists, and, although a special limiting membrane has not been in general recognised, the author has succeeded in demonstrating it, in mammalia and birds, by means of the application of potassa, which dissolves the obscuring granular matter. It may therefore be assumed, that the whole of the so-called vascular glands possess essentially a secreting structure.

The cells and nuclei appear to be at first in contact with the membrane, and afterwards to be separated from it, and to float free in the fluid. The complete cells are generally few in number, the free nuclei very numerous. The nuclei are slightly dotted or granular; they have a size of from 0·01 to 0·005 of a millimetre in the supra-renal capsules, and 0·007 to 0·005 in the thyroid gland. In the supra-renal glands of the embryo, they have been observed by Dr Ecker to be vesicular, and to contain nucleoli. When there are complete cells, they have a diameter in the supra-renal capsules of 0·017 to 0·020, in the thyroid gland from 0·010 to 0·012. The space between the cell-wall and the nucleus is often filled with granules.

Similar forms of cell development have been described by Simon, and observed also by Ecker in the thymus gland; and the nuclei in the spleen have been very frequently observed. The cells and vesicles of the thyroid gland are liable to undergo enlargement, constituting, according to Ecker, one of the forms of bronchocele.—*Henle and Pfeufer's Zeitschrift*, 1847, Heft. 2; *also Medical Gazette*, No. 159, *from Ecker* "*Der feinere Bau der Neben-nieren beim Menschen und den vier Wirbelthierclassen*," 1846.

[We propose next month returning to the subject of the thyroid gland, in order to give a sketch of Dr Ecker's observations on bronchocele, which are extremely original and important. The above anatomical observations are fundamentally the same as those of Mr Simon, in his work on the thymus gland, in some remarks on the structure of the other vascular glands.]

243.—*On the Physiology of the Glands without Ducts, or so-called Vascular Glands.* By Professor ECKER.—The author conceives the supra-renal capsules to have a function in common with all the other glands without ducts. The anatomical analogies of these bodies have been fully shown in the preceding article. They all possess as an essential structure a basement membrane, with cells and nuclei which have all the appearance of secreting structures; and the contents of

the ultimate vesicles or tubes is in all cases a highly albuminous fluid, containing fatty granules and free oil-globules. Dr Ecker has no hesitation in considering this a secretion which is destined to be returned to the blood, either through the lymphatics, or, as is more probable, directly through the walls of the vesicles. Here lies the distinction between these bodies and the ordinary glands, whose secretions, with the exception of the bile, are destined for excretion, and contain only effete matter. The bile serves an important purpose in relation to digestion; and it has been supposed that the spleen, thymus and thyroid glands, and renal capsules, have some such accessory office in connexion with other special functions. Ecker considers this hypothesis to be founded on imperfect analogies, and is rather disposed to attribute to them a common function in connexion with the process of nutrition. The fluid secreted by them is rich in nutritive elements; and the abstraction of these from the blood, to be returned to it again, is not difficult to understand if we consider that the supply of the elements of nutrition to the blood is variable, while the demand is constant; on which account there may be a necessity for organs in which these nutritive principles are stored up, so as to be constantly ready to supply the waste of the tissues. [Is it not more probable that, in the act of secretion, some chemical change is produced in these elements, which is required to fit them for the act of nutrition, but which has hitherto escaped our observation?] — *Medical Gazette*, No. 160.

244.—*On the Function of the Pancreas.* By Cl. Bernard.—The pancreatic secretion is limpid, viscous, and alkaline, and in all its general properties approximates closely to saliva; in a physiological point of view, however, its properties are entirely different. From researches detailed in the paper, the author concludes that the pancreatic juice is the indispensable agent in the digestion of fatty matters. He has found that, when mixed with oil or any other fatty body, it immediately produces an emulsion, a property which is not possessed by saliva, bile, serum, or any other animal fluid. This first action is not a saponification or combination, and appears to be perfectly mechanical; but it does not stop here, for, after a time, a further change takes place, and the fats are decomposed into their fatty acids and glycerine, a change which the author has fully established by experiments made along with MM. Barreswil and Marguerite.

Bile does not produce any emulsion with the fatty bodies, and has no action upon them so long as they are *neutral;* but it is capable of rapidly dissolving the fatty acids, and the well-known power which bile possesses of removing grease spots, is due, in all probability, to the previous decomposition of the fats by exposure to the air. Owing to these properties, a mixture of bile and the pancreatic juice, such as is found in the duodenum, has the double property of dissolving the neutral acid and fats. The author has also examined these points by tying the pancreatic ducts in the dog and rabbit; and he found that, after the operation, the chyle contained no fatty matters, although these substances were supplied with the food, and were found in abundance in an unemulsionated state in the intestines.—*L'Institut*, May 3, 1848.

245.—*On the Chemical Phenomena manifested by different Substances introduced into the Organism.* By M. Bernard.—The author has performed a very extensive series of experiments, of which the conclusions may be stated shortly as follows:—

1. Certain combinations of metals, which take place readily out of the body, and even in the gastric secretions, are prevented from occurring in the blood, and other animal fluids, by the affinities of the metal for organic matter. This proposition was drawn from observations on the reactions of a salt of iron with prussiate of potash.

2. Certain chemical reactions of the nature of fermentation (*e. g.* amygdaline with emulsine, sugar with yeast), which commonly do not take place in the stomach, are easily developed in the blood.

3. When salts of certain acids, whose affinity for bases is feeble (as the hydrocyanic and the carbonic), are injected into the veins, they are decomposed, and the acid is liberated; the decomposition in these cases appearing to take place in the capillaries of the lung.

4. Certain salts (such as the prussiates of potash and the salts of iron) appear to pass in the stomach from a lower to a higher, and in the blood and urine from a higher to a lower, state of oxydation.

[The extreme interest attaching to M. Bernard's iudividual experiments, induces us to give an analysis, in the present and the next Number, of such of them as appear to lead directly to the above results.]

First Series.—After a number of expe-

riments, which were vitiated by the difficulty of procuring a salt of iron which could be injected in the veins of an animal without fatal consequences, M. Bernard discovered that the lactate of iron was quite innocuous when used in this way. He then caused a simultaneous injection of lactate of peroxide of iron, and of prussiate of potash, to be thrown into different veins in the same animal. The result was surprising. Instead of the blue colour, which might have been expected, the blood and the tissues of the body experienced no apparent change whatever; the only exception being the pyloric extremity of the stomach, where a vivid blue colour was developed. The experiment was repeated several times, with similar results. In one instance only the urine presented a dingy blue colour; in all the experiments, however, a few drops of strong sulphuric acid added to the urine produced a copious precipitate of Prussian blue. These results were not affected by the acid or alkaline character of the urine itself.

The conclusion from these experiments was, that the double decomposition here indicated could only take place in two situations, viz. in the stomach, and occasionally to a slight extent in the urine. That the absence of the blue colour did not result from the insignificance of the quantities employed, was proved by another experiment. Into the veins of one rabbit the ordinary quantity of prussiate of potash in solution was thrown, and after some minutes the animal was bled. In another rabbit lactate of iron was injected, and bleeding likewise performed. On mingling the serum derived from these two rabbits, no reaction took place; nevertheless the one serum was easily proved to contain iron, and the other prussiate of potash. On adding now to the mixed serum of the two animals a few drops of sulphuric acid, the blue precipitate was instantly produced. The action of the urine of the two rabbits when mingled, was precisely similar to that of the serum. It was different, however, with the gastric fluid. On washing the coats of the stomach in the two animals, acid liquids were procured, which, on being mingled, gave rise to a blue colour immediately.

That this difference between the gastric and the other fluids was not due solely to acidity, was shown by the fact, that the urine presented the same phenomena, whether acid or alkaline, as above stated.

Having determined these facts, M. Bernard next proceeded to try the effect of the direct addition of the salt of iron, and afterwards of the prussiate of potash, to serum, urine, and gastric juice. In the first two he found that, except in the case where an acid was added, or large quantities of the re-agents used, there was no blue precipitate, while in the last the blue colour always appeared. When, however, the precipitate of potash was added first to the fluids, and afterwards the iron salt, the blue colour was immediately produced in the whole.

M. Bernard accordingly concluded, that from the attraction of iron for animal substances, it is prevented from developing its usual relations with prussiate of potash, when both these substances are injected into the blood; but that if a strong acid be added to animal matter containing these salts, this affinity for the animal matter is destroyed, and the several chemical relations are established. This does not take place, however, on the addition of phosphoric, acetic, or lactic acids.

The peculiarity of the gastric juice in these experiments is explained by the author, on the ground of the small quantity of organic matter in it being less than any other secretion in the body. [May not the existence of free muriatic acid be a more valid explanation?]

The tendency of iron to combine with the tissues, is further illustrated by M. Bernard in three experiments. In the first, a solution of lactate of iron was introduced into the cellular tissue of the neck, and a similar quantity of solution of prussiate of potash into the right thigh. A blue colour soon became developed in the former situation, while the thigh retained its natural colour. In the second experiment, the salt of iron was introduced into the thigh, and prussiate of potash was injected into the veins; the blue colour became developed in the thigh. In the third experiment, the salt of potash was introduced into the cellular tissue, and the iron-salt into the veins. In this case there was no blue colour developed.

It is obvious from these experiments, that the prussiate of potash circulates rapidly in the general mass of the blood, even when introduced into the system by a wound in the integuments; while the iron seizes on the tissue with which it is placed in contact, from which it is very sparingly absorbed into the circulation. Thus the mixture of the two salts is not effected, except at the point of introduction of the iron.—(*To be concluded in next Number.*)—*Archives Générales de Médecine*, Jan. 1848.

246.—*Lesion of the Anterior Lobes of the Brain without Alteration of the Faculty of Speech.* By M. Kemmerer.—A man attempted to commit suicide by firing a pistol against his forehead. He was found leaning against a wall, and answered questions by the words "let me sleep" (laissez-moi dormir). When seen by the authorities, he was asked who did him the injury? he replied, "It is the son of ——." He was asked for his arms, and replied distinctly that he had none; but in answer to further inquiries, he admitted having two pistols, and gave them up. Next day, having been reminded of his declaration as to the son of ——, he explained that he had intended to say, that without him he would not have been reduced to such extremities.

There was severe pain at the mastoid processes, which yielded to the application of leeches. Intelligence, motion, sensation, deglutition, were intact.

The next day the patient entered into conversation, and was able to rise to make water; but at six o'clock he gradually fell into coma. There was spasmodic contraction of the arms. Next day this continued, and he died in the evening.

There was a perforation of the frontal bone, close to the root of the nose; it was exactly filled by a metallic disk, with a smooth surface. On opening the cranium, the two anterior lobes of the brain appeared entirely destroyed, and converted into a sanguinolent mass. The membranes were torn around the perforation, and the bullet was prolonged into the brain in the form of a conical point. A clot of blood was extended along the falx cerebri. There was no other lesion.—*Gazette Médicale*, No. 24, *from Journ. des Connaissances Médico-Chirurgicales.* [This case is of considerable importance in connexion with the view of M. Bouillard as to the function of the anterior lobes of the brain. See *Retrospect* for March, p. 46.]

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

247.—*On Some Points connected with the Origin of Uric Acid Sediments in the Urine.* By Dr G. Zimmermann.—The subjects considered by the author are: First, The source of amorphous sediments of urates; second, The cause of their production; third, The origin of sediments consisting of uric acid in its crystalline state; fourth, The reason why urine is frequently rendered turbid by the addition of an acid, and subsequently deposits crystals of uric acid.

First, Dr Heintz in 1845 observed that amorphous sediments never contain any free uric acid, but consist of urates of ammonia, soda, potash, lime, and magnesia. The existence of urate of lime, he infers from having found carbonate of lime in the burnt ash of the sediment. Dr Zimmermann at first called in question the presence of this salt in such sediments, thinking that the existence of oxalate of lime (which he had frequently known such sediments to contain) would explain the presence of carbonate of lime in the ash after combustion; the oxalate, like the urate, being convertible by heat into the carbonate. The result of the following experiment subsequently induced him to change this view:—360 grammes of lateritious sediment were obtained from the urine of several patients, and then digested with acetic acid. The acid combined with the bases of the urates, precipitating the uric acid in crystals, together with oxalate of lime; after filtering the liquid and neutralizing it with liquor ammoniæ, the addition of oxalic acid showed the presence of a very large quantity of lime. No phosphate of lime being present in the lateritious sediment, the lime must have existed in the urine in combination with uric acid. The oxalate of lime, associated with the amorphous deposits, is not present in the urine when first voided, but oxalic acid being formed out of uric acid, then combines with lime; a portion of lime also exists in combination with the colouring matter. [We doubt whether the oxalate of lime will be found as invariably in these deposits as Dr Zimmermann states in this paper. At the same time we have detected crystals of oxalate of lime immediately after micturition, in urine in which, after a brief period, we have found them associated with amorphous urates in the deposited sediment. In some instances, doubtless, the subsequent chemical change referred to may account for their presence.] The chief circumstance urged by Heintz in favour of uric acid never existing in lateritious sediments in its free state, unless when crystalline, rested on the fact of uric acid always appearing in its crystalline form when deposited from a urate by the action of a stronger acid. This is not altogether correct, for, on slightly acidulating the solution of a salt of uric acid, the latter is invariably thrown down

amorphous, and remains so; even if a large quantity of acid is added to the solution of a urate, it is still deposited amorphous, though crystals of uric acid afterwards form. This may be observed under the microscope. The existence of free amorphous uric acid can only be determined indirectly; viz. by ascertaining whether the amount of bases obtained from the sediment corresponds to the amount of uric acid found. A second circumstance urged by Heintz against the existence of free amorphous uric acid in such sediments is, that when uric acid is added to urine freed from amorphous sediments by filtration and then heated, a portion of the acid is dissolved, and on the urine cooling appears in the form of a urate. It is, however, probable that this base does not exist in the urine previous to heating, but that the effect of the increased temperature is to decompose a portion of urea, and so generate ammonia. Heintz thinks that urate of lime when solid is always amorphous. According to Heintz and Dr Bence Jones, urate of ammonia admits of deposition in an amorphous condition from a solution containing chlorides of ammonia and sodium; but in so far as a lateritious deposit very frequently takes place in urine which scarcely contains one part in 1000 of dry chloride, it appears doubtful whether in these cases the chlorides are to be regarded as the cause of the amorphous condition in which the urate of ammonia is deposited. The deposit of this salt, which takes place when a heated solution of it is cooled, is invariably amorphous. When urate of soda, which ordinarily appears in a crystalline form, assumes the amorphous state in lateritious sediments, it is believed by Heintz and others to be due to the presence of chloride of sodium; in many cases, however, too small a proportion of this exists in the urine to account satisfactorily for this chemical interchange. We are not yet sufficiently acquainted with the influence exercised by the different constituents of the urine, particularly by the colouring matter, on the form assumed by the salts of uric acid while being precipitated.

Secondly, The determination of the causes which lead to the deposition of the urates in the form of a sediment, is a subject of much importance, involving, as it does, the explanation of the origin of sediments composed of crystals of uric acid, and the reason why lateritious sediments themselves sometimes change into uric acid crystals. Although by the theory of Liebig, which is adhered to by Heintz, it is possible to account for the acid reaction of the urine, and for the deposition of crystals of uric acid, yet by it the existence of certain conditions, which probably never occur, is rendered necessary. It requires either that free uric acid be formed at the kidneys in such quantity as to be able to convert the tribasic phosphate of soda into an acid phosphate, and that at a temperature of from 99° to 160° F., or that the kidneys secrete urates and the acid phosphate of soda in such quantities, that the uric acid dissolved in the urine may account for the acidity of the fluid. Neither of these conditions have ever been shown to exist, nor is it probable that either of them naturally occur; it is therefore necessary to seek elsewhere for the cause of the acidity of the urine, and for the deposition of crystalline uric acid. In order to determine why any given specimen of urine does or does not deposit a sediment, it is necessary to examine its chemical constitution carefully, and at different periods. It should be examined immediately after being voided, and again as soon as turbidity commences. The greater the amount of urates, and other solid constituents which urine contains, and consequently the less the amount of water, the more readily does a lateritious deposit take place as the urine cools from 86° to 59° F. In cases in which the sp. gr. of the urine ranged from 1015 to 1032, the quantity of uric acid thrown down ranged from 0·533 to 1·760 grains. The period at which the lateritious deposit falls is dependent on the quantity of water, the amount of urates, and the temperature of the medium. In relation to the formation of these deposits, it should be determined whether urine, as its temperature falls from 60° to 50° F., does not suffer an interchange in its bases and acids, whereby the urates are set free. Again, if the development of an acid in urine contributes to the production of sediments of amorphous urates, it requires to be determined what are the circumstances which either accelerate or delay the formation of such acid. Inasmuch as the healthy urine of twenty-four hours neither contains so little water, nor deposits so large a quantity of uric acid on the addition of hydrochloric acid, as a specimen of fever urine, whtch spontaneously throws down a precipitate, it may be inferred that in such a case the quantitative difference of uric acid sufficiently explains the formation of a sediment. But in other cases, in which such an explanation cannot hold, the reason must be looked for elsewhere.

Thirdly, It is probable that, under all circumstances, uric acid, when separated from the kidneys, is combined with a base, at any rate with ammonia; and that

only in those cases in which very large quantities of other stronger acids are formed in the system, can it be deprived of this alkali. When no free acid is found in urine just voided, which subsequently lets fall a precipitate, containing uric acid in crystals, the phenomenon must be ascribed to the development of a new acid. A similar explanation must also be given when a sediment, consisting of urates, is converted into one consisting of crystalline uric acid. The acid which is developed is either acetic or oxalic; it is formed apparently by a kind of fermentation. A moderately high temperature accelerates its formation, while boiling heat or alcohol retard or entirely prevent it. Urine, which has deposited a sediment of urates, and is disposed to undergo an acid fermentation, will furnish crystals of uric acid sooner if kept at a temperature of 72° F. than when exposed to 42° F. Several circumstances show that oxalic acid may be developed in urine rich in uric acid; when no free base exists this acid will decompose the urates, and unite with their base, especially with that of urate of lime, forming oxalate of lime. It may be assumed as a general principle, that neither free acids, nor free alkalies, ever exist in blood or urine.

Fourthly, The turbidity of urine, on the addition of an acid, results from the decomposition of the urates, and the consequent escape and deposition in an amorphous condition of uric acid. Crystals of the salt subsequently appear. Its deposition always depends on decomposition, and not on its previous existence in the urine in a free state.—*Medical Gazette*, No. 162-3, from Casper's *Wochenschrift*, April 1848.

248.—*On Albuminuria from Cantharides Blisters.* By M. Bouillaud.—Martin Solon, and various other authors, have noticed the occurrence of a temporary albuminuria in the course of acute affections. M. Bouillaud has also, in the first volume of his *Clinique Médicale*, published some cases of this occurrence. Since this he has devoted his attention more particularly to the effect of blisters in producing albuminuria, and finds them to be frequently followed by this result, and nearly constantly so when applied immediately after cupping had been practised on the same part. M. Bouillaud has found this coincidence between the application of a blister and the appearance of albumen in the urine, in two out of three of the cases which he had published as albuminuria in entero-mesenteric typhus; and he believes the absorption of cantharides to be a very frequent, if not the invariable cause of albuminuria in acute diseases.

M. Morel-Lavallée, who has made observations similar to those of M. Bouillaud, in regard to the occurrence of albuminuria after blisters, considers this condition as indicative of a form of cystitis. Some of M. Bouillaud's cases, in which he had an opportunity of observing the *post-mortem* appearances, he found the pelvis and calyces of the kidneys congested and ecchymosed, and the cortical substance more vascular than natural, while the bladder was little, if at all, altered. The occasional absence of pain in the region of the bladder is admitted by both authors, although slight strangury and frequent desire to make water are present in the majority of cases. M. Bouillaud does not consider the membranous and other forms of deposit in the urine, described by Morel-Lavallée as being in reality albumen, but only altered forms of vesical mucus. He recognises albumen only in one form, viz. in solution in the urine; and he is inclined to consider it as coming invariably from the kidneys. He does not profess, however, to have studied the action of cantharides on the bladder, nor does he deny the conclusions arrived at by M. Morel-Lavallée with respect to the occasional formation of false membranes. This, however, he considers as of secondary importance to the lesion of the kidney, in consequence of which the abnormal secretion of albumen is poured out.

The pathological cause of the affection above described is probably, according to M. Bouillaud, the absorption of cantharadine, which, being excreted by the kidneys, exerts upon their mucous membrane a reaction similar to the well-known effect on the skin, and induces an abnormal secretion from the former as from the latter.—*Révue Medico-Chirurg.*, Jan. and Feb. 1848.

III.—PRACTICE OF MEDICINE.

249.—*On the Treatment of Œdema of the Cellular Tissue by Deep Incisions.* By M. Lombard of Liége.—Notwithstanding the general impression, that incisions in anasarcous limbs are peculiarly apt to be followed by gangrene, the author has

unhesitatingly followed, for six years, in the general hospital at Liége, a practice as bold as it is unusual. As soon as the anasarca threatens to be dangerous, he causes a number of incisions (four or five for each limb, less than half an inch in length, and principally in the depending parts) to be made, passing entirely through the subcutaneous cellular tissue, and down to the fascia. He then places the patient, if possible, in the sitting posture, with the feet supported upon cloths. In this way, a very rapid evacuation of the fluid is procured, and the over distended skin rapidly returns to its natural condition. After all the fluid has been evacuated, a bandage is applied, so as to prevent a second effusion of serum, and at the same time to procure adhesion of the incised wounds by the first intention; results which, according to the author, may be confidently expected, if a moderate compression be employed.

When this method is resorted to in time, before the vitality of the skin has been destroyed by distension, and when care is taken to procure union by the first intention, as above described, M. Lombard asserts most decidedly that it is not liable to be followed by gangrene : and he appeals to the ample experience of his hospital practice for six years past in proof this fact. He explains the frequent origin of gangrene in other hands, by the too long delay of the operations, the gangrene being in most cases the consequence, not so much of the punctures, as of the distended condition and injured vitality of the skin, which would probably have led to this casualty even had no punctures or incisions been practised. Besides, the small and superficial punctures which are resorted to by some practitioners when too late, are quite insufficient for the rapid evacuation of the fluid, and cannot, therefore, be healed by the first intention. Hence the deep incisions here recommended, instead of being more frequently than others the cause of gangrene, are in reality the only safe proceeding when anasarca is obstinately on the increase.

When ascites accompanies the anasarcous condition of the limbs, and is dependent on the same pathological condition, M. Lombard finds that the removal of the anasarca in this method is almost always followed by the rapid disappearance of the ascites. He has been enabled in this way to relieve distension of the abdomen, even when so great as to cause extreme dyspnœa.—*Gazette des Hôpitaux*, May 9, 1848.

[It does not admit of doubt, that many of the bad effects which have been ascribed to incisions when practised in cases of extreme œdema, have resulted from the state of the integuments prior to the incision, rather than to the operation itself. Hence, if incisions are to be resorted to, we think that the principles of M. Lombard's method, viz. early and rapid evacuation of serum, and union of the wounds by the first intention, ought to be kept in view. In a great number of cases however, acupuncture, when performed in time, may be made to fulfil every purpose of incisions, and may be repeated frequently without any disagreeable consequences. The rapidity with which serum may be drained away through these small apertures, is often very remarkable ; and M. Lombard appears to us to have undervalued the efficiency of this method. It should certainly be resorted to in the first instance.]

250.—*Inflammation of the Superior Lobe of the Right Lung.* By M. HERVEZ. —In several cases (the number is not mentioned) which the author observed of inflammation limited to this portion of the lung, he was struck as well by their fatal issue as by the peculiar symptoms which characterise the disease, and distinguish it remarkably from inflammation of the lower lobes of the lungs, or of the upper lobe of the left lung. The patient early complains of great weakness, and is troubled with nausea ; the surface is pale and cold ; the pulse is small and weak, and a low delirium is usually present. There are little cough and expectoration, and the physical signs are obscure. Lastly, a symptom peculiar to the disease is acute lancinating pains in the region of the clavicle, and extending to the shoulder. From a consideration of the post-mortem appearances observed in *one* case, the author endeavours to account for the peculiar characters of this affection.

On raising the upper and hepatized lobe of the right lung, it was seen to have rested on the superior vena cava, the circulation through which, the author thinks, must have been obstructed. The entire length of the vein was occupied by a fibrinous clot. The inflamed lung also rested on, and appeared to compress, the right auricle.

The interference with the heart's action, supposed to be thus occasioned, is applied to account for the feeble pulse, coldness of the surface, and symptoms of general debility, which accompany the disease. The low delirium is ascribed to the venous congestion of the head ; and the acute neuralgic pains in the supra-

and infra-clavicular regions, are supposed to arise from the pressure of the inflamed and heavy lung on the pneumogastric nerve.

The practical deduction from these observations is, that we should not be deceived into inactive treatment by the symptoms of apparent weakness, but, on the contrary, adopt with energy those antiphlogistic measures calculated to relieve the pneumonic inflammation which constitutes their physical cause. In illustration of the value of this precept, M. Hervez narrates a case where the weak pulse and other symptoms of debility appeared strongly to contra-indicate active treatment, but in which, notwithstanding, its application was followed by recovery. —*L'Union Médicale*, May 25, 1848.

[The greater mortality of inflammation attacking the upper lobes of the lungs is generally admitted, and we are disposed to ascribe it to the more frequent occurrence of the disease in this seat in exhausted subjects. That any difference should exist between the two lungs in this respect, has not, we believe, been before suspected. We shall look with interest for new and more accurate observations.]

251.—*Case of Chronic Ascites successfully treated by Tincture of Iodine injected into the Peritoneum.* By M. Rul Ogez. —A boy, aged seven years, became gradually affected with ascites after an acute affection of the abdomen, the exact nature of which is not known. Various remedies had been tried without effect, and, at last, tapping was performed with temporary relief; but the fluid soon accumulated again to such a degree as to cause dangerous orthopnœa, and he was placed under the author's care three years after the beginning of the affection. At this time the distension of the abdomen was excessive; he was unable to sleep except at rare intervals; and had, moreover, become affected with dysentery, which was accompanied by great abdominal pain. After a few days of appropriate treatment, the dysentery was considerably alleviated; but the breathing continued so difficult, that tapping was performed without delay. After an examination of the abdomen, which resulted in the conviction that the viscera were in the normal state, and that the ascites probably depended on disease of the peritoneal membrane, M. Ogez injected through the canula a mixture of 3 gros (216 grs.) of tincture of iodine, with about 3 oz. of water; and by means of gentle friction, endeavoured to disperse the fluid through the whole abdomen. None of the injected fluid returned by the canula, which was accordingly withdrawn. The abdomen was then bound up as usual.

There was little or no pain during the operation, but the same evening and next day there was lancinating pain and tenderness of the belly, with tympanitic distension, fever, small frequent pulse, and some bilious vomiting. These symptoms not appearing to indicate a more intense degree of peritonitis than was necessary for the cure, M. Ogez prescribed only rest, with regulated diet, and diluent drinks. At the end of five or six days, the inflammatory symptoms had completely subsided; but a small quantity of fluid, giving rise to an obscure sense of fluctuation, had reappeared in the abdominal cavity; which, nevertheless, had lost five-sixths of its former volume. From this time, the patient continued to improve under a tonic regimen, and frequent friction of the abdomen, with moderate compression by means of a laced bandage. A moderate use of laxatives and diuretics, and exercise in the country so soon as the state of the patient permitted, completed the cure. Four months after the operation he continued to be gaining health and strength, and the abdomen was no larger than is usual in children of his age.

The author observes, that the success of this operation is no doubt owing to the fact, that the ascites was of the kind which he calls "essential;" that is, depending on disease of the peritoneum alone. It is only in such cases that he recommends its performance.—*Révue Medico-Chirurgicale*, March 1848, from the *Bulletin de l'Académie de Médecine de Bélgique.*

252.—*Dentition in Infancy—Weaning.* Clinical Lecture by Trousseau. — The teeth of the child are twenty in number; eight incisors, four canine, and eight molar. The process of dentition may be divided into five distinct eruptions, viz. :—

1st,	Inferior median incisors,	2 teeth.
2d,	Superior incisors, the median first, - -	4 ...
3d,	First molar and inferior lateral incisors, -	6 ...
4th,	Canine, - - -	4 ...
5th,	Last Molar, - -	4 ...
		20

The first two teeth generally appear without accident, the next generally produce some pain. Nevertheless a year may pass over without serious disorder.

At the period of the third eruption, there is generally pretty severe constitutional disturbance; but the fourth, that of the canines, is the most perilous of all. When the fifth group appear there is scarcely ever any thing of consequence. Now, it is of great importance, when the child is to be weaned early, to take advantage of the periods of repose which occur between the second and third, or the third and fourth periods. If it must be weaned, therefore, before the eruption of the canines, wean immediately after the third eruption; and, if it must be weaned before the eruption of the first molar, wean immediately after the appearance of the upper incisors. Do not wait till the molars or the canines are on the point of appearing, for in this case the weaning will be attended with great danger.

When the child has sixteen teeth it ought to be weaned. It may be weaned when it has twelve; but never when it has nine, ten, or eleven, for that is the middle of an eruption.

If the pain of dentition is very acute, cause a mixture of extract of belladonna and anodyne liniment to be rubbed in behind the ears and angles of the jaw, and apply poultices surrounded by wadding; if the gum is much swelled, and the tooth is on the point of appearing, and thus causing the intensity of the pain, press strongly on the gum, the tooth cuts it, and the pain is immediately relieved.—*Gazette des Hôpitaux*, No. 69.

253.—*Epidemic appearance of Cerebro-spinal Arachnitis.* Clinical Lecture by Dr JAS. F. DUNCAN.—Of late years considerable interest in the profession has been excited by the fact, that cerebro-spinal arachnitis has been noticed on several occasions to arise idiopathically, and to assume an epidemic form. Jahn tells us in his Practical Essays, that at Meiningen, in the year 1834, he met with twenty-one cases in the course of seven or eight weeks. Rilliet, in the *Archives Générales*, declares that (at Geneva) he has seen it not only in infants, but in adults. And on repeated occasions since the year 1837 it has been found to attack epidemically the fortified towns in France, Versailles, Metz, Strasburg, Bayonne, &c.; so that the Royal Academy, from the importance it had assumed, made it the subject of special investigation by commissioners appointed for the purpose. Last year (1846) it made its appearance among ourselves, and under circumstances of a very remarkable character. It first was observed at Loughlinstown by Dr Darby, who published an account of its symptoms and progress in the *Medical Press;* next it appeared at the South Dublin Union under the charge of Drs Shannon and Mayne, the latter of whom has given an admirable description of the disease in the *Dublin Quarterly Journal;* and lastly at Belfast, all about the same period, and in each locality marked by the same peculiarities. Thus, in each instance it was the inmates of the workhouse who principally suffered. It was confined almost exclusively to boys, wherever it was met with. It began suddenly, ran its course rapidly, was remarkably fatal, and presented on *post-mortem* examination a much greater amount of inflammatory disorganization in the spinal marrow and its membranes than in the head.—*Dublin Med. Press*, No. 493.

254.—*Carcinomatous Affections of the Spine.*—Dr Bühler has lately described three cases of this incurable but interesting and very important disease, of which there are few records, and of those which have been recorded all are doubtful, except the four cases by Mr Cæsar Hawkins, in the *Medico-Chirurgical Transactions* of 1841. Dr Bühler's cases are remarkable, seeing that the affection presented itself apparently as a primary disease of the vertebræ, as in one of Mr Hawkins', in whose three other cases carcinoma had already been developed in the mammæ or testes. Dr Bühler's first case occurred in an actor, a remarkably fine and well-built young man of twenty-seven years of age. The second was that of a man of sixty-nine, who from his youth had been scoliotic, or humpbacked, in consequence of a fall. The third was a woman of forty-two, who asserted she had had no previous illness. The first case was admitted to the hospital for paraplegia of the legs; the two other cases were sent in from the country as chronic rheumatism, for which they were at first, and unsuccessfully, treated. All three exhibited in the progress of the disease the greatest similarity of symptoms, the most prominent of which were excessive pains, which yielded to no remedy. These were at first confined to the back, but soon they extended to other parts of the body, and never ceased. At times they were most severe, particularly during the night, depriving the patient of all sleep. Pressure upon the spinous processes and neighbouring soft parts, and any motion of the body, materially increased the sufferings; the most easy posture was half recum-

bent, in which the patients generally remained. There were frequent spasmodic twitches, sometimes in one group of muscles, sometimes in another; clonic spasm of the legs and starting of the whole body, accompanied with severe pain, but without any disturbance of the sensorium. The respiration was generally quickened, and sometimes genuine asthmatic dyspnœa, with great constriction of the chest, took place. Other groups of muscles were at times attacked with tonic spasms; thus, the thighs were drawn up upon the abdomen, the muscles of which were frequently violently contracted. Constipation and retention of urine existed; at last, however, the sphincters became paralysed, and then both fæces and urine passed involuntarily. According to the higher or lower seat of the disease, the upper or lower extremities were paralysed, and sensibility partly or wholly extinguished. Occasionally formication and numbness were complained of: and motion, either voluntary or otherwise, always occasioned great pain. No scoliotic change in the form of the spine was observed, except in the young man, in whom the curvature became greater than natural; nor was the usual carcinomatous expression of countenance present, until near the end, when general cachexia was developed, and other organs participated in the disease. The progress was slow, death ensuing from the sixth to the ninth month. On dissection, the vertebræ were found softened, infiltrated by carcinoma, or wholly destroyed, and the whole spine more or less affected. The bones of the pelvis, femur, and sternum were also involved, and evidences of disease were found in the brain, lungs, pleuræ, liver, kidneys, and several lymphatic glands. ("Ueber Wirbeltuberkulose in einer bisher noch nicht beachteten form, und über den Krebs der Wirbelsäule von Dr Heinrich Bühler." 1847.)—*Medical Times.*

255.—*On the Treatment of Typhus Fever.* By M. Rostan (Hôtel Dieu). M. Rostan is a believer in the existence of a special morbific cause for typhus fever, affecting primarily the blood, and independent of any local lesion. Where such lesions exist, the fever is seldom found to correspond in intensity with the gravity of the local affection; nor are the pathological appearances of that invariable character which the doctrine of the symptomatic and inflammatory character of the fever would lead us to expect. Typhus fever occurs in three principal forms, in which the cerebral, thoracic, and abdominal complications respectively predominate. The latter is, in M. Rostan's opinion, identical with the *fièvre typhoïde* of Paris, and is characterised pathologically by the tumefaction and ulceration of the intestinal glands. The typhoid, like the typhus, attacks the same person only once, is accompanied by a state of the blood opposite to that in inflammations, and is never cut short by antiphlogistic treatment; being in this respect exactly like the whole class of exanthemata.

These remarks bear directly on the treatment, which must be directed not so as to suspend an inflammation, but so as to neutralize the effects of a morbid poison. According to the nature of these effects in the individual cases, and according to the accidental concomitants, the remedial means should vary. The gastro-intestinal form will require the moderate use of purgatives; the cerebral form, local bloodletting; the thoracic form, bronchitis, or typhoid pneumonia, may require even general blood-letting; while the presence of great prostration may contra-indicate each or all of these measures.

The treatment of typhus at the present day ought therefore to be addressed exclusively to the symptoms. If, at some future period, it should appear (as is not at all impossible) that we have a specific remedy for the typhus poison, such as we already have for the intermittent, we shall then have a basis for a treatment applicable to all cases. Such a remedy, however, has not yet been discovered; and it is therefore obvious, that nothing can be more absurd and pernicious than a routine treatment. Indeed, it may fairly be asserted, that if an unvarying treatment, say the antiphlogistic, be found to save two-thirds of the cases, there will be found in the remaining third some who have fallen victims, not to the disease, but to the treatment; as, for example, highly adynamic cases, which would have been saved by a tonic regimen, but had no chance of recovery according to the method pursued.

Some authors have denied the efficacy of remedies in typhus fever; alleging, on the ground of hospital statistics, that the proportion of deaths is always the same, whatever be the treatment employed. But such reasonings apply only to the results of routine practice in large series of cases; and are therefore, in M. Rostan's opinion, entirely inapplicable to the general question of the treatment of this disease. The administration of remedies can, in truth, only be safely neglected when the symptoms are so slight as not to demand inter-

ference.—*Gazette des Hôpitaux*, No. 61, 1848.

256.—*Cynanche Pharyngea from Disease of the Mucous Follicles.* Clinical Lecture by M. CHOMEL.—This disease, of which Chomel has observed twenty-two cases, although it is by no means of rare occurrence, has hitherto been overlooked. It consists of hypertrophy of the mucous follicles of the pharynx, soft palate, and uvula. It has been seen much more frequently in males than in females, chiefly at the age of from five to seventeen years. It often occurs along with a peculiar form of the upper jaw, in which the palatine arch is elevated, the cavity of the nose rendered smaller than natural, and nasal respiration to a great extent prevented. The upper lip in such persons is short, and the mouth is habitually kept open. Hence they are peculiarly liable to this disease from the perpetual tendency to dryness of the pharynx. Certain professions, as that of public singers, act as occasional causes of this disease. The first symptom complained of is a sense of uneasiness in the back part of the throat, with constant effort to get rid of the mucus which collects in that quarter. The patient has also a constant craving for water, which produces temporary relief. There is guttural cough and expectoration of small pellets of tough mucus, sometimes streaked with black. The voice of singers is contracted in range and impaired in quality, and patients in general have great difficulty in speaking aloud for any length of time. These circumstances are apt to induce a suspicion of phthisis. On examination of the throat, the arch of the palate is seen to be covered by small red points, which are more thickly disseminated on and near the uvula. These become more numerous and larger as the disease advances, till at length they run into each other, forming ridges and raised patches, between which only a small part of the mucous membrane retains its natural appearance. The affection is essentially chronic in its progress; it does not endanger life, and sometimes disappears without treatment. It should be observed, that a hypertrophy of the mucous membrane and follicles often exists in public speakers and singers, quite independently of disease, which produces no symptoms and demands no treatment. Gargles with borax or alum are generally sufficient to cure this malady in the earlier stages; should these fail, or should the morbid changes be considerable before treatment is commenced, cautious cauterization by the solution of nitrate of silver, or of nitrate of mercury, or by nitric acid diluted with three parts of water, and applied by means of a small piece of sponge, must be had recourse to. Baths, the douche, and the use of mineral waters containing sulphur, are also useful. Loud or continued speaking or singing must be avoided. The food must be well masticated, and must consist of articles perfectly free from acridity or acidity.—*Gazette des Hôpitaux*, June 1, 1848.

V.—PRACTICE OF SURGERY.

257.—*Amputation through the Ankle Joint.*—This operation, which has been so frequently performed of late years by the recommendation of Mr Syme, is now, we believe, universally admitted into the list of regular and established operations.

It was long ago proposed by Velpeau and Lisfranc, and various ways were devised so as to leave a covering for the ends of the tibia and fibula by means of lateral anterior and posterior flaps, and several operations of this kind were performed; and, although the results of one or two were encouraging, the general ill success attending this operation led to its abandonment. It was agan attempted by M. Baudens in 1839, and in the operation proposed by this surgeon the covering for the ends of the bones was made to consist of a long flap of skin taken from the dorsum of the foot. The thinness of the integuments, however, from which the flaps were formed in all these operations, gave little promise of a well-formed stump on which the patient might rest the weight of his body, and accordingly the results of this tibio-tarsal amputation remained highly unsatisfactory.

In 1842 it occurred to Mr Syme, that the thick fleshy integuments on the sole of the heel would form an admirable covering for the ends of the bones, and that from them alone could a *pad* of sufficient thickness and firmness be got whereon to rest the weight of the body. Mr Syme's operation has been repeatedly described, and is well known. The success attending the first few cases was so perfectly satisfactory that it rapidly acquired celebrity, and long ere this it has

been performed in England, France, and Germany.

Death has scarcely ever followed the operation; and the general result has been a firm round stump, on which the patient could rest the weight of his body with as great ease as on the sound heel; and, with an artificial foot, he has been able to walk stoutly and without difficulty.

Two objections, however, remain to the operation; the difficulty in its performance, and the occasional occurrence of destruction of the flap by mortification. To obviate these various suggestions have been made, and flaps have been made from all the different parts in the neighbourhood of the articulation; but none are found to present the firm rounded cushion beneath, which is formed by Mr Syme's flap taken from the sole of the heel.

We subjoin the following account of a plan which, we observe, has been lately proposed and executed by M. Sédillot of Strasburg. The case was one of malignant disease of the foot.

"The first incision was made in a semicircular direction, about three finger-breadths in front of the malleoli; a second was continued from the outer angle of this, beneath the external malleolus beyond the tendo-Achillis, which was divided. The joint was now entered from the outer side and behind, and, when the disarticulation was accomplished, a flap was formed from the skin on the inner and under side of the heel, by cutting from within outwards. The malleoli were next removed with the saw."—*Gazette Méd. de Strasbourg*, Mars 20, 1848.

This somewhat resembles a plan which has been adopted in one or two cases in Edinburgh (a notice of which has not yet appeared), where the greater part of the thick integuments of the heel are preserved in a long and broad flap, taken from the inner side of the foot. Were it not for the objections, already stated, against Mr Syme's operation, nothing would remain to be desired on the subject. The difficulty of dissecting back the flap, however, is considerable, and requires to be repeatedly practised before it can be performed with any degree of facility.

The sloughing of the flap, too, has now repeatedly occurred, and has been proved not to depend solely on the division of the posterior tibial artery before its division, as gangrene has supervened in cases where the plantar vessels have bled freely at the extremity of the flap. The force required in pushing the divided integuments round the promontory of the heel, submits the base of the flap to such stretching, that we cannot help suspecting that the injury done to the vessels by the violence which is necessarily used, may be the cause of mortification occasionally taking place; and this opinion has been strengthened by observing that gangrene has generally occurred in elderly persons, where the vessels do not submit to much injury with impunity. As yet, however, Mr Syme's operation is decidedly superior to any other which has been described; and except in the case of patients advanced in years, or in those in whom there is a suspicion of arterial disease, it may be undertaken with the confident prospect of a most satisfactory result.

258.—*Operation of Enterotomy.* B. M. A. Didot.—The following is another successful example of the employment of M. Amussat's operation, the establishment of an artificial anus in the lumbar region for the relief of obstructed bowel.

A man of sixty-five years of age had suffered from great irregularity of the bowels for about four years, extreme constipation, varying with severe attacks of diarrhœa. For above a year these symptoms had been accompanied with a dull pain in the hypogastric region, which had latterly become more severe, and of a lancinating character, and no evacuations could be obtained but by the use of strong purgatives and enemata, and even by these means the quantity of feculent matter evacuated was very small. His sufferings at last became extreme; the abdomen was enormously distended; and, worn out by constitutional irritation and suffering, he was most anxious for relief by any means.

On introducing the finger as far as possible into the rectum, the obstruction was found to be caused by a hard tumour, of the size of a large billiard ball, situated about the lower extremity of the sigmoid flexure of the colon. As the perforation of the intestine above this point was the only chance of giving vent to the accumulated fæces, by which the colon was enormously distended, this operation was immediately recommended to the patient, and was performed in the following manner:—

The patient being placed on his belly, an incision, three inches in length, was made transversely in the left lumbar region, half-way between the crest of the ileum and the false ribs. After dividing the muscular layers and the fascia transversalis to an equal extent with the first incision, the back part of the colon, where

it is not covered by peritoneum, was exposed.

Two needles were then made to transfix the intestine, each armed with a ligature, by means of which the intestine was gently drawn forwards towards the mouth of the wound, and a crucial incision, about an inch in length each way, made through the coats the in space between the ligatures. An enormous evacuation of fæces followed the first perforation of the intestine (*"un veritable déluge stercoral se fit jour par laplaie"*), and the cut edges of the bowel were drawn out by the ligatures through the wound, during the evacuation of the pent-up contents of the colon. The edges of the intestine were then attached to the skin by five points of suture. A poultice was applied over the opening, and complete and immediate relief was obtained by the patient from his protracted sufferings.

The fæces continued to be evauuated freely by the artificial opening, and eighteen days after the operation a small quantity was evacuated by the natural exit. Some days afterwards blood and purulent matter were evacuated by the anus, and on examination, with the finger in the rectum, the tumour was found to be ulcerated in several points. Two months after the operation the patient is stated to have improved so much in health as to be able to move about with comfort, and to have gained flesh.

No further mention, however, is made of the state of the artificial anus or of the progress of the disease. The case, however, is important, as showing the relief and prolongation of life which may be obtained from the performance of this operation. M. Amussat is said to have adopted this proceeding in eleven cases, in all of which similar good results to these here mentioned have been obtained. —*Bulletin de l'Acad. Roy. de Bélgique*, Tom. vi. No. 1.

259.—*Nitrate of Silver Ointment in Erysipelas.*—M. JOBERT states that he has obtained better results from the application of nitrate of silver with axunge, than from any other application in the treatment of erysipelas. Numerous cases are mentioned of the severer form of erysipelas having been treated in this manner in the Hôpital St Louis, where the disease is very prevalent, and with invariable success. Four degrees of strength are employed, varying from two drachms of nitrate of silver to an ounce of axunge, to equal parts of the ointment and caustic. The ointment is applied twice a-day, and after each application a thin layer of the ointment is left on the affected surface, taking care that the en tire inflamed surface and a short way beyond it are covered with it.—*Gazette des Hôpitaux*, May 11, 1848.

260.—*Rectal Operation of Lithotomy.* By M. MAISONNEUVE.—The operation proposed by M. M., and which he has lately performed successfully, differs from the recto-vesical method practised by Sanson and some others, in the sphincter ani and lower extremity of the rectum not being divided. The forefinger of the left hand is introduced into the anus, and a knife, sharp only near the point, is guided along it to the groove in the staff, and at once made to perforate the coats of the rectum and the membranous portion of the urethra. A *lithotome* is then substituted for the first knife, and its point made to rest in the groove. The operator then takes the handle of the staff in his left hand, and, depressing it, the *lithotome* held in the right hand is made to enter the bladder, dividing the prostate. The staff is then given to an assistant, and the forefinger of the left hand is introduced, to dilate the incision in the neck of the bladder. The staff is now withdrawn, the forceps introduced, and the stone extracted through the anus. This operation has been performed in one case by M. Maisonneuve with the best results. The greater part of the urine was passed by the urethra on the second and third days. On the fourth day the patient was out of doors smoking his pipe, and, on the ninth day after the operation, he walked several miles, and presented himself for inspection at the Académie de Médécine. He returned home seventeen days after the operation quite well, and passing his urine entirely by the urethra.—*L'Union Médicale*, May 25, 1848.

261.—*Observations on the Pathology and Treatment of Gonorrhœal Discharges in the Female.* By Dr EGAN.—After briefly reviewing the labours of those whose investigations into the nature of this disease were carried on in continental hospitals, the author proceeds to furnish a statistical summary of the particulars of 112 cases which came under his immediate care in the Lock-hospital of Dublin. The facts recorded have been ascertained chiefly from careful examination with the speculum, a means of diagnosis, the employment of which on an extensive scale, insufficient opportunity, and the voice of prejudice in this country, had previously

restrained. This disease is not confined to the vagina, as is generally supposed, but extends itself to the uterus, always involving the neck of that organ, and very frequently penetrating the uterus itself, and thus by a vitiated secretion of muco-purulent matter from the cervix uteri, or from the internal lining membrane of the uterus, the disease may be kept up for an indefinite period, while the vagina itself may be perfectly healthy. In fourteen of the cases detailed no disease of the vulva or nymphæ was apparent, the disease being dependent on the state of the uterus.

In ninety-eight of the 112 cases the vagina presented a more or less inflamed appearance. In thirty-eight cases granular erosions were apparent on the cervix uteri, with attendant induration in six. In fifty-seven the os and cervix exhibited an erythematous condition, generally accompanied with engorgement and slight induration. In six there was hypertrophy of the anterior lip of the os uteri. In six there was enlargement of the posterior lip, while in thirteen both lips were equally affected. In ninety-seven cases the uterus participated in the disease, which was evinced by a muco-purulent discharge from the os uteri.

The duration of disease previous to examination, was as follows ; In twenty-six it varied from one to eleven weeks ; in sixty-one from one to eighteen months; and in twenty-one from one to eight years. The greatest number occurring at two weeks, one and two months, and one year.

The symptoms presented on the invasion of the disease were generally of an inflammatory nature, as swelling of one or both labia, difficulty and pain in micturition, with a sensation of heat and weight in the lower part of the pelvis ; these generally subsided in a few days by rest in the recumbent position, with spare diet, the copious use of demulcent drinks, and the occasional aid of fomentations. General blood-letting was seldom resorted to, and local never, owing to the disposition which leech bites under these circumstances manifest to degenerate into foul and unmanageable sores. Nauseating doses of tartar emetic in this stage of the disease were useful. Balsams and cubebs, which are found so efficacious in the treatment of this affection in the male, prove almost inert in the female. For this reason, in the latter, local applications are especially called for; of these, solutions of chloride of lime, and injections of alum, are useful in cleansing the parts, besides exercising an astringent action on the vagina, which is usually in a relaxed condition. In more advanced stages of the disease, strong solutions of nitrate of silver will act beneficially. The most successful plan of treatment is that proposed by M. Ricord—the application of the solid nitrate of silver to the sides of the vagina and neck of uterus; the immediate effect is to increase the discharge, but soon to diminish or totally arrest it. When this fails, the acid nitrate of mercury may be employed. The separation of the walls of the vagina by plugs of lint will assist the cure; and, in protracted cases, counter-irritation to the sacrum and the actual cautery may be had recourse to. As substitutes for injections into the vagina (a method of treatment which, in consequence of the frequent participation of the uterus in gonorrhœa, the author was deterred from resorting to), a finely pointed pencil of nitrate of silver was introduced through the os, and allowed to remain in contact with the lining membrane of the uterus for some time. Preparations of steel, especially the compound iron mixture (D.P.), conjointly with the local application, are very efficacious in restoring the uterus to its healthy condition.—*Dublin Quarterly Journal of Medical Science*, May 1848.

262.—*Ulcers of the Cornea; New Method of Treatment.*—Of a considerable number of cases of ulcerative corneitis which fell under the notice of M. Dufresse-Chassaigne in 1846 and 1847, several were found not only incurable by the means ordinarily recommended, but even to be much aggravated by their employment ; and such serious consequences sometimes resulted in this way, as to compel the entire discontinuance of all active local treatment. In particular, M. Dufresse-Chassaigne remarked, that in two cases the cauterization by nitrate of silver was followed by severe attacks of supra-orbital neuralgia, which only yielded to the persevering use of tonics. In most of these instances of intractable ulceration, a number of radiating vessels, disposed in the form of a cone, were visible to the naked eye at the inner canthus, extending under the conjunctiva or in its substance, from the caruncula to the ulcer, which was generally situated within and in the lower part of the pupil. The apex of this cone of vessels was directed towards the cornea. M. Dufresse-Chassaigne was at length led to conceive the idea of attempting a cure, by cutting off the communication between these engorged vessels and the ulcer; and this he effected in two cases which he has recorded, by

excising a portion of the vascular cone, along with the part of the conjunctiva in which it was imbedded. A mere transverse incision of the vessels was found ineffectual, from the rapidity with which a communication between their severed extremities was reestablished. The bleeding which followed this operation was copious, but was readily checked by cold water dressing, and compresses; the advantages resulting from it were in both cases complete and satisfactory. The operation should not be performed under a very strong light, from its effect in producing efforts towards the closure of the eyelids. The patient must be directed to turn the eyeball as much as possible outwards, and the vascular cone being seized by means of the vulsellum, at a point from one to two lines distant from the edge of the cornea, a portion of the vessels is to be excised by fine sharp scissors, so as effectually to interrupt continuity. The after treatment consists simply in the application of compresses soaked in cold water, and renewed eight or ten times a-day.—*Union Médicale*, for June 8, 1848.

263.—*New Method of Treatment in Fissure of the Anus.* By M. MAISONNEUVE.—The author, believing this affection to depend on spasm of the sphincter ani, has adopted the following operation (first proposed by M. Recamier), in order to destroy the spasm by forcible distension. Introducing two fingers into the rectum, the anus is stretched by drawing the fingers in opposite directions, and the operator is thus enabled to introduce his whole hand into the rectum; he then closes his hand, and draws his fist through the anus. Among a great number of cases the author has not witnessed any bad effects, or a single relapse.—*Gazette des Hôpitaux*, October 2, 1847.

[For the complete destruction of the tendency to spasm, the hand must be retained in the rectum for a considerable time; in such cases permanent relaxation of the sphincter is a bad effect to be apprehended from the operation.]

264.—*Injection of Iodine for the Cure of Fistula in Ano.* By Dr VAN CAMP.—Equal parts of tincture of iodine and water were thrown into the fistulous cavity twice a-day for five days. The first injections caused great pain, and when the inflammation excited by them was deemed sufficient, they were suspended for three days; after that they were recommenced, and on the sixteenth day the cure was complete.—*Journ. de Méd. Prat.*

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

265.—*On Polypus of the Uterus.* By Dr LOCOCK.—In a paper read before the Royal Medical and Chirurgical Society, Dr Locock points out the danger of flooding attendant upon small polypi, and the difficulty of removing them when attached high up within the cervix uteri. He has met with five cases of this description, all having this peculiarity, that the small polypus could not be detected except during the attacks of hemorrhage, at which times the os uteri was found open and flaccid. He succeeded in three of the cases in removing the polypi, with extreme difficulty and after many failures. One of the operations he describes as "picking off or digging through the polypus with his finger nail," and, "he often felt, that if he had a finger nail long enough, strong enough, and sharp enough, he might scoop away the polypus." He therefore had invented a nail-like scoop enclosed in a canula, from which it could be protruded to any length. "The instrument is passed through the os uteri, its cutting edge is pressed against the base of the polypus, and it is then worked gently half round and back again once or twice, till it has cut through the object." In answer to a question from Dr Babington, inquiring how he prevented the uterus being wounded, Dr Locock stated, that he did not apprehend any ill consequences from wounding the uterus; for there was no organ of the body in its healthy state which could be wounded with more impunity than the womb.—*Lancet*, May 6, 1848.

[We cannot avoid calling attention to the comparatively inefficient nature of the practice recommended by Dr Locock. And we shall merely notice, in addition, the plan pursued in Edinburgh in similar cases, by quoting from the report of a communication by Dr Simpson to the Medico-Chirurgical Society of Edinburgh (*Monthly Journal*, 1844, p. 734), on mechanical dilatation of the cavity of the os and cervix of the uterus, as a means of diagnosis and treatment in some affections of that organ. "Professor Simpson first showed the difficulty which exists in ascertaining some of the morbid

conditions of the lining membrane of the cervix and cavity, in consequence of the small size of the normal opening into the organ. He pointed out that this opening may, by the use of a succession of *sponge tents*, be enlarged to such a degree as to overcome, in a great measure, this difficulty. The kind of sponge tent which Dr S. has used, is made in the manner of that described in most old works of general surgery. The pieces are pyramidal, of various sizes, and have a perforation in their base, to allow of their being temporarily fixed upon a curved wire or bougie, for their ready introduction into the os uteri. The bougie is withdrawn as soon as the sponge is lodged, and, in a few hours, the latter expands immensely in size. Previous to its introduction, a string is attached to the tent, to allow of its easy withdrawal. Under the expanding power of the tent, the cavity of the os and cervix uteri may be dilated, and without any suffering to the patient, to such an extent as to allow the finger to pass a sufficient distance for the purpose of ascertaining various points of diagnosis which could not otherwise be arrived at. Dr Simpson stated, that he had employed the same means to facilitate some kinds of remedial and operative interference in this part of the body, such as the removal of those small vesicular polypi that are so frequently clustered upon the interior of the cervix."]

266.—*Lymphatic Tumour of the Female Breast.* By Dr Coley.—This form of tumour is painful and tender to the touch, and feels as if composed of a series of hard cords lying parallel, or more or less frequently anastomosing, with one another. Its size varies from that of an almond to that of a pullet's egg. In addition, the neighbouring glands of the axilla are often swollen and inflamed. Under tonic and other treatment the tumour generally disappears entirely, but sometimes a permanent thickening and feeling of hardness remains in the part. The disease may return several times in the same patient, especially if her general health continue in a bad state. "This condition (says Dr Coley) is that of comparative emaciation, accompanied with irregular or deficient menstruation, depression of spirits, and general debility. Hence suckling and chlorotic women are most frequently the subjects of the attack."

One of these tumours was found, on dissection, to consist of the thickened coats of the lymphatics imbedded in a stratum of condensed cellular membrane. —*Lancet*, May 27, 1848.

267.—*Abscess of the Vulva.* By M. Velpeau.—Three cases of abscess of the vulva presented themselves at the same time, at the clinique of M. Velpeau, in young females of nineteen, twenty, and twenty-three years of age respectively. These abscesses are generally caused by excess of coition. If they are left to nature, they increase to a large size; their walls become very thin, and either an opening too small to permit the free escape of the matter is formed, or else a gangrene takes place of the thinned wall, which leaves too large an opening, and which does not heal up for some months. Hence the necessity of opening the abscess opportunely. M. Velpeau thinks the incision should be made on the outside of the labium.

In general, the cure is completed in five or six days. But, if the patient begins walking too soon, or otherwise irritates the recently diseased parts, the abscess is very apt to be again produced.

M. Velpeau says, that, within the last thirty years, he has seen at least a hundred and fifty cases of this description. Contrary to the opinions of Vidal and Huguier, he thinks that neither the vulvo-vaginal gland nor the follicles are the seat or cause of the suppuration, and consequently does not think that the extirpation of these parts would have any tendency to prevent a return of the abscess.—*Journal de Méd. et de Chir.*, Tom. XIX., Mai 1848.

268.—*Retroversion of the Unimpregnated Uterus.* By Professor Simpson. —In the paper before us, Dr Simpson himself has at last published, at some length, his views in regard to one of the most important affections of the unimpregnated uterus. His opinions in regard to the frequency of the disease, and his plans of diagnosis and treatment, have long been extensively known in the profession, and have received ample confirmation by the recent and valued researches of Dr Rigby, (*Medical Times*, 1846, p. 292, &c.) Dr Protheroe Smith, (*British Record of Obstetric Medicine*, 1848, p. 35, &c.) Dr Hensley, (*Provincial Medical and Surgical Journal*, January 1848,) &c. &c.

These important and original investigations were among the first fruits of the discovery of the uterine bougie. They were originally laid before the Medico-Chirurgical Society of Edinburgh, in 1843—(See our *Journal* for 1843, p. 660,) in a paper read by Dr Simpson on the uses and advantages of the uterine bougie. In the present imperfect notice, we shall

merely discuss the following three points, viz :—First, The frequency ; second, The diagnosis ; third, The treatment of retroversion of the unimpregnated uterus ; and it is merely necessary to premise that, under the term Retroversion, Dr Simpson includes displacement backwards of the entire organ, not necessarily changed in form, (*retroversion* properly so called); as well as that state frequently designated *retroflexion*, implying the displacement backwards of the fundus only, or along with it, of more or less of the body of the uterus, the lower part of the cervix retaining in some degree its natural situation.[1]

1. *Frequency of Retroversion.*—A very extensive experience in the diseases of females has sufficed to convince Dr Simpson, that the opinions regarding the supposed rarity of this affection, maintained by Ashwell, Burns, Churchill, and other English writers on female diseases, are entirely wrong. It is now shown to be one of the most common and frequent displacements of the womb ; and nothing more is required to convince any candid inquirer of the truth of this statement, than to investigate the subject with the aid of the uterine bougie, the only certain means of diagnosis in such cases.

2. *Diagnosis of Retroversion.*—In determining the presence or absence of this affection, very little confidence can be placed in the *functional symptoms or derangements.* Sometimes, especially when the pelvis is large and the displacement chronic, these sympathetic signs are entirely absent, while, in other cases, they are extremely severe and distressing. Further, however distinctly they may be marked, they can only indicate the presence of uterine disease, without at all indicating of what nature the disease is. Hence, it is necessary in this as in other uterine affections, to resort to the *physical examination* of the uterus, in order to determine its actual morbid state.

On examining per vaginam, we feel a projection of a solid tumour between the cervix uteri and rectum, when the finger is applied to the superior and posterior part of the vagina.—(*a*, *b*, Plate I.) On examination per anum, the same tumour is felt through the anterior wall of the bowel. The tumour is generally moveable under the finger, and is often tender to the touch. In regard to such a tumour, if discovered, it has still to be determined whether it is really the retroverted womb, or dependent on any of those states or diseases liable to be confounded with it, as, for instance, commencing pregnancy, fibrous tumours, ovarian tumours, pelvic abscess, organic disease, &c. &c. This can be done with certainty and satisfaction only by the *uterine bougie.* —(Plate I.) This instrument can be readily and safely passed into the uterine cavity, and thus enables us easily and directly to ascertain the direction of that cavity, and hence the exact position of the body, and fundus of the organ itself. When the uterus is in its normal position, the point of the instrument passes upwards and forwards in the direction of the umbilicus, and the concavity of the instrument (or the rough side of the handle) is directed towards the symphysis pubis. But when the organ is retroverted, the point of the instrument can only be passed backwards horizontally towards the hollow of the sacrum, and with the rough side of the handle looking towards the sacrum instead of towards the pubis. In addition to the *direction* of the organ, we can ascertain also, by tactile examination, that the point of the instrument is lodged in the centre of the tumour. Further, by turning the bougie round, we can replace the uterus, and feel it through the abdominal parietes in front, and retrovert it again at will.—(See Plate I.)

3. *Treatment of Retroversion.*—"When recent," says Dr Simpson, "and occurring after some straining effort, or from congestion and inflammation of the uterus, or subsequent to delivery, mere replacement of the organ by the bougie or finger will sometimes suffice, provided, along with it, we enforce for a length of time the horizontal position, or rather lying on the side or face, prevent over-distension of the rectum and bladder, reduce any local congestive or inflammatory state that may be present, and restore the local tone of the relaxed soft structures of the pelvis by astringent vaginal injections, or the use of medicated pessaries made with ointment containing extract of oak-bark, or tannin, or iodide of lead," &c.

This simple treatment, however, rarely succeeds. And it is necessary to replace, and by means of instruments to maintain, for some time the organ in its natural position. Before resorting, however, to these means of permanent cure, it is sometimes expedient to remove or diminish any morbid action that may be in any way the cause of the displacement.

The organ, then, is to be replaced by means of the uterine bougie, and a permanent uterine pessary to be introduced

[1] We are indebted to the kindness of Professor Simpson for the two accompanying plates, which were originally published in the *Dublin Journal* along with his own paper.

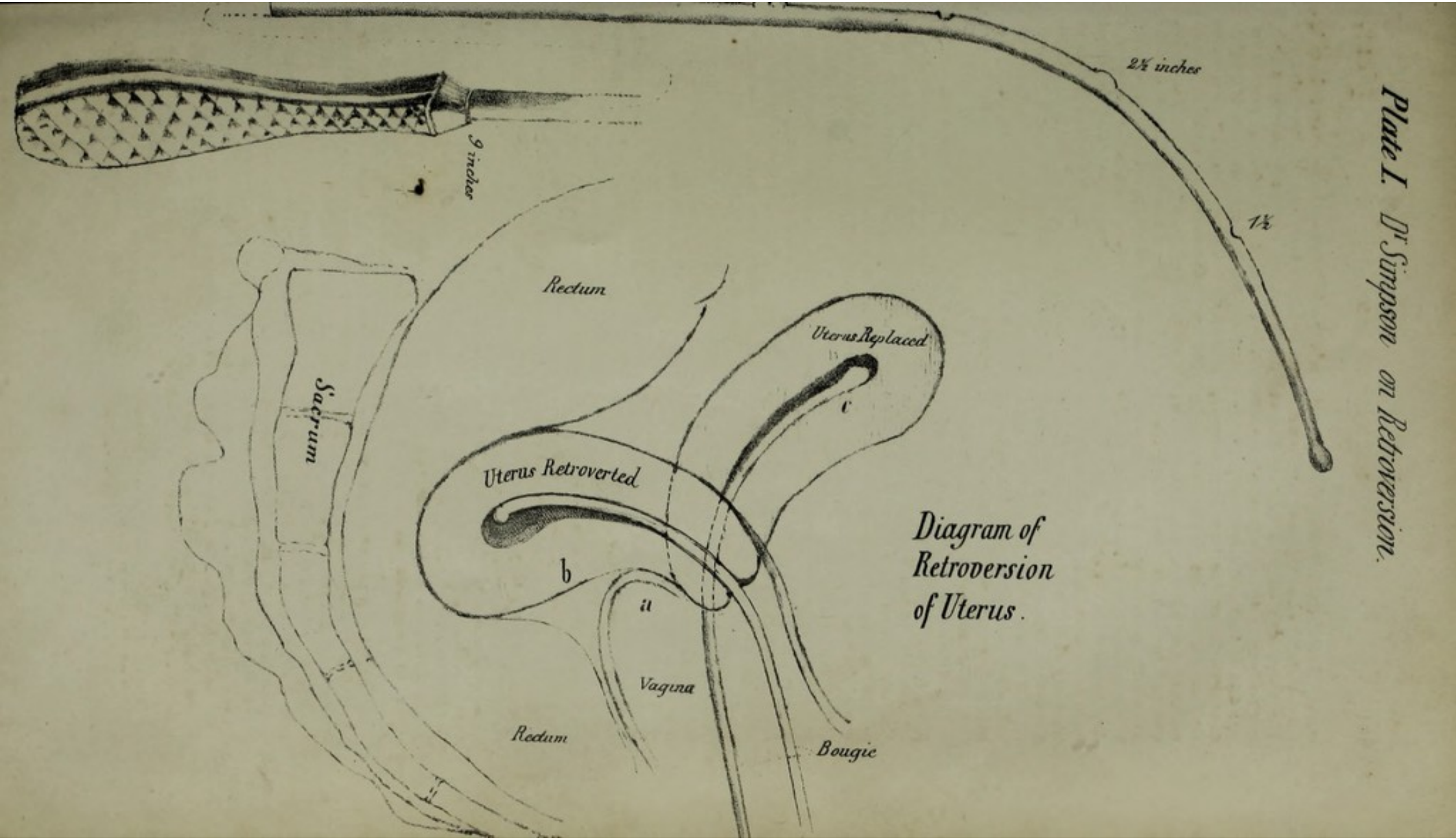
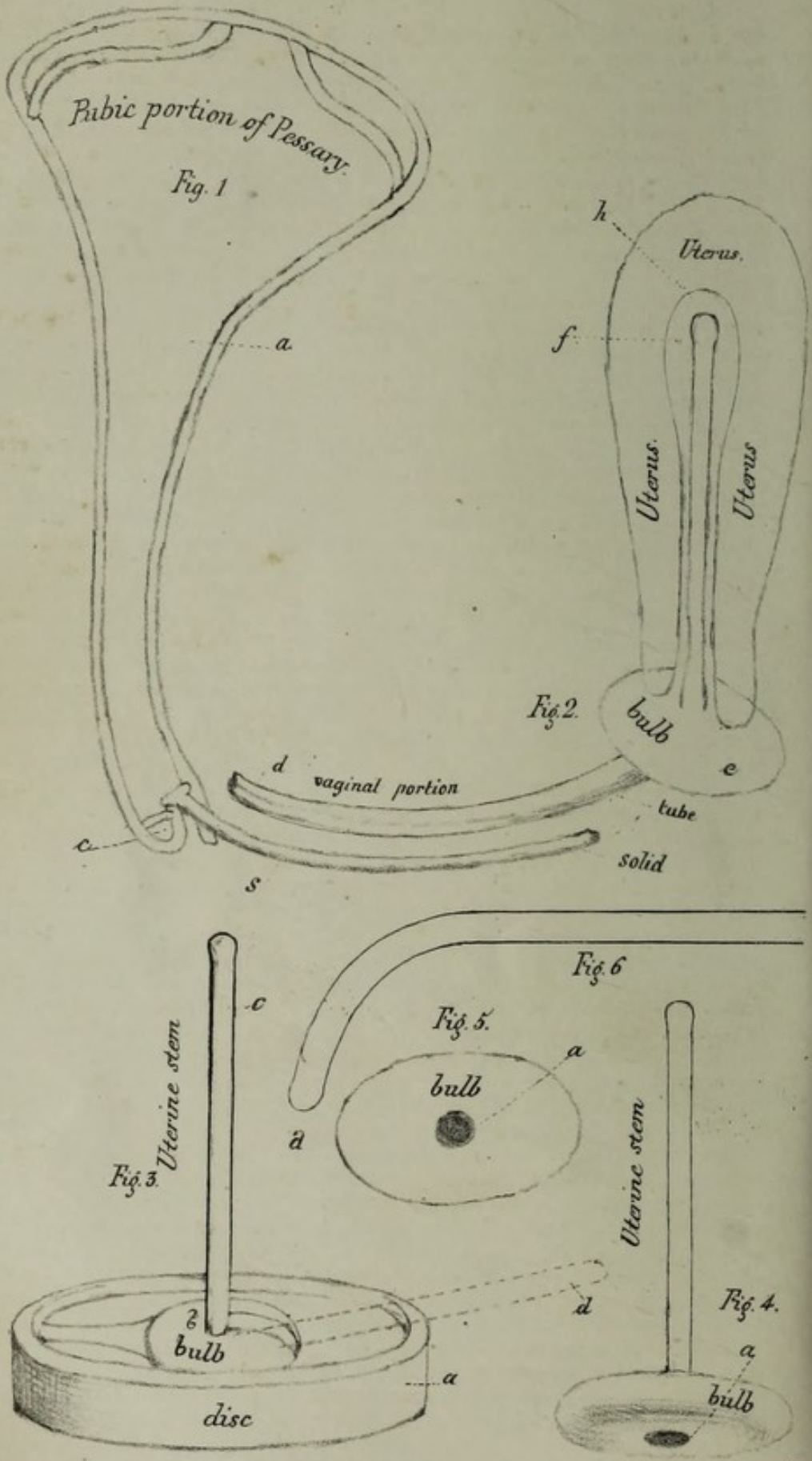


Diagram of Retroversion of Uterus.

Plate I. Dr Simpson on Retroversion.

Plate II. Pessaries for Retroversion &c.



Printed by Fr. Schenck.

Dr Simpson figures and describes three modifications of pessary to be used in different cases. They are made of German silver, and may require to be worn one or two weeks, or even many months in some cases. Their employment will cure many, but by no means all cases of retroversion; but, even when not sufficient to cure, they will generally relieve and palliate the annoyances and sufferings of the patient.

The first form of pessary (Plate II. Fig. 4) is composed of a stem two and a third inches long, to be introduced into the uterine cavity, and a bulb upon which the lips of the cervix uteri rest. On the lower surface of the bulb (Fig. 5) is an orifice, into which is introduced the end of a handle (Fig. 6) about eight inches long, and by means of which the pessary is passed. It is more useful in cases of antiversion than of retroversion; but it is imperfect, from the impossibility of retaining it above a few days, the canal of the cervix relaxing and dilating, and allowing its escape. It is often useful for dilating the cervix in cases of stricture, where the hysterotome is not employed.

The second form of pessary (Plate II. Fig. 3) has a similar uterine stem and bulb, and in addition, a large ovoid disc (*a*) 2⅝ inches in length, 1¼ inch broad, and ½ an inch in depth. The uterine stem (*c*) is moveable from the position *fc* to the position *fd*. This is necessary to facilitate the introduction of the instrument into the genital canal. On the lower surface of the instrument is a spring-catch to hold the stem fixed and upright after the instrument is introduced, and capable of being unlocked by the nail when the instrument requires to be withdrawn. The disc from its size and shape retains its place in the vagina, and keeps the uterus fixed, but when the tendency of the uterus to displacement is great, this form of pessary is sometimes inadequate to retain it in its normal situation.

The third form of uterine pessary is composed of two parts, *first*, an internal (Fig. 2) having a stem (*f*) and bulb (*e*), like the two last forms, and in addition a tubular vaginal portion (*d*); *secondly*, an external part (Fig. 1) consisting of a framework to maintain the internal portion *in situ*. This external part is about 5 inches long, expanding from ½ an inch at its lower, to 3 inches at its upper part. From its lower or vaginal extremity projects, nearly at right angles, a flat stem (*s*), fitted to slide into and fix in the corresponding open tube (*a*), attached to the bulb of the internal half of the instrument (*b*). In the plate, the uterus (*f*) is sketched, having in its cavity (*h*) the stem of the pessary. The internal half of the instrument is first introduced, and, by it, the uterus placed *in situ*. Then the external part is locked into it, and bent and moulded so as to fit to and fix upon the pubis. Nothing further is required, in general, to keep it in this position than the wearing a common napkin or understrap.—*Dublin Quarterly Journal of Medical Science*, May 1848.

269.—*Spontaneous Expulsion of an Uterine Tumour after Delivery.* By Dr Eldredge.—We have great pleasure in noticing the following remarkable case, in which a large uterine tumour, probably of the ordinary fibrous character, was enucleated and expelled without artificial interference. It is probable that, consequent on delivery, inflammation and sloughing of the uterine tissues between the tumour and the cavity of the uterus had taken place, and that the mass had been expelled by the uterine contractions, to which its own presence in such a state would give rise. It is particularly interesting and instructive as affording another instance of nature's own process for the cure of this malady.

The mother, æt. thirty-seven, had borne her last child seventeen years previously. She had, since then, enjoyed very good health; and her pregnancy presented nothing peculiar excepting an apparently very rapid and extraordinary increase of her size. The labour presented no remarkable or very serious peculiarity, except its protraction, and that force was required to bring out the head, the breech having presented. The child was dead. After complete delivery, the uterus continued so large as to excite a suspicion of the presence of twins. After about an hour, an examination was made per vaginam, and the uterus found to contain a hard unyielding tumour, of the size of an adult's head or even larger, its surface presenting the appearance of granulations, without any investing membrane, and internally its structure was fibrous and extremely hard, firmly imbedded in the muscular texture of the uterus, and attached to it over a large surface. At its margin it could be separated from these attachments by the fingers, but soon the finger reached adhesions so firm, as to be incapable of dividing them. She was at this time full as large as a woman at the full time. For two weeks, she had frequent febrile attacks. At the end of this time the tumour began to diminish slightly, and the discharges became very fetid and offensive; but her

general health steadily improved. Thirty-eight days after her confinement, the tumour was discharged without any pain. It was very fetid, and had evidently been detached for some time. The tumour weighed two pounds, and measured five inches by three, even after suffering so much from breaking down and decomposition.—*Boston Med. and Surg. Journal*, Feb. 2, 1848.

270.—*Imperforate Vagina, with apparent Spontaneous Ovulation and Formation of Graafian Vesicles.* By M. LOCATELLI.—A girl of twenty-six years of age had enjoyed good health till she was twenty, when she was attacked with severe pain in the kidneys and the lower and anterior part of the abdomen—returning periodically at monthly intervals, and disappearing after four or five days. These were considered by a medical man as arising from menstrual uterine congestion, as she had never menstruated during the six years.

The patient, gradually declining in health, submitted to an examination, when it was found that the vagina was closed for about half its extent by a membrane. There was a large tumour above the pubis, about the size of a child's head; it yielded slightly to pressure, which was felt to act on the vaginal closing membrane when the finger was applied during pressure on the abdominal swelling. The pulse was feeble and frequent—she was subject to hysteria.

The evacuation of the contained blood seeming the only remedial measure indicated, an incision was very gradually made with a bistoury held along the fore-finger, when there was an immediate discharge of between six and seven oz. of a dark clotted fluid like blood mixed with mucus. The flow was aided by pressure on the abdominal tumour, which was reduced to a third of its original bulk.

During the operation, the patient only complained of slight pain while the pressure was applied to the abdomen—but in the course of a few hours, convulsions with painful sensation, with a return of the swelling of the abdomen, at once indicated the commencement of peritoneal inflammation, which in spite of *two bloodlettings* terminated fatally in the course of two days.

On dissection at the end of forty-eight hours, there were distinct traces of peritonitis, with sero-purulent discharge, especially in the left iliac region, where there was a slight admixture of putrid blood. The uterus was of the size of a fist. The Fallopian tubes adhered strongly to the posterior surface of the ovaries, and were distended, the left about the size of a turkey's egg, while the right was not larger than a nut. The left was ruptured, from which dark blood flowed similar to what had been found in the left iliac region. The membrane closing the vagina was two lines in thickness, and the cavity of the uterus was not larger than usual.

On a more minute dissection, the expanded fimbriated tubes adhered to the surface of the ovary by loose areolar tissue, communicating with the uterus by a very slender canal. There were two tumours containing black blood, similar to that discharged by the operation. That of the left side contained four or five vesicles the size of millet seed, round, transparent, and full of a straw-coloured fluid. Judging anatomically, they appeared to be ovules detached from the ovary, which had undergone a partial development similar to what occurs before arriving at the uterus.

The ovaries had their surface very irregular from the many old cicatrices as well as more recent. There were many Graafian vesicles internally more or less developed and transparent, similar to corpora lutea. There were some other large vesicles full of blood, which were certainly Graafian, from which the ovule had been discharged a few days before, as they were found on the periphery of the ovary, and corresponded to the more recent of the external cicatrices.—*Gazette Médicale*, 1848, No. 6.

[There seems little doubt that the rupture of the Fallopian tubes excited all the peritoneal symptoms which ended fatally; without pressure, the discharge might have been slower, but the event would perhaps have been more favourable.]

271.—*Transfusion in Excessive Uterine Hemorrhage.* By Dr WALLER.—Among some cases of placenta prævia, detailed in the *Medical Times* by Dr Waller, we find three in which he resorted to transfusion, on account of the state of extreme prostration produced by the flooding consequent on the partial separation of the placenta. In spite of Dr Waller's very energetic treatment, two of the mothers sank, one of them undelivered. In the third case, the transfusion appears to have been of decided benefit.

1. This was the case of a delicate lady pregnant for the first time. She had had flooding repeatedly at intervals during a month, and it was greatly increased when labour came on. The child presented by

the feet, and was brought down by some traction. The placenta, which was adherent, required to be removed by the hand. "The blood all this time was flowing in alarming quantities. Stimuli were given internally, and cold applications used externally, by which the flow was checked. The pulse did not rally: it was imperceptible at the wrist, and could scarcely be distinguished in the carotids; the eye was set, the jaw dropped, and the breathing very laborious. Although the patient seemed *in articulo mortis*, I determined to give her the benefit of transfusion. The vein was promptly laid bare by Mr Gravenor, but now an unexpected difficulty presented itself. As soon as the puncture was made in the arm of the man who had consented to supply the blood, he became faint, and there was a slight trickling only from his vein; some brandy and water was given him without avail. Another person was procured; but by the time we were prepared to operate, all was over, the breathing had ceased." Still, two or three ounces were injected, but, of course, in vain.

2. When called to this patient, Dr W. found her *in articulo mortis*. No pulse at the wrist, or movement of the heart felt. The bleeding had ceased. She still continued breathing, and three charges of the syringe (two oz. each) were thrown into her veins, but without any perceptible effect.

3. This was a case of partial placental presentation, with very alarming hemorrhage. Her countenance was completely blanched, lips pale and livid, extremities cold, respiration laborious, pulse scarcely perceptible. Stimulants had been given without effect, and, as the symptoms of exhaustion increased, it was determined to perform transfusion. After injecting five ounces of blood, the improvement was manifest; pulse stronger, countenance of better aspect. About two hours and a half afterwards she again began to sink, and again four ounces of blood were injected, but without any improvement in the patient. A new subject was sought to furnish the blood. "The husband of the patient, being in the room, came forward to our aid; he looked rather pale, and therefore we gave him a glass of hot spirits and water, and then opened a vein, from which the blood flowed in an impetuous stream. The first injection of about two oz. produced a marked alteration on the pulse; it became decidedly perceptible. When nine oz. had been injected, the countenance was much improved; there was even a slight appearance of colour in the cheeks, and pain in the arm was complained of. Four oz. more were introduced, when all symptoms of immediate danger vanished." In a short time pains returned, and she was safely delivered. She recovered.—*Medical Times*, 1847-1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

272.—*Quinine a Prophylactic of Puerperal Fever.* By Dr Leudet of Rouen.—It was during an epidemic of puerperal fever, which occurred in the hospital of Rouen in 1843, that the author first thought of ascertaining by experiment whether quinine possessed the power of enabling the economy to resist the contagion of this disease. From the 21st September 1843 to the 8th January 1844, 83 women were delivered in the Hôtel Dieu of Rouen; in 9 of these women to whom quinine was given not one case of puerperal fever occurred, while of the remaining 74, who received no special treatment, 21 suffered from the disease. In two later epidemics, its utility was subjected to a more extensive trial. From the 8th of July to the 9th August 1845, of 26 cases of delivery, 15 were treated with quinine; one only of these was attacked, while of the remaining 11, 8 had puerperal fever. Lastly, during an epidemic which prevailed in Rouen from the 19th of March to the 21st of April 1846, there were 36 deliveries. Quinine was prescribed to 17 women, only one of whom had fever, while of the 19 who were submitted to no special treatment, 11 were attacked with the disease.

Dr L. begins the prophylactic treatment about four hours after delivery, by the administration of five grains of quinine; which dose is repeated twice during the same day at intervals of five hours. On the second day the same doses are given; but on the third day they are diminished to three grains thrice daily, and are so continued for four days more.

This method is adapted for the more common form of epidemic, where the fever does not present itself for three or four days after delivery. When it appears during parturition, or immediately after it, Dr Leudet advises that the use of quinine should begin with the first symptoms of labour.—*Thèses de Paris*, 1847, *from L'Union Méd.* April 8, 1848.

273.—*On the Presence of Arsenic in Mineral Waters.*—By MM. CHEVALLIER and GOBLEY.—The existence of arsenic in mineral waters was first detected in 1840 by M. Tripier, who found it in an African spring. More recently Walchner established the presence of both *arsenic* and *copper* in several of the ferruginous waters of Germany. The authors of the present paper have examined nearly a hundred different mineral springs to ascertain the presence or absence of arsenic. Their researches show, (1) That arsenic is not found in chalybeate springs alone, as Walchner supposed, but may be detected in other kinds both cold and thermal.

(2) That it exists only in very small quantity, which, though possibly large enough to exercise some action on the animal economy, and modify the therapeutic properties of the water, is never sufficient to occasion any deleterious effect.

Of the numerous springs in which they succeeded in obtaining traces of the metal, the following are a few of those more generally known :—Royat, Vichy, Saint-Mart, Hermonville, Mont-d'Or, Spa, Provins, Wiesbaden, Pyrmont, and Ems.

They have not been able to determine the condition in which the arsenic exists. —*L'Union Méd.* April 11, 13, 1848.

274.—*Carbonic Acid Gas as a Therapeutic Agent.* By Dr KUSTER of Cronthal, near Frankfort.—The mineral springs of Cronthal contain, in addition to soda and magnesian salts, a large proportion of free carbonic acid gas, or nearly one and a quarter cubic inches of gas for every cubic inch of water. In the treatment of disease, the gas is administered in a variety of ways. For introduction into the stomach, Dr Küster says, that it may be drawn into the mouth through a flexible tube, and then swallowed as if it were a liquid (?). Injection into the rectum forms another and a very efficient mode of using the gas internally. A large quantity of it may be thus introduced into the intestines without giving rise to irritation. Externally, the remedy is employed in the form of local and general gas baths, or a stream may be directed against a particular organ, as the eye or ear, forming a gas-douche.

The bath, after some minutes, produces a strong feeling of tingling and warmth of the surface, which is usually followed by copious perspiration. In torpid patients it is sometimes necessary to raise the temperature of the bath, by mixing a quantity of vapour with the gas. The patients remain from fifteen to thirty minutes in the bath, whith may be repeated once, twice, or even oftener, daily.

Dr Küster has used these baths very extensively in the treatment of various diseases, and has found them especially useful in rheumatism, gout, St Vitus' dance, and intermittent fever. In the last mentioned disease, their success appears to have been very decided, a complete cure having been generally obtained after the third bath.

As a local remedy, the carbonic acid gas has been used by the author chiefly in diseases of the ear and eye. It was introduced into the external meatus in cases of deafness with occasional advantage. Applied to the eye, the gas-douche occasions pain, increased vascularity of the conjunctiva, and a copious flow of tears. In rheumatic, catarrhal, and scrofulous ophthalmia, the douche alone, or combined with the general bath, has been followed with marked benefit. It is said also to be serviceable in dissipating opacities of the cornea.—*Schmidt's Jahrbücher,* p. 295, 1848.

275.—*On the Indian Hemp.* By M. COURTIVE. — The following conclusions may be drawn from M. Courtive's observations on this plant :—

(1.) The active principle of the Cannabis Indica collected at Algiers, is a resin which, in the dose of one grain, produces the same effect as half a drachm of the ordinary extract. (2.) The C. Indica collected in France furnishes a resin less active, and in less quantity than the same plant from Algiers. (3.) The C. sativa of France gives an analogous resin, but much less active. (4.) The same plant grown in France from seeds obtained in Italy, furnishes a resin of greater activity than the former. (5.) The active principle of the Cannabis resides chiefly in the leaves. (6.) The botanical characters of the C. Indica and sativa are not sufficiently distinct to form two species.—*Gazette Méd. de Paris,* May 1848.

276.—*Tartrate of Potash and Iron.*—Though long a member of the Pharmacopœia, this salt is at the present day little used. Its properties have been carefully studied by Soubeiran (*Traité de Pharmacie*), who formed a high opinion of its therapeutic value, and recommended it strongly as "probably possessing more advantages than any other ferruginous preparation." These are, its weak styptic taste, ready solubility in water, and fixity of composition in the presence

of acids and alkalies, by which are prevented those chemical changes in the intestines which render other martial compounds in part inert. It is easily borne by the stomach even in large doses, and does not constipate. In one case, where its use was continued for a long period, it is said to have changed the colour of the hair from light to dark,—a fact which supports Dumas' view, that the system frees itself of an excess of iron by the hairs. According to Mialhe, it is composed of two equivalents of tartaric acid, one of potassa, and two of the sesquioxide of iron, of which it contains thirty per cent by weight. It is best prepared by dissolving one part of bitartrate of potassa in six parts of water, and then adding as much moist hydrated peroxide of iron as the liquid will dissolve. Filter and evaporate at a low temperature; at 120° R. decomposition takes place,—carbonic acid is disengaged, and a precipitate forms of the tartrate of the protoxide.

The dose is from ten to thirty grains; but it may be given to the extent of a drachm and upwards. It may be made into pills with mucilage. The following formula is convenient for children:—Syrup 500 parts, ferrotartrate of potassa and cannella water, of each 16 parts.—*Traité de l'Art de Formuler*, p. 192, and *L'Union Médicale*, No. 2, 1848.

[An excellent chalybeate drink is formed by adding from ten to twenty grains of the tartrate to the bicarbonate of soda of an ordinary effervescing powder. The styptic taste of this preparation is very weak, although it contains more iron than most ferruginous waters.]

M. Ricord has found this salt of decided service in the treatment of phagedenic ulceration of the genital organs. He gives it in solution to the extent of from one to eight drachms daily. At the same time it is applied externally in the form of a wash to the diseased part.—*Gaz. Méd. de Paris*, 26th April.

277.—*Quinidine a New Alkaloid in Cinchona Bark.* By M. Winckler.—This alkaloid occurs in one of the new barks most resembling Huamalies, where it is accompanied by quinine, though the latter is present only in small quantity. Quinidine crystallizes from its solution in alcohol in crystals resembling amygdaline, which are somewhat hard, like sugar to the touch, and appear under the microscope to be colourless rhombic tablets It is more soluble in alcohol than cinchonine, less so than quinine, and is very sparingly soluble in water. Sulphate of quinidine can scarcely be distinguished from sulphate of quinine, and it only differs by its greater looseness from cinchonine precipitated by ammonia from a solution of its sulphate. The compound of chloride of quinidine with chloride of platinum, cannot be distinguished externally from the corresponding quinine salt. It leaves 26·4 per cent. of platinum.

When sulphate of quinidine occurs in sulphate of quinine, the solution of the mixture is precipitated by carbonate of soda, and the alkaloids dissolved in alcohol of spec. grav. 0·863. The quinidine soon crystallizes.—*Buchner's Repertorium*, Vol. xlviii. p. 385, *and Chemical Gazette*, No. 132.

278.—*On Crystallized and Amorphous Quinine and Cinchonine.* By M. Winckler.—Winckler has ascertained that cinchonine is converted into the amorphous condition by the action of an excess of sulphuric acid. And he has found that the so-called quinoidine contains both amorphous quinine and cinchonine in variable proportions, according to the duration of the action of the sulphuric acid in the preparation of these alkaloids, and the nature of the barks.

Some amorphous cinchonine was accidentally formed in the preparation of the sulphate of cinchonine, by adding a rather large quantity of concentrated sulphuric acid at once to the test mixture, and then heating it somewhat strongly. In consequence of this treatment, only one-third of the cinchonine separated in coloured crystals, and on the subsequent addition of alkalis a dark brown matter like turpentine was thrown down. The author has examined the properties of this substance, and compared them with those of the matter left behind when quinoidine is treated with ether for the preparation of the amorphous quinine, and has shown them to be perfectly identical. When heated cautiously in a tube, they both give a crystalline sublimate exactly like that obtained from crystallized cinchonine under similar circumstances; and the odour of quinoile, which is apparent on heating both amorphous and crystallized quinine, could not be observed. The author concludes from his experiments, that the amorphous quinine and cinchonine are formed by the action of acids upon the alkaloids during their preparation. He believes that quinine is not so readily converted into the amorphous condition as cinchonine, and a quinoidine containing little or no amorphous quinine, probably obtained in preparing sulphate of quinine from barks containing both alkaloids.

The author also shows that hypo-sulphite of soda throws down hypo-sulphite of quinine as a dazzling white precipitate, from the solution of the muriate of quinine ; cinchonine separates under similar circumstances in four-sided needles. As the amorphous alkaloids do not give those reactions, the author employs them as a means of distinguishing the presence of the crystallized alkaloids in quinoidine.—*Journal für Pract. Pharmacie*, Vol. XV. p. 281, *and Chemical Gazette*, No. 130.

279.—*Physiological Action of the Iodide of Potassium.* By M. M. BOYS DE LOURY and COSTILHES.—In an article on the therapeutic action of different medicines used at St Lazare, in the treatment of syphilis, these gentlemen remark that they have paid particular attention to the effects produced by this medicine, and that they occur in the following order:—

1. *Action on the Intestinal Canal.*—The first day, the dose being 0·75 gramme (10 to 12 gr.) slight pain and heaviness in the stomach : the pain is, however, not always present ; the appetite is usually increased ; it is remarkable how soon after the taking of the iodide the desire for food arises.

The following days these symptoms diminish or disappear. The second day, the dose being 1·00 gramme (upwards of 15 grs.), heaviness of the head, colic, and diarrhœa.

2. *On the Urinary Secretion.*—This is more abundant the first day, that is, the patient passes more than he drinks. This symptom is almost constant. The urine is clear and transparent—the patients urinate more by night than by day. Sometimes, however, the urine is not increased.

3. *Eruption.* The most frequent is the pustule of acne, which shows itself from the end of the first to the second day. It most frequently occurs on the face ; it does not usually last as long as the treatment, that is, it disappears in 15 or 20 days. Ecthyma more rarely, Neither papular erythema nor purpura hemorrhagica were observed ; in one case an eczema impetiginoides was seen.

4. *Pruritus* very seldom observed.

5. *Conjunctivitis.*—The conjunctiva was sometimes influenced when the iodide was given in doses of 1 to 2 grms. Both conjunctivas may become inflamed. It principally occurred during the first days of the use of the medicine, and was characterised by general vascularity and chemosis.

6. *Menstruation.*—Although this medicine is spoken of by most authors as an emmenagogue, they often remarked a decrease in the quantity of the menstrual fluid. Once the discharge re-appeared a week after the menstrual period ; but this may have been only a coincidence.

7. *Discharges* from the uterine cavity were not perceptibly increased.

8. As invariable and immediate effects, the authors never once failed to see the decrease or suspension of the pains of the bones after the first or second day of treatment. No other antisyphilitic agent possesses so prompt and constant an action.

9. *Salivation.*—This is a rare symptom in women, it was only seen once. M. Ricord observed it more frequently, perhaps, because he gave the medicine in larger doses. The saliva remained thin, the mucous membrane of the mouth uninflamed and unaltered ; the salivary glands not swollen—a true hypersecretion, without peculiar smell.

10. *Effects on the Circulation*, none.

11. *Accidents produced by the Iodide.*—The authors object to giving the iodide in such large doses as some physicians administer it. M. Biechy relates two cases in which serious accidents were produced. In the first, the patient being benefited by doses of three-fourths of a grain, gradually increased to fifteen grains, thought by doubling the dose to double the advantage received. The three first days he suffered from general uneasiness and intense headache ; the fourth day he was affected in his lower limbs, his sight disturbed, and his hearing almost gone ; on trying to walk, his legs gave way under him, and his arms had lost all power. Finally, having taken a few steps, he fell unconscious ; on coming to himself, he remained in a state of languor and weakness, which did not disappear for several days after the suspension of the medicine. In the second case, death ensued ; but it was doubtful if it could be attributed to the iodide.—*Gaz. Méd. de Paris.*

280.—*Clinical Notes taken in the Hospitals of Paris and Vienna.* By Dr ALEXANDER FLEMING. *Contra-indication of Iron in Chlorosis.*—Prof. Trousseau has frequently observed females who have passed several years while labouring under chlorosis without displaying any tendency to phthisis, and in whom the exhibition of chalybeates and removal of the chlorotic symptoms, have been followed by the immediate development of pulmonary disease, proving subsequently fatal. These observations induce him to believe that the chlorotic condition offers a certain immu-

nity from tubercular disease, and that as a rule iron ought not to be administered to chlorotic females, if formerly they have shown any suspicious tendency to chest affection, if they present cicatrices of previous tubercular disease, or if they are born of phthisical parents. He contents himself in such cases by supporting the patient's strength, and avoids the use of iron in every form.

There is no difficulty in supposing that the peculiar condition of the blood in chlorosis, may render the system less disposed to the development of tubercle; and the observations of Trousseau, having so important a practical bearing, merit the attention of the profession. At the same time, we should receive with caution any new doctrine of antagonism in disease. The prevalent views on this subject, in relation to phthisis and intermittent fever, phthisis and goitre, scrofula and rickets, &c., are not founded on correct observation.

On the Abuse of Alkaline Remedies. By Professor Trousseau.—Alkalis exercise a powerful influence on the economy. Their continued administration renders the blood more alkaline, and induces important chemical changes in the secretions. Those which are naturally alkaline become more so, and those which are acid become less so, neuter, or even alkaline. The presence of free acids in the stomach being essential to the digestion of certain elements, their neutralization will necessarily interfere seriously with this important function. A due proportion of alkalis in the blood endows it with the property of burning to a certain extent the carbonaceous elements, as sugar, starch, alcohol, absorbed in the process of digestion. An imperfect combustion gives rise, it is true, to morbid symptoms; but a too great or too rapid combustion, on the other hand, is no less fraught with evil, and occasions important changes in the composition of the blood, and consequently in the texture of the organs. When alkalis are taken in large quantity, and during a long period, the blood becomes more fluid, and the patient gradually sinks into a cachetic condition, characterised by paleness, debility, general tumefaction of the tissues, passive hemorrhages, and finally emaciation. Among the frequenters of the mineral waters of Ems, Vichy, and Carlsbad, Trousseau has seen several melancholy illustrations of the above remarks; and in his lectures, he details the case of one of the most distinguished chemists of France who nearly fell a victim to the cachexia thus induced. It is the more necessary to point out this danger, as, from its insidious character, suspicion may not be excited until severe injury to the patient's health has been sustained. Physicians prescribe a two or three months' course of alkaline waters with perfect indifference. It should be kept in remembrance, that, like many other valuable drugs, they are powerful for evil as well as for good.

Nitrate of Silver in the Diarrhœa of Children. By Professor Trousseau.—The following practice, which I have seen adopted with marked success in the Hôpital Necker, Paris, is only had recourse to in obstinate cases, and where ordinary remedies have failed. If mucosanguineous secretion and tenesmus are present, indicating an inflammatory condition of the mucous membrane of the colon, an injection composed of from one to two grains of nitrate of silver, and eight ounces of water, is prescribed night and morning. When this clyster has been expelled, another is given consisting of tepid water, to which one drop of laudanum has been added.

But when the diarrhoea is accompanied by nausea and vomiting, and the dejections are serous and of a green colour, indicating the small intestines as the seat of the disease, the nitrate is given by the mouth.

℞ Nitrat. Argenti . . .	gr. ½
Aq. Distill.	ʒvi.
Syrup Simp.	ʒiv.

Of this mixture, from two to eight teaspoonfuls may be prescribed according to the effect produced. Professor Trousseau has seen no bad results from the internal administration of the nitrate in children; on the contrary, it has proved a valuable remedy in many troublesome cases.—(*To be continued.*)

VII.—FORENSIC MEDICINE AND TOXICOLOGY.

281.—*On the Determination of the Nature of certain Spots found on a Blouse.* By Isnard and Dieu.—The blouse given for examination to Messrs Isnard and Dieu, presented behind, over the middle and lower part, exactly at the part corresponding

to the hips in the sitting posture, a spot about two inches long and an inch and a half broad, and a second about half an inch in the perpendicular direction, and three quarters of an inch across. These two principal spots were surrounded and united by a considerable number of spots of the same description. Over the middle of the left sleeve, corresponding to the elbow, there was a similar spot. These spots gave to the stuff a density and stiffness not discoverable elsewhere; their colour was a dirty brown red—and there was an appearance as if a part of the colouring matter had been removed by water. These spots were treated as for blood-stains, yet in some respects failed to afford the usual indications—thus in repeated trials, the liquid obtained by maceration remained green after the separation of the coagulum as seen by reflected light, and rose-coloured as seen by transmitted light, which colours should not have arisen without the addition of potassa—and though ammonia did not change the liquid obtained by maceration, yet it was not precipitated by chlorine as should have happened, since it was considerably charged with colouring matter—lastly, the effect of maceration on the spot was not to leave a thin grey layer of fibrine, as should have been the case in the event of a blood-stain. They then had recourse to the microscope, but without effect. By further experiments, however, the animal nature of the spots was sufficiently determined. And what else but blood spots could be containing albumen and red colouring matter, undergoing no change of colour under the action of ammonia (as would have happened in the case of vegetable colouring matter), and showing no signs of being of a fatty nature? Though then it seemed impossible that these spots could be any thing else but blood; yet as there was an absence of some of the acknowledged indications, the medical men gave it as their opinion that there was a strong presumption in favour of the spots being blood, but that it was not a matter of absolute certainty.—*Gazette Médicale de Paris, Mars* 11, 1848.

282.—*Poisoning with Mace.* By Dr WATSON of Liverpool.—The person affected was at a sale where there were samples of mace, and ate, in the course of an hour and a half, as much as, when broken small, could be lifted on a teaspoon. Immediately after he felt pain on the crown of the head, over a space about the size of a penny piece, along with slight nausea, as if, the patient said, he had been smoking inordinately. These symptoms continued without increase for two and a half hours, when the patient dined. He rose from dinner, and looked out at the window to dissipate, if possible, this uneasy feeling, when, all at once, he felt the blood rush to his head, creating a sensation as if an electric current had passed from the crown of the head downwards. He made an effort to get down-stairs and then he felt twice a sensation such as he thought a person would experience who had become nearly insensible from cold, and, if he had yielded to it, he imagined that he could have slept away out of existence without pain. He then shivered, and, laying himself on a sofa near a fire, he suffered, by turns, the extremes of cold and heat. There was precordial anxiety, which induced the surgeon first called in to administer hot brandy and water; but finding this of no use, he exhibited an emetic of sulphate of zinc and ipecacuanha, which brought away some trifling portions of masticated mace. When Dr Watson now first saw him, the feet were cold, and required warmth, the head throbbed, the eyes looked injected, the countenance had a singular expression, whilst the words he employed seemed selected for their merit of being the opposite to what should have been used. Camphor mixture, and compound spirits of ammonia, with chloric ether and purgatives, were used. The forehead was kept cool by a spirit lotion. It was some days before the intellectual disturbance entirely disappeared.—*London Medical Gazette,* 11th February 1848, and *Provincial Medical and Surgical Journal,* 26th January 1848.

283.—*Attempt on the Chastity of a Young Girl—Death from a different cause.* By PROFESSOR TOURDES of Strasburg.—A girl of eight years of age died some weeks after an attempt on her chastity by a man aged forty. As the man had already confessed this and several other such attempts on girls from eight to ten years of age, the belief became prevalent that her death was owing to this cause. On investigation, however, it was discovered that the girl had died of measles of a typhoid form accompanied with pneumonia. On inspection after death the body was found emaciated; there was no trace of old or recent violence; the hymen was of a semilunar form and uninjured; the two lungs infiltrated with grey and yellow tubercles, and the seat of a red lobular hepatization; the bronchial tubes had a brown tint, and contained much muco-

purulent matter; the heart contained a little dissolved blood; the mouth was dry and brown; the mucous membrane of the stomach was of a vivid red; and follicular patches, round and elliptical, occupied the lowest portion of the small intestines.

The evidence that an attempt had been made was in so far conclusive, as the fact being admitted both by the child and the accused; but the narrowness of the parts had rendered penetration impracticable, and no serious violence had been done. It was not, then, a case of rape or attempted rape, but an attempt on the chastity at a tender age without any violence.—*Gazette Médicale de Strasbourgh*, Mars 20, 1848.

284.—*Viability.*—The question as to the age of viability in an infant was raised on the occasion of the birth of a female infant, born, according to the mother's calculation, in the sixth month, which lived a day. It was nearly fourteen inches long, (35 centimetres); its weight was about two pounds, (755 grammes); the umbilicus was more than half an inch (1·5 centimetres) below the middle point of the body; the circumference of the head was 8·746 inches (22 centimetres); the fontanelles were very small; the lungs weighed little more than six drachms; the respiration had been complete; there was meconiun in the ileum and great intestine. There was no morbid appearance to explain the cause of death. The infant had received every due attention, and every thing showed that the defect of maturity was the sole cause of the failure of life. This, then, was a case of the birth of a living but not viable infant in the sixth month.—*Ibid.*

285.—*Paternity.*—The paternity of a child was charged on a man who had had intercourse with the mother on one occasion, only 190 days before the birth. The examination of the infant three days after its birth showed that it was very red, of moderate embonpoint, lively, crying with force, drinking greedily; the eyes quite open; its weight between seven and eight pounds (3375 grammes); its height nearly nineteen inches (48 centimetres); the umbilicus more than half an inch below the middle point of the body; the circumference of the head nearly fourteen inches (35 centimetres); the parietal diameter 3·733 inches (9·5 centimetres;) mento-occipital 4·909 inches, (13 centimetres); the frontal 4·616 inches (12 centimetres;) the testicles in the scrotum. From these characters it was concluded that the infant had reached maturity, and that it was impossible it could have been born after a gestation of only six months and seventeen days.—*Ibid.*

286.—*Infanticide.*—The body of a female infant was found in an outhouse covered with a bloody shift. The infant though small was mature; its height about eighteen inches (47·5 centimetres); its weight nearly seven pounds (2235 grammes); an osseous point existed in the cartilage of the lower end of the femur. The body was well formed and viable; the respiration had been deep and general; the lungs weighed 1¼ oz. (39 grammes). There was some froth at the bifurcation of the trachea; the velum of the palate, the epiglottis, the base of the tongue, the trachea, and the bronchi were of a vivid red; the heart contained liquid blood, with no trace of coagulation; the lungs showed a well marked congestion, as did the brain. These characters coincide with those of death by asphyxia. Can the cause, then, be discovered? There are evident traces of compression at the entrance of the respiratory passages; the lips are thin, red, dry; the right side of the neck presents the trace of strong compression, a print red and dry, produced by the ball of the shoulder, towards which the head had been directed by the constrained attitude in which the infant was found as tied in the shift. A strong pressure had plainly been made on the mouth and on the neck; but had this pressure been made during life? The marks are not decisive. A careful dissection showed no sign of erosion of the skin, or of ecchymosis in the subjacent parts. The compression may have been made during life, and the coincidence of death by asphyxia gives a great degree of probability to this conjecture; but it is the duty of the physician to arrest his conclusions at the point where facts fail him; the signs characteristic of such a lesion during life not being present, he is not entitled to affirm that compression has been the cause of death, at the same time that he does not suppress the probability of such having been the case.—*Ibid.*

287.—*Crushing of a Hemisphere of the Brain; continuance of life for twenty minutes.*—A child, three years old, was thrown down by a heavy carriage, one wheel of which passed over the head. The child breathed for twenty minutes without showing any sign of consciousness; the head was flattened laterally; there was great mobility of the bones on compression; the integrity of the cranial integuments contrasted remarkably with

the extent of the internal injury. Portions of the occipital, of the left parietal, and of the left temporal bones were depressed towards the brain; and the dura mater, torn at the place of the fracture, gave passage to a red mass squeezed out of nearly the whole extent of the left hemisphere. The right hemisphere was uninjured. There is nothing else remarkable in this case, than the continuance of life for twenty minutes after an injury of a character so vital.—*Ibid.*

288.—*Death from Wound of the Internal Mammary Artery.*—A man in a quarrel received a wound by a pointed and cutting instrument, the precise character of which was not discovered, in the internal mammary artery. He lost much blood at the time, and being brought to the Strasbourg Civil Hospital, he received the attentions due to such a case, no serious apprehensions of the result being entertained. He made no complaint next day, but in the evening, about twenty-four hours after receiving the wound, he was seized with a sudden agitation, sat down on his bed, and expired. Inspection after death showed six wounds and two insignificant contusions; of the wounds three were superficial, and three penetrating—two of the abdomen, one of the chest. This last was obviously the cause of death. The instrument had pierced the skin, the muscles, the cartilage of the fifth rib on the right side; it had cut across the internal mammary artery and a collateral vein, divided the pleura, and reached the anterior border of the right lung. The right cavity of the chest was filled with brown clots, weighing within two or three ounces of two pounds. The internal mammary artery was the only important vessel wounded; there was no other source of the hemorrhage. The two lungs, particularly the left, were gorged with blood; the bronchi were strongly inflated, and contained a red mucus; the heart was almost empty, and contained a small number of clots entangled in the cords of the auriculo-ventricular valves; the venæ cavæ contained but little blood; the brain was pale

The immediate cause of death seems to have been secondary hemorrhage, brought on by the movements of the patient at a time when he was weakened by previous hemorrhage, the effect of the wounds, and the treatment to which he had been subjected. The dark colour of the blood in the cavity of the pleura, probably arose from the mixture of fresh blood with that before poured forth. The wounds appear to have been inflicted with a poignard knife, that is, with an instrument both pointed and cutting on the edge.—*Ibid.*

289.—*Fatal Burn.*—In a quarrel between two workmen in a brewery, one was pushed into a vat full of boiling liquid; he died in forty hours, without any reaction; the surface of the body was one great burn. Signs of pulmonary congestion preceded death. There was no dissection.—*Ibid.*

290.—*Inspection after Death by the Guillotine.*—On examining the neck after the punishment of death, one of the cervical vertebræ was found cut through the middle; the wound showed an unequal retraction of the muscles, without any intermuscular ecchymosis. The heart was empty. Some red clots, and a little frothy blood, were contained in the bronchi. Circumstances prevented a further examination.—*Ibid.*—(*To be continued.*)

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

291.—*The Sanitary State of the Public Wells of Glasgow.* By ROBERT DUNDAS THOMSON, M.D.—1. *Distinction between River and Well Water.*—The purest water which occurs in a state of nature, is, as is well known, rain water, since in a great measure it resembles distilled water; but even rain water is not perfectly pure, betause it may contain traces of substances, soluble in water, which are found in the atmosphere, such as carbonic acid, nitrate of ammonia—the latter only during thunder storms; and besides, both during summer and winter, when there is less diffusion of electricity in the atmosphere, it may contain, dissolved in it, ammonia, which is now known to pervade the atmosphere in the form of carbonate. It is thus obvious that even in the purest forms of waters, as they occur in nature, there is liability to impurity. The rain descending with these substances in solution to the earth, must convey these soluble bodies to the soil. The soil becomes thus, to a certain extent, contaminated by foreign matter from the atmosphere, by the instrumentality of the purest natural water. In taking into consideration, then, the source of the dissolved matters contained in less pure forms of water, it

is necessary to keep in view this constantly operating cause of impurity. To such an extent does this cause produce an influence, that we find in all soils a certain amount of ammonia present, varying in quantity towards the surface, according as the soil is either close bottomed or loose—thus showing that when there is less obstruction to its percolating downwards, it disappears from the surface, and penetrates to the lower strata. A portion at least of this ammonia is conceived to be derived from the atmosphere, and acts as food for plants.

Supposing, then, this water, charged with mere traces of impurity, should fall upon a scanty soil, overlying a hard and difficultly decomposable rock, we should expect that this water would take up but a small amount of soluble matter, in consequence of the absence of any such substances in the soil upon which it fell. Hence it is that streams and rivers which rise among rocks of granite or slate, trap or greenstone, are exceedingly pure. It is thus we account for the superiority of the waters of the Highlands, and other elevated parts of Scotland. The waters of the Dee, for example, which are used for the supply of the city of Aberdeen, are perhaps the purest of any waters employed by an equally large community in this country.

From a knowledge also of the nature of the rocks with which waters come in contact, we can predicate the presence or absence of certain ingredients. For example, we should not expect the presence of potash in the waters derived from the neighbourhood of Glasgow, as the rocks themselves usually contain soda.

If rain water were, instead of falling upon a hard rock, to be precipitated upon a soft and easily decomposable stratum, and filter downwards, we might expect that it would gradually dissolve up a considerable quantity of soluble substances. If, again, the water were to descend upon a sandy or clay soil, having interspersed through its particles saline matter filtering in from various impure sources, it is obvious that the water would be rendered still more impure than in either of the previously supposed circumstances. This is rendered still more obvious in respect to wells, if we remember that the water found in them is originally derived from the atmosphere, and makes its way into wells by filtering through a considerable extent of soft matter, containing of course soluble imbedded substances.

2. *Amount of the Solid Impurities in some of the Glasgow Well Water.*—The following table affords a view of the amount of solid matter (salts, &c.) in the imperial gallon of various Glasgow wells at different seasons, dried at 350 F. :—

	Grains per Imperial Gallon.
Stirling Square Well, June and July 1847,	99·5
Do. February 1848,	94·6
St David's Well, June 1847,	83·3
Bridgegate Well, do.	84·4
George Street Well, do.	57·9
Union Street Well, do.	52·9
St Vincent St. (100) do.	51·57
Glassford Street, do.	40·00
Gorbals (Norfolk St.) do.	44·90
Infirmary Well, do.	25·60
Lady Well, do.	17·73
Arn's Well (Green), do.	14·9
A—February,	50·64
A—March,	43·24
B—February,	64·20
B—March,	49·04
C—February,	58·84
C—March,	66·20
D—February,	71·90
E—Do.	79·80
L—Do.	51·80

From repeated examinations of the same well, I have found very remarkable variations even within a few days.

When we compare the impurity of these waters with that of other waters employed for domestic purposes, the contrast is sufficiently striking :—

	Grains Salts per Imperial Gallon.
Clyde Water, December 1847,	8·4
Brock Burn, mean of four analyses, 1845,	6·95
Gorbals Water Company, 1848.	7·8
Paisley Water Company,	7·59

These comparisons, and the facts which have been stated in reference to the sources of the impurity of well water, are sufficient to show, that well water must always occupy a very unfavourable position when contrasted with rain or river water, in reference to the foreign matter contained in it in solution. In the preceding Tables the wells have been arranged according to the amount of impurity present in them; but they may also be classed according to their position in the city, or to their levels, those in the higher levels being less impure than such as are situated at lower elevations.

It is perhaps not difficult to account for the large amount of solid matter in St David's Well from its proximity to the churchyard, and from the circumstance, if I am not mistaken, that the graveyard at one period protruded further into the street than at present, so as nearly to include the present position of the well.

4th, Care must be taken to maintain the sanitary laws now in force, respecting glanders, boils, pustules, and rot, viz., to bury the body with the skin cut to pieces. —*Bulletin de L'Académie Royale de Belgique*, Tom. vi. No. 7.

293.—*Sale of Horse Flesh.*—Since the siege of Copenhagen in 1807, horse flesh has regularly been sold by the butchers in that capital for general consumption. The only formality required is, that a horse before it is killed, should be examined by a veterinary surgeon and marked on each hoof. There exist in the Danish capital shambles specially licensed, where nothing but horse flesh is sold. The establishment is placed under the immediate control of the veterinary college. The researches of Parent Duchatelet, have established that in Paris immense quantities of horse flesh are sold clandestinely. All the efforts of the board of health to authorize and regulate its sale have failed; but there is sufficient evidence to show that no injury to the public health has resulted from it. Baron Larrey used horse flesh with advantage to feed his wounded on various occasions, and by its use got the better of an epidemic scurvy, which attacked the army during the siege of Alexandria. The Belgian committee have eaten horse flesh several times. It must be allowed to be inferior to beef or mutton; it possesses a sweetish taste, which, however, can be easily covered by seasoning. With the addition of a little spice, the difference between horse flesh and other kinds of butcher meat is little observed.—*M. Verheyen's Report.*

294.—*Mortality among the French in Algeria. Cost of a Conquest.*—M. Boudin, surgeon in chief of the army in Africa, lately read to the National Academy of Medicine a commnnication on the acclimatizing of the French population in Algeria.

Since 1830, Algeria has absorbed more than fourteen hundred millions of francs, and has caused the death of more than a million of soldiers. Its budget at present exceeds 120 millions of francs. Its army, with an effective strength of 100,000 men, sustains from the climate alone an annual mortality of 7000 fighting men. It demands each year one son additional to be born in 20,000 families. The increasing importation of bread stuffs and cattle attest the insufficiency of the soil for the mere support of the army. The grain grown in the colony fetches a price nearly double of that imported from Odessa. After eighteen years of unequalled efforts, Algeria does not possess more than ten thousand cultivators. Every where, up to this moment, the Arab races show themselves refractory to civilisation and amalgamation with the French. In short, these immense sacrifices of life and capital have only terminated in a negative colonization, whilst they have produced a positive diminution of the resources of the mother country.

The following are among the new facts collected by M. Boudin in support of these propositions. In examining the annual mortality of the civil population of France, where the number of old persons is of course considerable, he finds it to be a little less than 24 per 1000 inhabitants. In Algeria the mortality per 1000 at the various stations is reckoned as follows :—

Algiers, 36·4; Mortaganem, 37·0; Bonfarick, 40·4; Oran, 41·5; Tenes, 49·6; Borkadem, 50·7; Phillipville, 55·3; Kouta, 57·6; Cherchel, 60·9; Mustapha, 62·1; Fondonk, 65·9; Budak, 66·2; lastly, at El-Arouch, 141·4. [The mean mortality for the whole colony is thus 58·8 per 1000.]

The facts collected in this memoir may be summed up as follows :—Outlay of 1500 millions of francs; upwards of 100,000 men killed by the climate; annual budget of more than 100 millions of francs; colonization *nil;* Arabs refractory to amalgamation and civilisation; the working year reduced by disease to less than eleven months; mortality of the soldier eight times greater than that of men of the same age in civil life in France; mortality of the European civil population double that of the population living in France; the proportion of deaths of Europeans increasing with the prolongation of the occupancy of the country.—*Gazette Médicale.*

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

295.—*On the Mucous Membrane of the Vagina.* By Dr C. MANDT.—The author was induced to make the minute researches communicated in the present paper, by the Memoir of Deville (*Archives Générales*, 4th series, vol. v.) on the granular inflammation of the vagina in pregnancy, in which he considers the granulations as the hypertrophied follicles of the vaginal mucous membrane.

The mucous membrane of the vagina is covered by a thick pavement epithelium, and is characterised by numerous microscopic papillæ, furnished abundantly with nerves. These are quite different from the wart-like bodies described by the older writers as papillæ, and which are visible by the naked eye on the transverse wrinkles of the mucous membrane. The microscopic papillæ are scattered over the mucous membrane generally, and exist in great numbers on the surface of the wrinkles and wart-like papillæ of the older anatomists. They bear a general resemblance to the papillæ of the skin and tongue, but are much smaller and closer.

The opinions of authors as to the glands of the vagina are very discordant. Some describe follicles of considerable size, such as those at the opening of the urethra and on the cervix uteri. Others speak of both simple and conglomerate glands as being abundantly distributed in the vaginal mucous membrane; while others have failed to see any thing approaching to a glandular structure.

The author has not been able to observe in the vagina any general distribution of glands or follicles, and thinks that the descriptions of former authors have been drawn from the glands about the cervix uteri, and the parts anterior to the hymen. He has, however, in one or two instances, found an appearance similar to what was described by Haller as occurring on the upper and smooth part of the vaginal mucous membrane. This was a limited number of bluish or blackish points, sometimes very slightly depressed, but scarcely so as to affect the smoothness of the membrane. They seemed only in a few instances to have an obscure and indefinite opening, although Haller describes them as having openings into which a bristle might be introduced. The author is not certain that they are glands at all; but thinks they may probably be vesicles generally closed, and only accidentally presenting openings.

The author is disposed to consider the granular inflammation of the vagina, as rather a hypertrophy of its papillæ than of its glands.—*Henle and Pfeufer's Zeitschrift*, Band vii. Heft. i.

296.—*On the Investing Fibrous Membrane or Fascia of the Heart.* By ROBERT LEE, M.D.—In prosecuting his dissections of the nerves of the heart, the author found that the great difficulty in displaying them arose from the presence of a dense fibrous membrane or fascia, interposed between the serous membrane and the muscular substance. He gave a brief description of this fibrous membrane in a paper "on the nervous system of the heart," read before the Royal Society on the 20th of May 1847. In the present communication he enters more fully into the mode of displaying this fibrous investment of the heart; describes its appearance and structure, its relative thickness and firmness of attachment in different parts, and the strong though slender fibres which pass from its inner surface, and form a *stroma*, binding together the bloodvessels and nerves, and accompanying them between the muscular fasciculi throughout the entire walls of the heart, from the outer surface to the lining membrane. The author exhibited drawings and preparations, demonstrating the existence of this fascia in the hearts

of the larger quadrupeds, and in the hearts of children of the ages of six and nine years, as well as of the adult. He states that it is found, also, in the hearts of birds. He remarks, that it is this fascia which gives to the heart the great firmness noticed by Mr Hunter; and that it must have great influence in preventing dilatation and rupture of the organ during violent exertion. He thinks it not of less interest in a pathological point of view, since it is impossible to avoid suspecting that rheumatic inflammation of the heart has its principal and primary seat in this dense fibrous membrane; and he suggests that dilatation of the heart may be owing to a change in this membrane analogous to that which, in the sclerotic coat of the eye, gives rise to staphyloma and other diseases of that organ.—*Proceedings of Medico-Chirurgical Society of London, in Med. Gazette*, June 23, 1848.

297.—*On the State of the Blood and Muscles in Animals killed by Hunting and by Fighting.* By Mr GEORGE GULLIVER.—The author states that his experience is opposed to the doctrine affirmed by Hunter (and generally received at the present day), that in animals hunted to death the blood remains fluid, and the muscles uncontracted. In two instances, in hares hunted to death by harriers, he found the rigor mortis to supervene shortly after death; the heart was contracted, and contained clots of blood. In a hunted stag, he likewise found the blood to coagulate after death; and observant stag-hunters have assured him, that the muscles become rigid under those circumstances. The same was observed in cocks killed by fighting.—*Ibid.*

298.—*Composition of Human Milk.* By J. W. GRIFFITH, M.D.—This paper contains the result of a series of ultimate analyses of human milk, made by drying the fresh milk at 212°, burning with chromate of lead, and determining the nitrogen by Warrentrap and Will's method. As an illustration of these results, we give the following of milk, taken fourteen days after parturition. It yielded 12·49 and 12·58 per cent. of solids in two determinations, and the ultimate analyses gave—

	I.	II.
Carbon, .	50·57	...
Hydrogen, .	7·86	...
Nitrogen, .	1·90	1·92
Oxygen, .	38·12	...
Ash, .	1·55	...

From his analyses, the author draws the conclusion, that the milk is rather richer in carbon and hydrogen during the earlier periods of lactation, while the quantity of nitrogen undergoes very little variation. This latter statement is at variance with the results obtained by Simon, from the proximate analysis of the milk at different periods; he found the caseine increased towards the end of lactation, but the method of analysis adopted by him is probably not free from fallacy. The amount of caseine obtained by proximate analysis, varies considerably according to the method of analysis made use of. When the butter is removed by ether, and the sugar and extractives by water, the proportion of caseine found is considerably less, than when the sugar, &c., are removed by alcohol. The author has found that the former method gives results much more consistent with the ultimate analysis than the latter.—*Chemical Gazette*, No. 134.

299.—*On the Chemical Phenomena manifested by different Substances introduced into the Organism.* By M. BERNARD. (Continued from p. 132).

Second Series.—The author next proceeded to determine if the blood presented any obstacle to the establishment of certain catalytic reactions, which take place with facility external to the organism. The action of emulsine on amygdaline is favourable for this purpose, in as much as a highly poisonous substance is instantly generated by their union. The experiments of M. Bernard satisfactorily determine, that the injection of these substances into the circulation, simultaneously, or at a short interval, causes death, with the usual symptoms of poisoning by prussic acid, and with the evolution of a strong smell in the breath of oil of bitter almonds. The injection of either of the substances separately, on the contrary, gave rise to no fatal results.

The action of diastase on starch in the blood might naturally be expected to be a good subject of experiment. But the serum of the blood has the singular property of producing the transformation of starch into sugar; hence experiments on this head were not instituted.

The transformation of sugar into alcohol, by means of yeast, was the next subject of experiment. In two animals (a dog and a rabbit), cane sugar and yeast were simultaneously introduced into the circulation in considerable quantity. Both animals died. The urine of the rabbit alone was examined; it remained quite free of sugar (which, under ordinary circumstances, passes with great ease into the urine). The symptoms in both animals were those of a marked typhoid con-

dition, with fever and extreme debility; the rabbit died in less than twenty-four hours, the dog on the third day. The morbid changes were, in both animals, injection, ecchymosis, ulceration of the stomach, ecchymotic patches in the small intestine, and a dark imperfectly coagulated state of the blood. In both cases (a sufficiently singular fact) the pancreas was diseased, the orifice of its ducts being tumid and red; its substance in the rabbit red and inflamed; in the dog, the seat of numerous small abscesses. These facts appear to indicate a special poisonous action, exercised by the alcoholic fermentation upon the animal organization; and also to prove that the change of sugar into alcohol may occur within the circulation.

Third Series.—The rapidly fatal effect of cyanuret of mercury, when introduced into the stomach, is readily explained by the action of the gastric juice, which, even externally to the body, decomposes it, setting free hydro-cyanic acid. The action of this salt, when introduced into the veins, on the contrary, cannot be explained by the action of the blood upon it; as, out of the body, no decomposition takes place. Nevertheless, on injecting the cyanuret of potassium into the veins of an animal, a poisonous effect, similar to that of prussic acid, is produced; and the odour of prussic acid is exhaled from all the tissues.

Where, then, does this decomposition take place? As all the acid fluids of the body present a reaction similar to the gastric juice, M. Bernard performed the following experiment, to exclude the possibility of the decomposition taking place in the stomach or urinary passages. The stomach, kidneys, and bladder, were removed from a live dog. A solution of cyanuret of mercury was then injected by the crural vein; in half a minute the animal began to respire with difficulty, and died soon after convulsed. All the tissues were impregnated with the odour of prussic acid; yet in no place could an acid fluid be found. [Were the contents of the cœcum examined? It appears to us that their well-known acidity forms an objection to this experiment.]

With the view of discovering whether this reaction took place in the systemic capillaries, the author now isolated the thigh of a dog from all communication with the rest of the body, leaving only the artery and vein entire. He then injected by the artery a sufficient quantity of cyanuret of mercury, and shortly afterwards drew blood from the vein. The blood contained abundance of the salt, but no trace of prussic acid; the tissues of the thigh were in a similar condition. From this experiment M. Bernard judges that the systemic circulation is not engaged in the decomposition of the cyanurets; he therefore, by way of exclusion, ascribes this decomposition to the pulmonic circulation.

Certain bicarbonates are decomposed in the blood when passing the capillaries of the lung. Thus, if a large quantity of solution of bicarbonate of soda be injected into the veins of a rabbit, the animal dies suddenly, and, on dissection, there is found air in the division of the pulmonary artery, and sometimes even in the ventricles of the heart. The lungs also are emphysematous and distended. These results are not produced if the same salts are introduced gradually.

Fourth Series.—The experiments of this series are not so important as to require detailed notice; they consisted simply of an examination into the effects of different animal fluids, on the state of oxidation of the ferro-cyanurets of potassium, and the salts of iron.—*Archives Générales de Médicine*, Jan. and Feb. 1848.

300.—*On the Changes which certain Substances undergo in their Passage into the Urine.* By MM. Wöehler and Frerichs.—These experiments were made by administering either with the food or by injection into the stomach of animals, generally dogs, the substances, the action of which was to be observed. The animals were then introduced into a case lined with tin, the bottom of which was so constructed as to carry off and collect the whole of the urine. The following are the results obtained, with the different substances:—*Salicylous acid.* This substance, which is isomeric with benzoic acid, was given repeatedly, and in large doses. It irritates the mucous membranes, but is not poisonous. Hippuric acid was never found in the urine, but the salicylous acid passed off unchanged, and was recognised in the urine by its characteristic tests. Salicylic acid was sought for but not found, which is of interest, because, as we shall immediately see, oil of bitter almonds, which is in many respects allied to salicylous acid, undergoes oxidation in similar circumstances.—*Oil of bitter almonds free from hydrocyanic acid*, in doses of 30 grains, had no poisonous action upon dogs. A large quantity of hippuric acid was found in the urine. The oil of bitter almonds is consequently oxidized in the system, and the benzoic acid produced is further changed into hippuric acid in the usual manner.

—*Amygdaline* in two cases produced vomiting, paralysis of the extremities, and slow and stertorous breathing, which symptoms went off after 6 or 8 hours. The breath smelt distinctly of hydrocyanic acid; and the urine, on the addition of emulsion of sweet almonds, gave the same smell in an equally distinct manner. Hippuric acid was not found. In all the other cases in which amygdaline was tried, no such symptoms made their appearance, although the doses were equally large.—*Benzoic Ether, and Balsam of Peru*, gave rise to the formation of hippuric acid.—*Tannic Acid* was administered in doses gradually increased from 7½ to 90 grains. The animal remained healthy, although the intestinal evacuations ceased entirely. In the urine were found *gallic acid*, pyrogallic acid, and humus-like matters.—*Urates and Allantoine.* These substances were tried with the object of ascertaining whether the view which has been often adopted, that uric acid undergoes decomposition in the system exactly as it does out of it, was correct. As is well known, under the action of oxidizing agents, it passes into urea, oxalic acid, and allantoine. The administration of urate of ammonia to a rabbit, was found to cause the separation by the kidneys of at least five times the usual quantity of urea. In the dog, and in man, it was found to cause the excretion of a large quantity of oxalates, but no allantoine could be detected. In order, therefore, to ascertain what became of the allantoine, it was administered in the pure state. None of it appeared in the urine; nor was oxalic acid found, which was sought for under the impression that the allantoine might have been changed into oxalic acid and ammonia, as happens when it is boiled with caustic potass.—*Sulphocyanide of Potassium* passes unchanged through the system, aud is not poisonous.—*Thiosinamine* (*Rodallin*, product of the action of ammonia upon oil of mustard) is not poisonous. Sulphocyanide of potassium was found in the urine. Now it has been shown by the researches of Gerhardt and Von Wertheim, that oil of mustard can be decomposed into sulphocyanide of potassium and oil of garlic. A similar change, therefore, appears to take place in the system; but no traces of the allyl compounds could be observed by the sense of smell either in the breath or urine.—*Chinone and Aniline* are not poisonous.—*Hydrate of Phenyle* (*Carbolic acid*) proved highly poisonous—a few drops causing the death of rabbits, guinea pigs, and dogs, in, at furthest, a quarter of an hour, with violent convulsions. As the hydrate of phenyle has been found in castoreum, the authors suggest its use in small doses in hysteria. A few trials made with it were, however, insufficient to test its value. —*Alloxantine*, in doses of from 75 to 90 grains, did not re-appear in the urine. No alloxan was found, but the urine was rich in urea.—*Urea*, administered to a man in a dose of 45 grains, was not converted into carbonate of ammonia, as the authors had *a priori* expected, but appears to have passed off unchanged.—*Phosphorous and Arsenic Acids.* It results from the experiments of the authors, that arsenic acid is much less poisonous than arsenious acid. The action of the former substance is not so local as that of the latter, and is longer in taking effect, its action being probably dependent upon partial reduction to the state of arsenious acid. Phosphorous acid in moderate doses proved poisonous to a pigeon, guinea pig, and cat, but without any appearance of inflammation of the intestinal canal. The authors draw attention to the fact of the lower grades of oxidation of the isomorphous elements, arsenic and phosphorus being poisonous, while the higher, in the case of phosphorus, is quite innocuous, and in arsenic is a comparatively feeble poison.—*Arseniate of Lime*, which occurs in some mineral waters, was found to be poisonous in large doses.—*Annalen der Chemie und Pharmacie*, March 1848.

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

301.—*On the Anatomy of the Enlarged Thyroid Gland in Bronchocele.* By PROFESSOR ALEX. ECKER, of Basle.—The author distinguishes two varieties of goitre or bronchocele, which are sufficiently distinct in some cases, although frequently combined so as to give rise to secondary forms. In one of these (Gefässkropf, *Struma vasculosa*) the vessels are chiefly engaged; while the other (Drüsenkropf, *Struma glandulosa*) consists essentially in alterations of the closed vesicles, described in last Number of the *Retrospect* (p. 129) as composed of the basement membrane, and containing the secreting cells of the gland.

In the first kind, or *vascular goitre*, there is in the early stage a congestive turgescence of the gland, a condition often merely temporary, but liable to become

permanent when accompanied by exudation, or by some other alteration as presently to be described. The temporary congestion here spoken of may be produced by respiratory embarrassment, and seems also in females to be connected with excitement of the generative system. The congestion, when becoming permanent, attacks the gland unequally. The lobes which are most diseased are enlarged to different sizes, and those which are most considerably enlarged, generally present increased development of the surrounding areolar tissue, which forms a distinct investment supplied with vessels. The smallest lobes which he has seen thus surrounded, were not more than a line in diameter. On looking at one of these isolated lobes (the size of a cherry) with the microscope, he found on one occasion, that the whole of the changes were in the vascular system, the capillaries of which, running in the interior between the glandular vesicles, were enlarged and full of blood; the vesicles themselves were apparently healthy, and contained their normal contents. In the further progress of the disorder there is more and more dilatation of the capillary vessels and smaller arteries, which become varicose and aneurysmatic, as described by Hasse and Kölliker (*Zeitschrift f. Rat. Med.* B. IV. p. i.) The alteration generally begins at the centre of the lobule. With a simple lens, or even the naked eye, there are to be seen very distinctly marked blood-coloured points; these are the dilated parts of vessels, filled with blood. The diameter of the dilated parts is from 1-10th to 1-8th of a millimetre; while that of the normal portions of the same vessel is about 1-30th of a millimetre—the smallest capillaries not being the most subject to these changes. At times the dilated portions may be observed to break off from the rest of the vessel, presenting the appearance of a cyst filled with blood, and resembling a bloodvessel in nothing except the contents. The walls of these cysts are of very various thickness; they are sometimes evidently denser than natural, and the seat of an opaque deposit. The cysts are not readily compressed. In their interior, among the bloodvessels, are to be seen colourless spaces, which, on rupturing the cyst, may be observed to be caused by the presence of pale, circular, granular bodies of 1-8th of a millimetre in diameter (altered colourless blood-corpuscles). The yellow blood corpuscles adhere to each other, and are with difficulty separated by the addition of water. The gland-vesicles have generally disappeared at this stage of the disorder. Professor Ecker seems undetermined whether to consider this an inflammatory affection of the gland. In the cases he has seen, the symptoms have not presented this character.

The ultimate consequences of the changes described above are hemorrhage, exudation, and calcareous deposition in the walls of the dilated vessels. When blood is extravasated, it usually infiltrates itself through the parenchyma, and afterwards becomes surrounded by a sort of cyst, as in apoplectic extravasations in the brain. These changes constitute one form of *Struma cystica*. The blood likewise undergoes changes similar to those common in apoplectic cysts—the blood corpuscles disappearing, and being replaced by exudation corpuscles and granular masses, with masses and bodies of a rust-yellow colour, and sometimes crystals of cholesterine. Exudation is very frequent, and takes either a diffused form, or is collected in masses surrounded by congested tissue. The component parts of the exudations are generally primitive fibres and elementary granules, with blood-corpuscles. Most frequently exudation occurs in a distinct and isolated form in a cleft or cavity of the gland, which is larger or smaller in proportion to the amount of exudation. In some cases the author has seen the pathological products surrounded by a distinct cyst, lined by a membrane; this constitutes another form of the *Struma cystica*. The cysts so formed may either enlarge indefinitely, or may become atrophied. In addition to these transformations, the author entertains no doubt of the occasional occurrence of fibrous and carcinomatous growths as the result of exudation in the thyroid gland: but by far the most common product is a development within the exudation of new vesicles or cysts, similar to those of the normal gland, but inferior both in size and in the degree of development of their contents. These *pathological* vesicles the author regards as *exogenous* formations, springing up among the vessels and normal elements of the gland, and constituting, according to his pathological views, the only real hypertrophy of the gland. A very frequent alteration of the vessels in the *Struma vasculosa*, according to M. Ecker, is the obstruction and obliteration of the smaller arteries and capillaries, by the deposition of calcareous matter within their coats. This change appears to take place chiefly in vessels under 1-12th of a millimetre in diameter; those larger than this remaining unaffected. The altered vessels are destitute of blood, while at the same time they often appear

in parts dilated and sacculated in form; the walls of the sacculi being, like those of the vessels themselves, the seat of calcareous deposit. From an examination of glands affected with this degeneration, M. Ecker concludes that it is a secondary result of the congestive state formerly noticed. The obliteration of vessels is thus one of the sources of the calcareous concretions often found in bronchocele; although, according to the author, concretions are also frequently formed by the obliteration of cysts and by the absorption of exudation.

The second primitive form of goitre is that in which the gland-vesicles are dilated by albuminous fluid, or by gelatinous masses of so-called *colloid* matter. The vascular system is either not involved or only secondarily affected; in the latter case, a composite form of goitre is the result.

In the commencement of this alteration the small granules or lobules of the gland, instead of having the solid appearance of those in a healthy gland, are at some parts turgid and partially diaphanous, like the grains of boiled sago. The diseased lobules also become aggregated together, and can often be readily separated in a mass from the more healthy tissue around them. The fibrous tissue disappears more and more as the disease advances, and the vessels become obliterated; and at last a whole lobe of the gland may present the appearance of a gelatinous yellowish mass, held together by very delicate fibres; or it may entirely become converted into one great colloid cyst, constituting a third form of *Struma cystica*.

The microscopic examination in the early stage, shows the vesicles somewhat dilated, and filled with contents which present more than the usual amount of fatty granules. The dilated vesicles may reach the diameter of 1-6th, 1-4th, or even half a line. When larger vesicles than this are seen, they are commonly due to the coalition of several smaller ones, by the disappearance of the intervening membrane, and union of the colloid masses. The principal change at first on the contents of the glandular vesicles is the generation of an unusually large amount of complete cells, fewer of the nuclei being free than in the healthy gland. These cells appear frequently to become distended with colloid matter, the nucleus, at the same time, shrinking, and the cell-wall becoming very thin, till at last the cell assumes the appearance of a rounded mass of jelly. There are also to be seen more irregular masses of colloid matter quite transparent, and containing numerous cells and nuclei, and sometimes crystals of cholesterine. The final result of all these changes is the disappearance of the cell structure, and the absorption of the walls of the vesicles, as well as the fibrous stroma, until at last the gland becomes transformed into transparent colloid masses, in which few septa and no bloodvessels are to be seen.

The colloid matter appears to contain much albumen, giving the characteristic lilac colour on boiling in muriatic acid. It is insoluble in hot and cold water, and therefore bears no resemblance to the gelatinous principles.

The alterations in this form of degeneration of the thyroid gland are, in the majority of cases, quite unaccompanied by congestion. The author, therefore, regards the colloid matter as not being an exudation in the proper sense of the term, but an excess of vitiated secretion, which, through inactivity of the absorbents, is not removed back into the circulation. Hence, he considers the name *Struma lymphatica* (sometimes applied to goitre) as by no means ill chosen.

It remains only to say, that the two primitive forms of goitre here described are frequently combined, so as to produce all sorts of intermediate and complex varieties. Thus, the congestion and dilatation of the vessels may supervene on the glandular form, and occupy the intervening parts of the gland between the vesicles; and dilatation of the vesicles may supervene on changes more immediately connected with the vascular system. In either case the result is similar, and it is, therefore, impossible to find a sharp and definite boundary-line between the two primitive forms.—*Zeitschrift für Rationelle Medizin*, 1847, Heft 2.

[The above appears to us a most important contribution to the pathological anatomy, not only of this organ, but also of the glandular system in general. The author's views are entitled to great consideration, from the circumstance of their being based on an intimate knowledge of the anatomy of the healthy gland, the only sure basis, in our opinion, for an inquiry into its pathological conditions. Nevertheless, there are some points on which we would desire corroborative evidence before assenting to his views; such are the exogenous and new development of gland-vesicles in exudation, and the formation of cysts from the dilated arteries, phenomena which appear so different from what we know in other glands, as to require the strictest scrutiny, more especially where there are so many sources of fallacy. We would direct the

attention of the reader to the last form mentioned of the cystic goitre (*Struma cystica*), as presenting many remarkable analogies with the pathological formation of encysted dropsy of the ovary, described by Hughes Bennett.]

302.—*Ossification of the Cartilages of the Larynx.* By M. Segond. (Académie de Médecine.)—The author's conclusions are as follows:—1st, The epoch of life at which ossification of the laryngeal cartilages commences is variable. 2d, When this change takes place, it commences constantly at particular points, which for the most part correspond to the insertion of the laryngeal muscles. 3d, Ossification commences in the cricoid cartilages, and terminates with the arytænoid. 4th, When the cricoid cartilage is entirely ossified, its form becomes altered, so that the anterior part of the cartilage cannot move under the thyroid cartilage; whence it happens, that persons in whom the change has occurred, cannot utter the high notes of the voice. 5th, The thyroid cartilage when ossified undergoes a notable transformation; the groove which is commonly seen in front of the superior tubercle is obliterated, and the inferior border of the cartilage is thickened, and interferes with the motions of the cricoid. 6th, There is a change, independent of ossification, which may embarrass the movements of the cricoid cartilage, viz., a prolongation of the inferior cornua of the thyroid. 7th, Two portions of the arytænoid cartilages resist the progress of ossification for a long period; these are the superior internal apophyses. The *corpora triticia*, when ossified, become amalgamated with the great cornua of the thyroid cartilage.—*Archives Générales*, Nov. 1847; and *Ranking's Abstract*, Jan. to June 1848.

303.—*On the Prevalence of Small-Pox in India at Different Periods of the Year.* By C. Morehead, M.D.—The examination of the statistics of a considerable number of cases shows that the amount and fatality of small-pox in India is many times greater during the first half of the year than during the second. Thus the admissions into the Bombay General Hospital are six times as many from January to June as from July to December; and in Calcutta the deaths from small-pox are forty times as numerous in the former as in the latter period. The maximum both of deaths and admissions is in the month of March, corresponding with the observations of Sydenham and Huxham respecting the prevalence of small-pox epidemics in this country about the vernal equinox. It is observed in India, that a considerable difficulty exists of propagating the cow-pox during the hot months of the year.—*Bombay Medical and Physical Transactions*, No. VIII.; *and Brit. and Foreign Med. Chir. Review*, July 1848.

304.—*Revaccinations in the Prussian Army.*—The total number of men vaccinated was 43,264; the number of those who bore marks of a former vaccination in a decided manner, 34,264; ditto with the marks not very distinct, 6405; ditto with the marks not visible at all, 2927. The vaccine virus developed itself satisfactorily in 25,544; very irregularly in 7425; and not at all in 10,627. The vaccinations which had yielded no results were repeated; they acted in 2718, and failed entirely in 8952 cases. In consequence of the present vaccination, there were developed from one to five vaccine pustules upon 13,295; from six to ten upon 8164; from eleven to twenty upon 5767; from twenty-one to thirty upon 1036 of the men. Amongst those who were vaccinated in the year 1847 there was, within the same year, no case of varicella, none of actual small-pox, and one only of chicken-pox. The lymph was obtained from vaccinated children or grown-up persons. It is remarkable, that amongst those who were subjected to revaccination, there were several who had had the small-pox before, yet upon whom the vaccine matter produced the usual pustules.—*Medical Times*, July 1, 1848, (authority not quoted).

III.—PRACTICE OF MEDICINE.

305.—*Practical Remarks on Croup.* By Dr H. Zeroni.—The most ordinary form of croup is *Congestive Croup*. This form generally occurs at a time when there is a tendency in the weather to induce catarrhal affections, manifesting itself suddenly, generally in the night, and without any precursory symptoms, with the exception, perhaps, occasionally of a slight cold in the head. In this form of the disease, children wake from a quiet sleep with a sharply barking kind of interrupted cough, raise themselves in bed, and begin to cry in apparent distress, a piping hiss-

ing inspiration being occasionally heard as well as in their coughing. The countenance is often flushed and turgescent, but the respiration is not hurried, and but little febrile excitement is perceived in the pulse. When the attack subsides, the child again falls asleep, and rests quietly till the morning; occasionally, however, the attack recurs, respiration becomes more noisy, rattling, and hissing, and the child either vomits, or simply makes an effort to do so. This form of the disease requires little more than careful nursing for its cure; the child should be kept in bed, be made to drink copiously of warm drinks, partake freely of some oily emulsion, and have a sponge steeped in hot water laid on the neck. If, however, a hissing hurried respiration causes apprehension of a recurrence of the attack, the most effectual means is to give an emetic, continuing its use until the child has vomited several times. (This form of the disease appears to be induced by an hereditary and acquired predisposition.) To young children during the first year, Dr Zeroni gives ½ gr. cupr. sulph. every quarter of an hour.

The second form is *Inflammatory Laryngeal Croup*. This is far more serious in its nature, and *never* occurs without premonitory symptoms, or where it may not be referred to the action of some injurious influences. It may have been induced by the pre-occurrence of the milder form, or owing to exposure to bad weather immediately after recovery from a former attack. The characteristic symptoms of this second form of croup are as follows: broken, rough, whistling cough, the inspiration quick, and with a sharp sound; the child is restless, moves the hands, bringing them frequently to the head and neck. The face is hot, red, or purple, the neck swollen, whilst the pulsations of the heart and arteries are rapid. When the attack subsides, the child becomes strikingly animated, enters into his customary sports, and evinces no desire to lie down or to go to sleep. Respiration after the first attack, and even after several attacks, is quiet and natural; it becomes, however, gradually more hurried and noisy, and a faint rattling is heard, which assumes by degrees a metallic sound. Hoarseness increases, and the voice becomes low and whistling. The attacks come on more frequently, and the child is more restless and irritable during the periods of intermission, whilst the pulse grows fainter and fainter. This uneasiness, however, ceases. The child doses continually, lies on its back, with its head thrown back and pressed into the pillow; the throat protrudes, the countenance is drawn, pale, and swollen, somewhat of a bluish or yellowish tinge. The eyes are sunk, and half shut; whatever is handed to the child is impatiently pushed aside, and nothing can induce it to drink. The respiration is loud and rattling, all the muscles of the neck act convulsively, the pulse is frequent and small. The child dies either in this state of sopor, with the symptoms of paralysis, or in the midst of convulsions induced by another choking attack of cough.

This form of disease requires prompt and energetic treatment. No time should be lost in abstracting blood, and no apparent amelioration of the symptoms should hinder the frequent application of leeches, in proportion to the age, until the child begins to evince an appearance of exhaustion from loss of blood. A second important means is cupr. sulph., from 3 to 4 grains of which should at first be given in order to induce vomiting, and the dose should be then reduced to ⅛ or ¼ of a grain, every half hour or hour, until the disease assumes a favourable turn. Dr Zeroni also speaks of the invaluable aid he has derived in some cases of *this* form of croup, but not in any other, from a combination of musk and opium.

Inflammatory Tracheal Croup.—This is likewise attended by premonitory symptoms, and induced by pre-existing or extremely injurious influences. It generally occurs in the months of February and March. Children catch cold, have a dry, somewhat rough, cough, which is often disregarded, and they are frequently suffered to expose themselves to cold and damp; the hoarseness and cough gradually increase, this state often continuing for upwards of a week before the occurrence of the fit of choking, and before medical advice is sought. After the first attack, the child is often cheerful, and even at times extremely merry. The voice is quite gone, the respiration somewhat hurried, and more or less rattling; the cough not frequent, short, rough, unattended by a whistling inspiration, no expectoration, or if any, merely a white frothy mucus, interspersed with a few streaks of blood; the pulse quick, the skin warm, and the urine natural. If the little patients are able to speak, they complain of pain in the neck and the middle of the chest. By degrees the choking fits become more frequent, the respiration more hurried and difficult, and the tone accompanying it rougher and more croaking. Extreme hilarity and the most remarkable movements alternate with excessive lassitude, during which the child

sinks down exhausted, falls asleep, exhibiting the most marked disinclination to be spoken to or touched. The cough becomes a noiseless suppressed expulsion of air, the attacks are accompanied by a violent noisy rattling sound, the muscles of the neck become powerfully convulsed, and the head is thrown far back. The pulse is small and quick, the skin drawn, the muscles extremely relapsed, the face swelled and puffy, the lips blue. The child dies in a state of sopor, as if from asphyxia. This form is more fatal to children under two years of age, than to those who are older. It is met with in children of six, or even occasionally nine years of age.

The application of leeches is of the greatest importance, since on this depends the result of the whole treatment. If a sufficient number of leeches be early applied to the neck and chest, we may regard the termination of the disease as probably favourable. Emetics do not appear to have much influence here, although they occasionally relieve the respiration.

The fourth form, which is designated by Dr Zeroni as *Aphthous Croup,* is the most dangerous, but fortunately also the most uncommon; it has only been observed in autumn, during a continuance of stormy, cold, and rainy weather. It never occurs unattended by premonitory symptoms. The child is somewhat excited, occasionally flushed, and appearing from time to time to have transient febrile symptoms. As, however, it is cheerful, sleeps well, and has a good appetite, these symptoms are too often neglected, and the child is suffered to go out in the damp or cold, until at last it complains of pain on swallowing. On examining the throat, the tonsils are found to be somewhat swollen, reddish, and covered here and there by a yellowish-white puriform investment. The submaxillary glands are swollen. The child continues, however, cheerful, and there is scarcely a trace of fever. The aphthous streaks or points now extend gradually more and more, approaching each other. On removing part of this investment from the tonsils, we find that the subjacent membrane is of a brownish-red colour, but not dry. Deglutition becomes more painful, but still there is no fever, and it is not till the fourth or fifth day that the symptoms assume a more serious character. Hoarseness comes on, a low singular kind of cough is heard, and occasional oppressive sensations are experienced. The disease soon runs its fatal course, and the child, after several days of indescribable suffering, dies in a state of sopor, under circumstances similar to those of which we have already spoken. A prophylactic mode of treatment seems the only one that is of avail in this form of croup; and, considering the nature of the disease, too much stress cannot be laid on those means of prevention under the control of parents —such as prompt attention to any symptoms of indisposition manifested by young children, and care not to expose them to the open air until all morbid symptoms are entirely removed; since Dr Zeroni mentions that where once this aphthous affection of the tonsils was established, he never yet succeeded in saving the child; leeches, tartar-emetic, and calomel being all without avail. The only means which he considers at all likely to produce a favourable result, are the external application of caustics, as suggested by Aretæus. Dr Zeroni considers that this aphthous affection of the tonsils may occur in adults, although in their case he has never observed a fatal result. The disease may manifest itself alone, or conjointly with febrile diseases; but he has not found that, in this latter case, the local affection rendered any change necessary in the mode of treatment for the main disease.

The fifth form of croup, observed by Dr Zeroni, is *Suppurative Croup.* This is invariably found to have been preceded by a fully developed catarrh, and usually occurs at the close of winter, and the beginning of spring. It begins with more or less fever, restlessness, insomnia; the cough that was previously loose, becomes dry, rough, and barking, without being attended by a whistling inspiration, or a metallic sound. The cough comes on by fits, during which the child tries to sit up, bends the head forward, and puts its hands to its ears, tongue, or mouth. The attacks are not attended by choking, but cause distress by the continuance of the short broken cough. The child is hoarse from the beginning of the disease, but loses his voice entirely after a time; cases, however, occur, in which the cough is at first loose, and the voice clear, but where there is much fever at the beginning of the disease, and even strongly marked delirium occurring at night. Fever gradually increases, the child sleeps almost continually, actual suffocative fits at length come on, the respiration becomes hurried, gasping, and rattling. The child is pale, and appears swollen; and finally torpor supervenes, with an extremely quick pulse and profuse perspiration,

and the child not unfrequently dies in convulsions.

If the disease is neglected, it generally proves fatal to infants and very young children from the ninth to the eleventh day. In adults, it may be prolonged to the fourteenth or eighteenth day; in the latter case, the attacks are much more violent. The suffocative attacks which generally supervene on the seventh day are most distressing; the child starts up with violence, tears, scratches, and bites every thing it can lay hold of, often tearing its hair and biting its hands; it appears to be in most fearful struggle, and in the height of its agony, the hoarseness suddenly disappears, and it cries in a loud voice for help: the short cough becomes looser, and mucus is expectorated, the fever abates, and finally the dreadful sufferings of the little patient terminate in symptoms of paralysis.

This form, like the others, demands a prompt and early application of leeches, which must be repeated with a frequency proportionate to the age of the child and the violence of the fever; it is almost the only thing to which recourse can be had, but as soon as the cough becomes somewhat less distressing, and the fever abates, a favourable termination of the disease may be hoped for; occasionally, however, much service is derived from cupr. sulph. given in sufficient doses to produce vomiting; this must be done when the cough and fever have abated, and the suffocative attacks have begun. The above forms of croup are only met with in children, and seldom after their sixth year. Dr Zeroni scarcely attaches any faith to the opinion entertained by many, of the fatal nature of croup in adults. He says that he certainly has observed all the symptoms of croup most strikingly manifested in women; but these were found to depend on uterine derangement, and yielded to a mode of treatment adopted with reference to diseases of the latter kind; and he considers that where adults have sunk under croupous symptoms, they must be ascribed rather to œdema glottidis than to genuine croup.—*Henle u. Pfeufer's Zeitschrift für Rat. Med.* 1847; *Brit. and For. Med. Chir. Rev.*, July 1848.

306.—*Treatment of Asphyxia.* By Dr REID, of Liverpool.—Dr Reid suggests, that in treating the apparently asphyxiated a certain proportion of chlorine or nitrous oxide should be used with the atmospheric air employed in artificial respiration. He is led to propose this on the principle that the chief object is, independent of restoring the circulation and temperature, that the dormant irritability should be subjected to an extraordinary stimulant. While the common atmospheric air, or even oxygen gas perfectly pure, has no action, the irritative action of this gas (the chlorine) so well known in the living subject, will, in a corresponding manner, be more energetic in the lungs of the apparently drowned. In numerous experiments made on the healthy subject, and also on several different invalids, he has found that in the former, on an average of about 200 individuals, one cubic inch of chlorine, diffused through 200 cubic inches of air (common air) could be respired without exciting any irritation; but when the quantity of atmospheric air was reduced, the amount of chlorine remaining the same, more or less irritation was induced. It is unnecessary to remark on the different effects on invalids, as these varied very much, and it would be impossible to make nice applications of the sort in cases of asphyxia.

One cubic inch of chlorine may be diffused through fifty cubic inches of air for this purpose, or even one cubic inch in twenty-five cubic inches of atmospheric air. The respiratory movements once excited, the amount of chlorine may gradually be reduced. Scarcely any bad effect will supervene which cannot be relieved by ammonia and hot water. The chlorine is readily obtained from the common chloride of lime.—*Lancet*, April 22.

307.—*Vomiting caused by Relaxation of the Abdominal Parietes cured by a Bandage.*—M. Greppo reports the case of a woman whose abdominal parietes were much relaxed in consequence of repeated pregnancy, and who was troubled by habitual vomiting, which resisted all the ordinary remedies. An abdominal supporter bandage was then applied, which entirely relieved her. When, however, she neglects to wear the supporter, the vomiting returns.—*Med. Times*, June 17, 1848.

308.—*Irritable Bladder from Tapeworm.* By Mr TUFNELL.—A man of temperate habits complained of excessive irritability of the bladder, with difficult micturition. His health had been good till three months previously, when he began to suffer from dyspepsia, with irritation of the rectum and hemorrhoids. These symptoms increased, and to them were added tenesmus, and frequent calls to make water, which was voided in a twisted jet, and accompanied by severe straining, but no pain. The urine was highly acid, and loaded with lithate of ammonia. The prostate was of natural

size, but very sensitive to the touch. His symptoms were twice removed by appropriate treatment, but he returned a third time, suffering severely, and anxiously desiring an operation for his relief, being convinced that he suffered from urinary calculus. The irritation about the anus had now greatly increased, and he was observed at the same time to be frequently rubbing his nose, which led to the suspicion of worms in the intestines. A purgative of turpentine and castor-oil was administered, and the following morning a tapeworm, measuring thirty feet, was evacuated. The patient obtained immediate relief from his distressing symptoms. —*Dub. Med. Press*, Feb. 1848; and *Ranking's Abstract.*

309.—*Danger of Repressing Skin Diseases.*—Several instances have occurred in the practice of M. Devergie, illustrative of the danger which may arise from the repression of chronic cutaneous affections. The reporter of the cases sums up as follows:—1. The functional disturbance of the internal organs occurs simultaneously with the subsidence of the skin disease. 2. The severity of the symptoms is proportionate to the extent and severity of the skin disease. 3. The symptoms cease on the return of the cutaneous irritation. 4. Death may occur more rapidly than from similar internal disease produced by other causes. 5. If the internal disease be treated antiphlogistically, death is precipitated, and a fatal result always ensues if the eruption cannot be restored, or an artificial one excited.—*Gaz. des Hôpitaux*, No. 110, and *Ranking's Abstract.*

310.—*Sub-pleural Emphysema, a Cause of the Cracked Metal Sound.* By R. C. Golding.—The author observes, "I was asked to see a lad who had had a pulmonary complaint (imagined to be phthisis), for two years past; he was moribund when I saw him, and died two hours after.

On percussing the upper part of the left side immediately under the clavicle, the cracked metal sound was elicited in the most perfect manner.

On *post-mortem* inspection (corresponding to the part where the sound was produced during life), two circumscribed portions of sub-pleural emphysema were seen, together as large as a full-sized hen's egg; there was no cavity in the left lung, nor was the disease of a tuberculous character; it was an example of chronic pneumonia. It is unnecessary to particularize the other morbid appearances: suffice it that the circumscribed interlobular and sub-pleural emphysema elicited a sound indistinguishable from the *bruit de pot fêle* of pulmonary excavations.

The physical cause of its production was the collection of air chiefly in the cellular tissue over the upper portion of the left lung, which, by forcible percussion, was made to permeate the surrounding cellular tissue, returning after the percussion stroke to the situation where, before the stroke, it was chiefly collected.

The entire lung was condensed, unfitted for respiration, and closely adherent (except at the upper part) to the walls of the chest; the emphysema was doubtless due to a rupture of a superficial air-cell, and was prevented extending by the thickened and adherent state of the pleura, which had recently been inflamed."—*Med. Gaz.* July 14, 1848.

311.—*Treatment of Epilepsy by Tartar Emetic Frictions to the Scalp.*—M. Mettais narrates ten cases in proof of the efficacy of tartar emetic ointment rubbed into the scalp, so as to induce free suppuration. He states that the counter irritation should be maintained for a considerable time, as relapses have occurred when the suppuration has been too long suspended. —*Gaz. Med.* Feb. 1848; and *Ranking's Abstract.*

312.—*Retention of Urine in Cerebral Affections.*—M. Von Den Broeck states that in these cases he has almost always found the application of large cupping-glasses to the upper and inner parts of the thighs give rise to a speedy voiding of the urine.—*Brit. and For. Med. Chir. Rev.*, July 1848.

313.—*Prognosis furnished by the Tears of Children.* By M. Trousseau.—M. Trousseau states that it may be laid down as an aphorism, as seldom liable to exceptions as those of Hippocrates, that when a child sheds tears a favourable prognosis may be delivered, however menacing the symptoms; while, when this is not the case, in painful diseases, and especially if the eyes are dry and sunken in the orbits, great danger to life exists. The observation applies almost invariably to children less than two years of age, and particularly to those less than one, but may frequently be verified even until seven. In no one of his operations for croup has he ever seen a child shed tears; and he has always felt much pleased if they did so some days after, as, when they did not, the unfavourable prognosis given was almost always verified.—*Gazette des Hôp*, 1848, No. 14, *and Brit. and For. Med. Chir. Rev.*, July 1848.

314.—*On the Erysipelas of New-born Infants.* By M. TROUSSEAU.—This disease, whatever class of society the patients belong to, whether in hospital or private practice, is almost always fatal; so that, in nine years, M. Trousseau has only seen three recoveries. A slight swelling and redness are first pointed out by the mother upon the vulva or penis, and, as the child seems well enough, the practitioner may disregard them. But the inflammation gradually extends to the abdomen and thighs, and the child becomes sleepless and remarkably pallid, sucking greedily on account of thirst, but suffering from no purging or vomiting. About the fourth or fifth day the erysipelas commonly becomes complicated with peritonitis, which kills the child within twenty-four hours; so that it is rare for it to live beyond the sixth or seventh day. There is also not unfrequently umbilical phlebitis present. When puerperal fever prevails, infantile erysipelas is not uncommon, proceeding from ulceration, which ensues upon the detachment of the funis.—*Ibid.*

IV.—PRACTICE OF SURGERY.

315.—*Case of Resection of the Scapula.* By Professor FERGUSSON.—W. H——, aged thirty-three, was admitted into King's College Hospital, on January 13th, 1847. He had suffered from disease of the right shoulder-joint for seven years, when the extremity was amputated at the articulation, at Fort Pitt Hospital, and a part of the glenoid cavity was at the same time removed. He recovered, but became the subject of abscess on the front of the chest about twelve months afterwards. On admission into King's College Hospital, the whole shoulder was enlarged, and the soft tissues hypertrophied; a great many fistulous openings existed in the pectoral region, and over the clavicle, which discharged copiously. Having determined on the propriety of removing the scapula entire, the author proceeded to operate on the 6th of February 1847. The patient was put under the influence of ether, and the clavicle was first exposed, and divided about two inches from its acromial extremity with a saw; another incision extended along the spine of the scapula, and a third in the course of the old cicatrix. Some further dissection, and a division of the attaching muscles, enabled the operator to complete the excision, the subclavian artery being the while compressed over the first rib. The axillary and other arteries were tied, and the wound closed with stitches. The patient's recovery was satisfactory, and unattended by any thing deserving particular notice. On May 5th, he was sent into the country, and a recent account reports him to be well and fat, though still occasionally troubled with small abscesses on the breast. After maceration, the bone exhibited a hypertrophied condition; the remaining portion of the glenoid cavity was carious, and its margin was surrounded by a mass of new ossific matter. The author concluded with some observations on the interest attaching to the case, from the rarity and formidable character of the operation required for the relief of the disease, and its successful issue.—*Proceedings of Medico-Chirurgical Society of London, in Medical Gazette,* June 23, 1848.

316.—*Report of a Case in which Gastrotomy was performed for the Relief of Obstruction of the Bowels.* By Mr R. DRUITT.—J. D——, a delicate boy, aged eleven, had, at the end of February last, an attack of inflammation of the bowels, which yielded to the use of calomel, Dover's powder, and purgatives. On April 1st, the author was requested to see him for a similar attack, which resisted the treatment before adopted. Vomiting supervened, and the bowels were obstinately constipated. The belly was tense, but the chief pain and tenderness were referred to one spot—a little below and to the left of the umbilicus. The use of purgatives merely excited vomiting, and the rejected matter assumed a yellow, liquid character, and had a stercoraceous smell. The symptoms varied but little, the stomach rejecting almost every thing but milk and soda-water until the 9th, when the patient appeared excessively exhausted. After this he rallied, but the bowels were unmoved; and as every reasonable measure had been resorted to, without success, to procure their evacuation, as the tenderness continued fixed to the same spot, and as there was evidently a distended state of probably both the stomach and neighbouring portion of intestine, it was ultimately determined that an operation for relief of the supposed internal strangulation should be resorted to. On the 14th, the author accordingly opened the abdomen by an incision along the linea alba, below the umbilicus, and a distinct band was soon discovered, binding

down the intestine. This was liberated; but almost simultaneously the bowel gave way at a point lower down, its contents escaping into the peritoneal cavity. This aperture was found and secured; but the patient survived only two hours and a half. On examining the abdomen after death, there were evident traces of former peritonitis, in the form of extensive adhesions. The whole of the large intestine, and a portion of the ileum, were pale, contracted, and empty. The remaining portion of the small intestine, up to the duodenum, was reddened, enormously distended, and filled with liquid feculent matter. The stomach was also greatly distended. The seat of stricture, where the band was divided, was marked and abrupt. The ulcerated opening was in the ileum, not far from the lower attachment of the band. The author considered that an earlier operation would have afforded a reasonable prospect of a successful issue.—*Ibid.*

317.—*Fungus Hæmatodes of the Testicle, doubtfully malignant.* By Dr O'Brien Bellingham.—A labouring man, aged 58, was admitted into hospital on account of an enlargement of the left testicle, of two months' standing. The testicle was the size of a hen's egg, slightly painful after being handled, but not otherwise. The epididymis was indurated; the cord healthy; the integuments unaltered in colour. He was a healthy, florid man, married, and the father of a family; of temperate habits, never had venereal disease, nor had taken mercury. He had likewise never received any injury of the part.

A year afterwards his health was still good; the tumour was increased in size, and was the seat of severe dragging pain, which extended up the cord. In other respects there was no change.

A few weeks after this, the testicle was removed, the wound healing rapidly. The tumour on section presented a pulpy appearance, except the epididymis, which was nearly as hard as cartilage. The cut surface was pale, the centre softened, and dotted with dark points of extravasated blood. The layers of the tunica vaginalis were adherent, except at a few points, and here a small quantity of limpid fluid was collected.

Seven years after the operation the patient died of bronchitis. On *post mortem* examination, the lungs were found to be emphysematous; all other organs perfectly healthy.

Instances of fungus hæmatodes of the testicle, not recurring after operation, are extremely rare; one case only is mentioned in Mr Curling's work, from the practice of Sir B. Brodie, in which, after three years, the patient was "going on favourably."—*Dublin Medical Press*, July 1848.

[From the details in this case, it can scarcely be doubted that the tumour was some singular kind of non-malignant growth, possibly scrofulous, which simulated the true cancerous fungus. The absence of cachexy, acute pain, and rapid enlargement, must have arrested even the practical surgeon's attention. The apparent characters of the tumour were so decidedly those of encephaloid disease, as to be considered perfectly characteristic by Mr Cusack. The minute structure, if examined, would probably have thrown some light on this subject.]

318.—*Removal of a Diseased Ovary; Cure.* By Dr Vaullegeard.—T. R., aged 25, menstruated at 18; had enjoyed very good health until the year 1842, when the abdomen became enlarged and the menses irregular. These symptoms disappeared suddenly, and during fifteen months the patient did not suffer any relapse; but, at the expiration of that period, the abdomen again became distended, and the menstruation deficient. On May 11, 1844, paracentesis was performed for the first time, and, twenty-five litres of transparent fluid having been removed, an ovarian tumour, of the size of the hand, was detected in the left iliac region. From that period forward, the dropsical collection formed with such rapidity and abundance, that three days before operation paracentesis was again performed for the fifty-first time. Examination through the abdominal parietes indicated the presence of an oval tumour, extending from the left iliac fossa to the right hypochondrium; its surface was rough, and the tumour moveable.

On the 15th of September 1847, the patient having inhaled ether, insensibility was produced in the space of seventy-five seconds, and an incision, three inches in length, was made to the left side of, and in a parallel direction with, the linea alba; six or eight litres of fluid were permitted to escape, and the length of the incision increased to seven inches. The tumour, of the colour of wine lees, presented itself at the orifice, and, being of a soft consistence, was laid open, in order that its bulk might be diminished by the discharge of a portion of its contents, which were of a serous and puriform character. The pedicle was, as had been predicted, found on the left side, and was

divided, after two ligatures had been thrown round it. Very little blood was lost during the operation, and the wound was united by three sutures.

During the two first days the patient felt remarkably well; she was even permitted to take broth and some wine and water. On the third day the pulse rose to 102, but the digestive functions remained unimpaired, and the intestinal evacuations regular. On the seventh day only the wound was examined; it had healed by primary union, excepting in its most interior part occupied by the ligatures. On the sixteenth day the threads were removed, and the patient had almost completely recovered twenty-five days after operation.

The tumour weighed nine pounds, and the fluids which it contained were estimated at an equal weight. Its tissue seemed of a fibro-cartilaginous nature, in the intervals of which were found gelatinous, cerebriform, and granular textures. —*Med. Times,* June 17.

[According to Dr M'Carthy, the reporter of this case, it is the first in which extirpation of the ovary has been performed in France. We regret that the microscope was not employed to determine with more accuracy the nature of the tumour.]

319.—*New Operation for Varicose Veins.* By WM. BIRD HERAPATH, M.B.—If pressure exist upon a vein at any point intermediate between its radicles and the right side of the heart, distension of the distal portion will be produced to such a degree that the valves can no longer close the dilated vein; but on removing the cause of the enlargement, the valves will again become capable of resuming their functions.

The superficial cutaneous veins most frequently affected by varix are the internal and external saphena, both of which have to pass through apertures in the deep fascia in order to reach the larger trunks, into which they deliver the circulating current. Now, should these apertures at any time be, either absolutely or relatively, too small to allow the passage of the quantity of blood carried by these veins, distension must ensue, and varix be induced.

Long standing in the upright posture creates a relative decrease in the size of the aperture, inasmuch as more blood is then sent by the heart to all the vessels of the inferior extremities, and an opening capable of passing the quantity returned in the horizontal position might become incapable of doing so in the altered circumstances here spoken of.

The cure proposed by the author consists in dividing the apertures of the deep fascia of the thigh to such an extent as to remove the impediment to the returning current of the blood. He gives a case where the varix was confined to the internal saphena vein and its branches, and where it was completely removed by dividing the falciform process of the fascia lata. He remarks, that where the popliteal vein is varicose, the case is one to which the operation in question is not applicable; as the seat of the obstruction is then probably on or above the iliac vein. The same will be the case when the spermatic veins are involved in the diseased condition.

The following is the author's description of the operation in a case of extreme varix of the internal saphena vein alone, in which, as has been said above, the cure has been complete:—Ether having been administered, I pinched up a fold of skin between my fingers of sufficient size, and then transfixed and divided it with a pointed bistoury; an incision three inches in length was thus obtained, obliquely upwards and inwards, immediately over the swollen termination of the saphena vein. The superficial fascia was remarkably thin at this spot, and, having carefully dissected it away from its attachment to the falciform border, I then depressed the vein with the forefinger of the left hand, and with the pointed bistoury, passed directly upwards immediately beneath the iliac layer of fascia, I divided the crescentic border of the saphenous opening to the extent of half an inch, which, of course, considerably enlarged the aperture, and at once removed the stricture; the varix immediately disappeared. At this stage of the operation the patient most unexpectedly gave a kick; the point of the bistoury punctured one of the abdominal branches of the saphena, probably the superficial epigastric, and hemorrhage to a greater extent occurred than the operation necessarily involved. Pressure with the thumb immediately controlled, and a spongeful of cold water soon stopped it; about two ounces of blood were lost. The wound was closed by two points of suture, and drawn together by adhesive plaster, and the whole covered by a pad of wet lint held on by a few turns of bandage.—*Med. Times,* July 15, 1848.

320.—*Varicocele successfully treated by Operation.* By M. VIDAL DE CASSIS.—A man, aged twenty-two, was admitted into M. Vidal's wards at the Hôpital du Midi. He presented a varicocele on each side of the scrotum, which caused great pain and

inconvenience. M. Vidal resolved upon an operation, which he performed in the following manner on the 8th of September:—The enlarged veins having been carefully separated from the other elements of the spermatic cord, a silver wire was passed through the scrotum, so as to embrace the posterior aspect of the varicose plexus; another wire was placed in front, entering the scrotum at the same orifices as the first; the wires were then twisted on each other, so as to roll the enlarged veins round the metallic threads. On the 19th of September the wires were removed by incision; and on the 8th of October the patient left the hospital completely cured.—*Med. Times*, June 17.

321.—*On Wounds of the Chest.* By G. J. Guthrie.—Mr Guthrie recommends the treatment of wounds of the chest in the following manner:—1. All incised or penetrating wounds of the chest should be closed as quickly as possible, by a continuous suture through the skin only, and a compress supported by adhesive plasters, the patient being afterwards placed on the wounded side. 2. If blood flows freely from a small opening, the wound should be enlarged, so as to show whether it does or does not flow from within the cavity. If it evidently proceed from a vessel external to the cavity, that vessel must be secured by torsion or by ligature. 3. If blood flow from within the chest, in a manner likely to endanger life, the wound should be instantly closed; but as the loss of a reasonable qnantity of blood in such cases, say from two to three pounds, will be beneficial rather than otherwise, this closure may be delayed until syncope takes place, or until a further loss of blood appears unadvisable. 4. If the wound in the chest have ceased to bleed, although a quantity of blood is manifestly effused into the cavity of the pleura, the wound may be left open, although covered, for a few hours, if the effused or extravasated blood should seem likely to be evacuated from it, when aided by position; but as soon as this evacuation appears to have been effected, or cannot be accomplished, the wound should be closed. It must be borne in mind that the extravasation which does take place is usually less than is generally supposed—a point which auscultation and percussion will hereafter in all probability disclose. 5. If auscultation and percussion should indicate that the cavity of the pleura is full of blood, and the oppression of breathing and the distress are so great as to place the life of the patient in immediate danger, the wound, although recent, should be reopened. 6. As soon as the presence of even a serous fluid in the chest is ascertained to be in sufficient quantity to compress the lung against the spine, and time has been allowed for the closure of the vessel from which blood originally flowed, a counter-opening should be made in the place of election for its evacuation by the trocar and canula, which may be afterwards enlarged, unless the reopening of the wound should be thought preferable, which will not be the case unless it should be low in the chest.—*Medical Times*, April 8, 1848.

322.—*Elastic Belts in the Umbilical Hernia of Children.* By Mr Spong.—Well regulated, constant, and equable pressure, seems all-sufficient for the cure of this disease in infants, and the elastic belt, presently to be described, answers the purpose effectually. It consists of a piece of vulcanized caoutchouc, about six inches in length, and three inches and a half in breadth, to either end of which is attached a piece of fine white linen web (a species of girthing used by saddlers, and manufactured of about the same breadth), with tapes appended, which are tied behind the back. The piece of vulcanized India-rubber should be of such a length, according to the size of the child, as will embrace rather less than one-third of the circumference of the abdomen, the circle being completed by the pieces of linen web. This material is sufficiently stiff to prevent its creasing; its elasticity admits of the various movements of the child, in crying, coughing, &c.; and in whatever position the body is placed, it always keeps up a determinate pressure. The patient soon becomes accustomed to its use, and it may be worn advantageously by night as well as by day; moreover, it retains its position accurately.

This substance is made of various degrees of thickness; that which is about as thick as half-a-crown will be found to answer best. Another small circular piece, twice as stout as this, and about two inches in diameter, should be fixed to the centre of the first by a stitch of strong silk passed through the centre of both; this acts well as a pad immediately over the hernia.

This instrument is simple, cheap, and efficient. Mr S. has tried it in several cases, and with uniform success. The cure usually occupied a period of from three to four months. (But in one case, where, from neglect of the mother, the hernia had attained the size of the child's fist, the use of the belt was required for six months.) The same belt, made of

stouter material, will be found to answer for reducible umbilical hernia of adults, as the instrument is not displaced by exercise, and the patient can employ whatever amount of pressure he finds best for his particular employment.—*Lancet*, June 3.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

323.—*Etherization in Labour.* By Drs PUTNAM, ROUX, CLARK, and MURPHY.—Dr Putnam has adopted this practice in nineteen cases, and states that he has not observed any serious accident immediate or remote, that could be attributed to the use of ether, and that he has never met with any formidable symptoms. In the commencement of labour, he believes it may promote the dilatation of the os uteri, and it dissipates the despondency and irritability which often attends this stage. Towards the close of the labour it is to be given without reserve. Dr Putnam has failed to detect any thing unusual in the pulsations of the fœtal heart during etherization, and no ill consequence to the child after birth could be observed. In regard to the mother, he believes that its use eminently accelerates her convalescence.

Dr Putnam thinks that the etherization diminishes both the parturient efforts and the resistance offered to them by the soft parts of the mother, and consequently that the duration of the labour is in most cases unaffected. In some rare cases, however, he believes that the ether suspends the process of parturition, and must consequently be laid aside. We shall give his concluding paragraph in his own words :—"There are conditions, however, in which the positive unequivocal advantages of ether far outweigh any temporary evils : in which it is not merely yielded to the patient's comfort, but demanded by her necessities. The muscular action may be inordinate, wasting the strength without advancing the labour—inflicting injurious pressure upon the soft parts, and thereby compromising the safety of mother and child. These, besides various mental disturbances, are materially controlled and relieved by the use of ether. Above all, in obstetric operations, the patient is saved much suffering. Apart from the prostration and other immediate and remote evils consequent upon the use of antimony, opium, and venesection, which to be effective must be full, they often fail to produce the desired relaxation and repose. If the cases related should not prove to be exceptions, we have in ether a most valuable auxiliary. Any one who has encountered the resistance and benumbing pressure of the uterus in a case of difficult turning, will feel that it was here pre-eminently useful. Under the particular combination of circumstances the operation might have been difficult and dangerous, if not impossible, unless by means of an unjustifiable degree of force. In no case is violence more to be deprecated."—*Boston Medical and Surgical Journal*, February 2, 1848.

After a careful investigation of the subject of etherization in labour, Dr Roux has arrived at the following conclusions. 1st, That females in the puerperal state suffer no injury from the inhalation of ether ;—2d, That in ordinary labours it annuls the pain without interfering at all with their progress ;—and 3d, That in difficult labours it is highly desirable, in order to prevent the suffering attendant upon them.—*Gazette Médicale*, October 9, 1847.

We shall quote Dr Clark's own words, containing the conclusions at which he has arrived on the use of ether in obstetrical practice. In his paper he details sixteen cases.

"In general (he says) any morbid state was rectified by the etherous influence, so that nausea and vomiting disappeared, convulsive tendencies were removed, and the pulse raised if previously depressed, and lessened in frequency if antecedently too rapid.

"In most cases, a perfect etherization destroyed the painfulness of labour, even when the patient retained consciousness. In other and rare instances, the sufferings were abated but not removed, even when the intellectual powers seemed lost for the time.

"Generally, the duration and frequency of the labour-actions were lessened, without any apparent retardation of the usual result of the labour; nor does there seem to have been any unusual proclivity to hemorrhagy in my cases.

"On the whole, my trials of ether as a torture-saving agent, have been satisfactory to me and my patients, and a sufficient number of cases have come under my notice, to justify me in the continuance of the use of a remedy which seems not only to save sorrow and suffering in com-

mon cases, but to be doubly useful when there are morbid complications. The extraordinary length of time during which delicate females can bear a strong etherization, seems to me to put at rest, if that has not been done by others, any reasonable doubt of its perfect safety, when used in the simplest manner, by respiring through a sponge."—*Philadelphia Medical Examiner*, March 1848.

We shall merely quote in addition the conclusions arrived at by Dr Murphy, in regard to the use of *chloroform* in parturition. 1st, Chloroform does not interfere with the action of the uterus unless when given in doses too large. 2d, It relaxes the maternal passages, and especially the perineum. 3d, It subdues nervous irritation and restores nervous energy. 4th, It secures to the patient some hours' repose after delivery. 5th, Its injurious effects, if any, when an ordinary dose is given, seem to depend on constitutional peculiarities or improper management.—*Lancet*, April 19, 1847.

324.—*Accidental Anæsthesia during Labour, from an over-dose of Morphia.* By Dr Foulke.—Mrs R—— of New Hope, æt. 16, was taken with premature labour-pains at the end of the eighth month of pregnancy. In attempting to arrest them, Dr F. made up a potion, by dissolving one-half grain of sulphate of morphia in some water in a cup, and directed that a teaspoonful of this should be given every twenty minutes. He accidentally left a bottle containing two drachms of morphia beside his patient, and from which she, misunderstanding Dr F.'s directions, took repeated doses, till she had swallowed eleven and a half grains. She suffered from a painful itching and pricking of the skin, and other distressing symptoms, for five hours and a half before she fell into a profound sleep. She then lost all consciousness; respiration occurred not oftener than once in forty-five seconds. She was somewhat disturbed every twenty minutes, but gave no sign of suffering pain. Labour slowly advanced, and her child was born in a state of narcotism, breathing but about once in fifty seconds. It did not recover till after seven hours.

The mother was for twenty-four hours plunged in this deep narcotism. To rouse her she was given at an interval of twenty minutes two doses, each of two grains of tartar-emetic, and twenty of ipecacuan; and, as this produced no effect, three or four large doses of ground mustard were also given at twenty minutes' interval; but no vomiting was produced. No diarrhœa followed, and she made a good recovery.—*American Journ. of Med. Sciences*, April 1848.

325.—*Cases of Cæsarean Section.* Godman, Stoltz, and Celestino de Pelayo.—Mr Godman's patient, after having borne three living children, became affected with malacosteon, and at her fourth confinement was delivered by craniotomy. On examining, per vaginam, at the commencement of her fifth labour, the pelvis was found to have assumed an extreme degree of deformity; the outlet was of the form of the figure 8, the two tuberosities of the ischia being in contact. The greatest diameter was found to be about an inch and a quarter, the least not an inch. The os uteri could not be reached by the finger at all. The operation was immediately performed in the usual way, and after some time the woman made a complete recovery. The child was born alive.

She became again pregnant. Abortion was induced at the end of the second month, and after this she gradually sank and died.—*British Record of Obstet. Medicine*, February 15, 1848.

M. Stoltz' patient, after being naturally delivered, at the full time, of her first child, came into the hospital complaining of violent lacerating pains in the sacrum. On examination, a small medullary sarcomatous tumour, springing from the sacrum, was felt projecting into the pelvic cavity. The pain continued incessantly till the commencement of her second pregnancy (about three years afterwards) when it diminished, and disappeared entirely at the end of the second month. From this time, her health improved greatly, and her embonpoint manifestly increased. At the commencement of the ninth month of her second pregnancy, she again entered the hospital. The sacral and gluteal regions were bulging in the form of a segment of a large sphere, consisting of a malignant tumour, which also filled up the whole pelvic cavity. The Cæsarean operation was performed in the usual way, and the child was born alive. The mother also made a good recovery and suckled her child. About six months after this delivery, she died worn-out by the further increase and progress of the malignant tumour.—*Gaz. Medic. de Strasbourg*, Mai 20, 1848.

In the following case the operation was performed after the death of the mother. Dr Celestino de Pelayo's patient was a

deformed and rachitic woman, having an habitual dyspnœa. Labour supervened at the end of her first pregnancy, and advanced naturally till the os uteri became completely dilated, and the head somewhat engaged in the pelvic cavity, when, all at once, she cried out that she was choked, and was seized with tetanic convulsions and died. The Cæsarean operation was immediately performed, and a healthy female child extracted. After insufflation, frictions, &c., it was completely recovered from the state of asphyxia in which it was born. Our author has performed this operation six times, and in this case alone has he been so fortunate as to rescue the infant.—*El Telegrapho Medico*, 1*er Trimestre* 1848; and *Union Médicale*, June 8, 1848.

326.—*Birth of a Double Monster.* By M. Capuron.—In the pages of this month's *Journal* is recorded a case of the birth of a double monster, occurring in the practice of Dr Lyell of Dundee. And we are glad to be able, so opportunely, to lay before our readers the following additional instance of this rare complication of labour.

In May last, M. Capuron laid before the Parisian Academy of Medicine, the following case which had occurred in the practice of M. Derien of Paimpol. The fœtus, a complete double monster (*Sternopage* of Geoffroy St Hilaire), had arrived at the full term, and was extracted from the maternal passages without the aid of any instruments, and without injuring the mother, who made an excellent recovery. One foot of each child presented, and, by traction exerted upon both, the monster was made to descend as far as the axillæ, when the arms were brought down, and then came the turn of the two heads. Of these, the one was delivered after the other by traction at the mouth, and the subsequent aid of the forceps.—*Gazette Médicale de Paris*, No. 23, 1848.

327.—*Rupture of the Uterus.* By Dr Trask.—In the last two numbers of the *American Journal of the Medical Sciences*, Dr Trask presents us with the histories of upwards of 300 cases of rupture of the uterus, occurring either during utero-gestation, or during parturition. We shall give briefly some of the general results of his inquiry.

In a great proportion of cases the laceration seemed to depend upon some previously existing diseased condition of the uterus itself, and therefore its occurrence in a great number of instances was unavoidable. Of 49 cases in which the condition of the uterine structure is mentioned, in only 10 is it spoken of as being healthy. In the remaining 39 it was found that there existed at some part or other of the uterine walls a thinning or softening of its substance, or both, arising in most cases either from mechanical injury or from idiopathic causes, as chronic inflammation, or inflammation excited during a protracted labour. The risk of rupture when any portion of the uterus is in an unhealthy condition, depends directly upon the amount of opposition presented to the expulsion of the child.

In upwards of 60 cases there existed a diminution of the diameters of the pelvis to a greater or less degree, and in several the fœtal head was hydrocephalic; where, although the pelvis was of standard dimensions, there was nevertheless a relative deficiency, and this disproportion predisposed to rupture of the uterus in the same way that a contracted pelvis would.

The age of the patient seems to exert a considerable influence over the occurrence of rupture. In the following table, containing 141 cases, it is shown to increase in frequency in a ratio proportional to the age of the patient. In mothers

Below 20 years;	3 cases occurred.
From 20 to 25 years;	14 cases occurred.
From 25 to 30 years;	34 cases occurred.
From 30 to 35 years;	36 cases occurred.
From 35 to 40 years;	37 cases occurred.
From 40 to 45 years;	15 cases occurred.

It is stated by several writers, that rupture during a first pregnancy or labour is rare. The following table, however, exhibits even a larger number, during a first labour, than during any other. The discrepancy may be accounted for by the fact, that the comparison is usually made in the mind between the first labour and all subsequent labours taken together, and not, as it should be, between the first and any other individual labour, as between the first and second, or the first and sixth:

In 1st pregnancy;	24 cases occurred.
In 2d pregnancy;	18 cases occurred.
In 3d pregnancy;	17 cases occurred.
In 4th pregnancy;	21 cases occurred.
In 5th pregnancy;	18 cases occurred.
In 6th pregnancy;	16 cases occurred.
In 7th pregnancy;	9 cases occurred.
In 8th pregnancy;	5 cases occurred.
In 9th pregnancy;	5 cases occurred.
In 10th pregnancy;	9 cases occurred.
In 11th pregnancy;	8 cases occurred.
In 12th pregnancy;	3 cases occurred.
In 13th pregnancy;	2 cases occurred.

Data are not afforded us from which

we might calculate the influence of the duration of labour upon the frequency of the occurrence of rupture. The following table exhibits merely the number of cases occurring in labours of different lengths. It does not give us the proportion of ruptures to the same number of cases of labour of different lengths. From other sources we know that the liability to rupture increases with the increased duration of labour. In labours

Below 6 hours; 23 cases occurred.
From 12 to 24 hours; 18 cases occurred.
From 24 to 36 hours; 16 cases occurred.
Above 36 hours; 20 cases occurred.

In reference to the question of interference or non-interference in cases of rupture of the uterus, we shall content ourselves by stating the statistical results of Dr Trask's inquiry. Of 89 cases left undelivered, 24 recovered, or 27 in 100; of 31 cases delivered spontaneously, 11 recovered, or 35 in 100; of 154 cases artificially delivered, 57 recovered, or 37 in 100.

A comparison, then, of those delivered by art and of those abandoned undelivered, yields a proportion of 37 per cent. of the former as saved, to 27 of the latter, showing that the chances under the former treatment are considerably better than under the latter. This is to be regarded as a mere approximation to the truth, as will be shown afterwards. However, it does not give the actual success of either course of procedure, but still it enables us to form some idea of the relative success of the two.

But even were not the success of artificial delivery greater than that of non-interference, the fact that those delivered survive the accident longer than those who die undelivered, shows that it is the part of humanity to give the patient the chance of even the few additional hours of existence which delivery affords. For if we take the average of those of both classes who survived less than forty-eight hours, we find that the average continuance of life after rupture with those *delivered is twenty-two* hours, while of those *undelivered* it is only *nine* hours.

In the 89 cases in which no treatment was adopted, but the patients were abandoned to the resources of nature, 24 recovered. In these instances the fœtus in some became invested in false membranes, and was in this way separated from the viscera of the abdomen. Most generally, however, after a few months it was discharged piecemeal through fistulous openings in the abdomen, vagina, or rectum.

Of 104 cases where the head, with the whole or part of the child, had escaped into the peritoneal cavity, in 57 the patients were abandoned; of these 18 were saved and 39 lost. Of 30 delivered by turning, &c., 9 were saved and 21 lost. In 17 gastrotomy was performed; of these 13 were saved and 4 lost.

Of 63 cases of rupture with contraction of the pelvis, 11 were abandoned, and all died. Perforation was performed in 19; of these 3 were saved and 16 lost. Turning, with the assistance of the lever, crotchet, forceps, &c., in 25 cases; of these 11 were saved, and 14 lost. Gastrotomy in 8 instances, 5 mothers were saved and 3 lost. Or total of both cases —Gastrotomy—saved, 18 ; lost, 7.

Undelivered—saved, 18; lost, 50.

Other modes of delivery—saved, 23; lost, 51.

It would seem, then, that more mothers survived after gastrotomy had been performed than under any other plan of treatment. It is most probable that this operation was performed chiefly, if not exclusively, in those cases in which the fœtus had altogether escaped into the cavity of the abdomen, with firm contraction of the edges of the uterus, or else in cases of so great a degree of contraction of the pelvis as to demand the Cæsarean section. But whether performed for one or the other, it is of no consequence. This will appear from the fact, that gastrotomy depends for its success in no respect upon the capacity of the pelvis to allow a child to pass, or whether the rent of the uterus is permanently closed, or will still admit the hand.

Dr Trask wishes it to be distinctly understood, however, that the above statistics are not to be considered as affording the actual *proportion* of recoveries and deaths after the respective modes of treatment. Few are ambitious of publishing unsuccessful cases, and hence the reason of so large a proportion of successful terminations that the above cases exhibit. But there is no reason why such apparent success should follow gastrotomy, were not its results in reality, in the main, more satisfactory than that of the other modes of delivery. It is an operation that few practitioners have the nerve to undertake, amidst the exciting scenes by which one is surrounded on the occurrence of rupture of the womb. A degree of *éclat* always attends its performance—even though the result prove unsuccessful ; and there will thus be no causes tending to *suppress* the publication of unsuccessful cases of gastrotomy, which do not apply in an equal and even

greater degree, to the other modes of operation, as perforation, the application of the forceps, or version.

If the success of gastrotomy, then, be so much greater than that of other modes of delivery, it must be in consequence of its more fully meeting the indications that such cases present, than either of the other modes.—*Amer. Jour. of Med. Sc. for* January and April, 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

328.—*On the Production of Local Anæsthesia.* By Professor SIMPSON and Mr NUNNELEY.—It would certainly be a most valuable attainment in medicine and surgery, could we induce a local and limited anæsthesia, without the temporary loss of consciousness, and constitutional disturbance which inseparably accompany a state of general anæsthesia. Hitherto all attempts at producing such a state in any part of the human body have failed, and, with our present materia medica, we can see no reasonable prospect of success. In experiments on the human hand, only a partial, and probably also a merely superficial, anæsthesia has been thus occasioned. It is very remarkable, that immersion of the hand in water, of very high or of very low temperature, produced in Dr Simpson's trials a benumbing influence, as great, if not greater than that following insertion of the hand for hours into liquid chloroform, or chloroform vapour; while, in the same individuals, strong tinctures of opium, Indian hemp, and of aconite, produced little or no appreciable anæsthetic effect. Dr Simpson has arrived at the following conclusions:—1. In articulate animals, complete local anæsthesia can be produced by the direct application of liquid chloroform, or of its vapour. 2. In batrachian reptiles, the tail or a limb can be affected in the same way; but if the application be continued, general anæsthesia speedily results from the absorption of the chloroform. Mr Nunneley states that the anæsthesia advances from the limb acted upon, first, to the corresponding extremity of the other side, and then gradually involves the whole body; but his recorded experiments do not warrant this conclusion. 3. In the smaller mammalia, a single limb, or even the whole posterior half of the body, can be in this manner rendered anæsthetic. 4. In man, partial, and probably superficial, local anæsthesia of a part, as the hand, can be produced by exposing it to chloroform vapour; but the part thus acted on cannot be cut or punctured without pain. Mr Nunneley states, that before an operation for staphyloma, he was in this way able, not only to destroy the sensibility of the eye, but also to paralyse its muscles. In Dr Simpson's experiments, the burning pain produced by the application of chloroform vapour to the eye, or even to the eyelids, was such as to prevent the continuance of the experiment in any case above two or three minutes, and, consequently, no anæsthetic effect was obtained. 5. An agent, endowed with greater activity, would probably be dangerous, by its acting too powerfully on the general economy, before the local anæsthesia was established to a sufficient depth. 6. Direct anæsthesia, by any known drug, is objectionable, on account of the accompanying vascular irritation. 7. When the surface is broken, the application of chloroform would be too painful to be endured; and, indeed, no small degree of suffering sometimes arises from the exposure of the unbroken skin to its action.—*Provincial Medical and Surgical Journal,* Nos. for June 28, and July 12, 1848.

329.—*On the Therapeutic Properties of Atropia.* By DONOVAN, CUNIER, and BOUCHARDAT.—This alkaloid represents perfectly the active properties of belladonna, for which it may be advantageously substituted for external, and perhaps also for internal use. Atropia crystallizes in white silky prisms; it is odourless, very soluble in alcohol and ether, but requires five hundred times its weight of water for solution. The solution is bitter, and has an alkaline reaction. The alkaloid dissolves readily in acids, as the nitric and muriatic, forming crystallizable salts. It is expensive (one shilling per grain); but this is of less consequence, as, on account of its activity, the doses prescribed are very small.

Atropia is an energetic poison; one-sixth of a grain has occasioned in man all the serious effects characteristic of the poisonous Solanaceæ—dilatation of the pupil, dimness of vision, nausea, dryness and sense of constriction in the pharynx, feeble pulse and tendency to syncope, coldness of the surface, aphonia, and delirium. Bouchardat and Donovan prefer it to the extract or tincture of belladonna for internal exhibition, on account of the greater accuracy with which it may be dosed.

[The extract is undoubtedly very unequal in its effects, and, could we rely on the purity of the alkaloid, its solution would probably form a preparation of certain efficacy—a point of the first importance in the use of all drugs. The activity of a medicine is no objection to its internal use, provided the preparation employed is of uniform strength, *and is of such a nature* as to act uniformly on the economy. If a certain amount of physiological action is to be developed, it is immaterial whether it be obtained by the exhibition of one-tenth of a grain of an alkaloid, or half a drachm of the crude drug, or an extract of it. In the first case, by giving the alkaloid in solution in water, to which a little acid has been added, we secure the absorption of the whole dose prescribed, and can calculate with considerable certainty on the amount of its action. On the other hand, when an extract is used, its solution in the stomach is rapid or slow, perfect or imperfect, according to a variety of circumstances over which we have little control.]

The expense of atropia presents a strong inducement to its sophistication. Mr Donovan proposes the following process for purifying it, by which the apothecary may protect himself against any commercial fraud. Dissolve one drachm of commercial atropia in an ounce of rectified spirit. If there be a residuum, separate it; then add six ounces of distilled water, and shake the mixture; no change appears at first, but after twelve or eighteen hours, the atropia forms into beautiful stellated groups of crystals, adhering every where to the sides of the vessel. The liquor being poured off, the crystals are collected on fine bibulous paper, and dried in the air. This is pure atropia, on the unvarying nature of which the physician may place complete reliance.

Bouchardat recommends its internal exhibition in those diseases, in the treatment of which belladonna and the other Solanaceæ have been found useful, as epilepsy, chorea, pertussis, and hysteria, and as an anodyne in neuralgia, rheumatism, cancer, &c.

[Belladonna is, with the French, the favourite anodyne for internal use; but for this purpose it bears no comparison with monkshood. The preparation of the latter plant, which we saw in most common use in Paris, was the watery extract, the weak and uncertain activity of which fully accounts for the low estimation in which the drug was held. For the last two years, an alcoholic tincture, of the strength recommended by Dr Fleming, has been employed by several physicians (Bouchardat, Trousseau, Tessier), who now entertain, as might have been anticipated, a very much higher opinion of its value as a sedative and anodyne.]

To return to atropia. Bouchardat begins its administration with one-twelfth of a grain, increasing gradually to one-sixth of a grain, and he has even given higher doses. He recommends the following preparation:—

Atropia, . 1 gramme (15 grs.)
Rectified spirit, 40 ...
Dose one to five drops.

[As this tincture cannot be applied to the eye in ophthalmic surgery, for which purpose a watery solution must be used, we think it better to reject it entirely, and to propose a solution adapted equally for internal and external employment. It is very inconvenient having several preparations of an active drug, more especially when they resemble each other in appearance, but differ in strength.

Atropia, . 8 grains,
Water, . 1 ounce.

Dissolve with the aid of a drop or two of muriatic acid. This is quite a manageable strength for internal use; the dose being from three to ten minims. A drop or two of this solution, placed between the eyelids, causes complete dilatation of the pupil in from five to ten minutes.]

For the use of children affected with hooping-cough, Bouchardat recommends a syrup,—

Atropia, . 1 décigr.
Water, . 10 grammes.

Dissolve with the aid of a drop of muriatic acid, and add

Syrup, . 1000 grammes.

100 grammes of this mixture contain 1 centigramme of atropia. Dose 20 to 100 grammes. Atropia may be given also, in powder mixed with sugar, or with honey and liquorice, in the form of pill.

For *external use*, the solution in water, which we have indicated above, is the best preparation. It dilates the pupil quickly and completely, and is a cleanly application. M. Cunier relates several highly interesting cases, in which he succeeded, by the daily application of atropia during several weeks, in breaking up old adhesions of the iris, and opening up the occluded pupil. In ophthalmia, accompanied with intense photophobia, it often affords great relief.

In the form of ointment it is employed usefully to relax spasmodic contractions of different organs, as of the cervix uteri, anus, and urethra.

Ointment of atropia.

Atropia, . . 4 grains.
Diluted nitric acid, 10 minims.
Axunge, . . 1 ounce.

A small portion only, not greater than the size of a pea, should be applied at a time.—Bouchardat and Stuart Cooper, *Annuaire de Thérapeutique*, 1848; Cunier, *Annales d'Oculistique*, 1847; Donovan, *Dublin Med. Press*, May 31, 1848.

To dilate the pupil, Mr Walker of Edinburgh dissolves two grains in an ounce of water, with a few drops of acetic acid, and applies a single drop of this solution to the conjunctiva. Dilatation of the pupil commences in twenty minutes, is completed in about four hours, and lasts from two to three days.—*Christison's Dispensatory*, 2d Ed. 1848.

330.—*On the Counteraction of the Ill Effects of Mercury by Dulcamara.* By M. BRETONNEAU.—M. Bretonneau, from long observation, has convinced himself that the too prolonged use of mercury gives rise to symptoms, besides those due to its peculiar action on the nervous system, quite analogous to those of secondary syphilis. He has also been led to form a very high opinion of the power which the *Solanum dulcamara* possesses as a preventive, or as a curative of these. He lays great stress, however, upon the mode of its administration. Two drachms (prepared as decoction) are to be given daily for the first week, four for the second week, and so on, adding weekly two drachms until ten are attained, which brings the patient to the sixth week, at which time the dose is to be gradually diminished, until two drachms are again attained, when the medicine is to be discontinued.—*Rev. Méd. Chir.* vol. iii. p. 40; and *Brit. and For. Med. Chir. Rev.* No. 3, July 1848, p. 271.

331.—*Anthelmintic Drugs employed in Abyssinia.* By M. SCHIMPER.—The great frequency of tœnia among the Abyssinians, is attributed by the author to the use of badly prepared bread, and of raw flesh, the favourite dish of all classes of the people, which is seasoned with a detestable "sauce naturelle," collected in the large intestines of the sheep, goat, and antelope. There are various qualities of bread; the best is made of "tef" (Poa Abyssinica), but, on account of its high price, this is only enjoyed by the wealthier classes, who are for that reason, according to the author, less subject to worms. The inferior breads are prepared from maize, peas, beans, and barley: wheat is rarely employed. The rich Mahometans enjoy comparative immunity from the disease, which is due as much to the use of good bread, as to their not being permitted by the Koran to eat unprepared flesh. The Europeans who have been established for many years in Abyssinia, but who eat only boiled or roasted meat, and avoid the inferior breads, are quite exempt from worms; while those who have fallen into the habits of the natives in this respect, suffer equally with them.

The following are the drugs employed as anthelmintics—

1. Cosso — *Brayera anthelmintica*, Kunth—Rosacæ. Part used; the flowers, or rather the inflorescence. (Cosso and Habbe are Abyssinian names for tœnia.)
2. Habbe Tschakko; bulbs of the *Oxalis anthelmintica*, Al. Br.
3. Habbe Zellim; leaves of the *Jasminum floribundum*.
4. Bolbilda—*Celosia adoensis*, Hochstetter—Amaranthaceæ. The leaves, flower, and fruit are the parts used.
4. Roman; bark of the root of the *Punica granatum*.
6. Musenna; bark of an undetermined leguminous plant.
7. Saoria; fruit of the *Mœsa picta*.
8. Angogo; fruit of an undetermined plant.
9. Ogkert; root of the *Silene macrosolen*, Hochstt—Caryophyllaceæ.

Of these nine drugs, the Saoria and Musenna are reputed the most effective, not only killing, but likewise expelling the parasites. The others require to be followed up by purgatives.

The *Brayera anthelmintica* is a strong, lofty tree, indigenous to Abyssinia. It is met with abundantly on the mountains, growing at an elevation which indicates that it might be successfully cultivated in the warmer parts of Europe. The Brayera has a very thick trunk; the foliage is beautifully pennate, and its small and extremely numerous flowers are disposed in an elegant panicle. It is this inflorescence which the Abyssinians have employed from time immemorial, under the name of Cosso, to destroy the tœnia. There are two kinds of flowers, male and female; but in commerce they are usually mixed. They lose their properties by keeping, and are usually supposed to be inert after three years. A handful of the flowers forms an ordinary dose. They are reduced to powder, in which state they are suspended in a glass of water, and immediately swallowed. This mixture passes rapidly into fermentation, becoming at the same time acrid and emetic.

The Cosso produces an unpleasant sense of irritation and constriction in the fauces, and sometimes occasions constipation; for which reason it is usual to

conjoin it with purgatives. It acts with considerable energy, and promptly affords relief to the acute pains in the belly, occasioned by the worms.

[If the results of recent trials made in Paris with the powdered flowers, may be credited, the Brayera appears to be a very powerful anthelmintic.]

The bulbs of the *Oxalis anthelmintica* are broken and digested with water, so as to form a mixture, which is taken when the stomach is empty. Although the taste is very disagreeable, this remedy is in general use, on account of its slow and gentle action. The plant grows abundantly in all parts of Abyssinia.

The *Jasminum floribundum* is a severe and dangerous drastic purgative, and is rarely used. The *Pomegranate* is seldom employed on account of its scarcity. It is not indigenous to Abyssinia.

The *Mœsa picta* is a vigorous herb, which grows in abundance on the sides of the mountains. For administration, the ripe fruit is powdered and mixed with water. Of all the drugs enumerated, it is the least disagreeable; at the same time, it kills and effectually expels the whole worm; moreover, as it has no injurious action, M. Schimper strongly recommends it to the notice of European physicians.—*Gaz. Méd. de Strasbourg*, No. 4, 1848.

332.—*On the Efficacy of the Seeds of Phellandrium aquaticum in Affections of the Respiratory Organs.* By Dr Michea. —As Dr. Michéa freely admits, the use of phellandrium is no new discovery in medicine; but, notwithstanding the incontestable energy of its action, it is but little used in the present day. It is much more frequently employed in veterinary than in ordinary medicine; and its febrifuge, tonic, and even sedative properties, which were so highly appreciated by the practitioners of the last century, have been almost wholly neglected by those of our own day; we therefore owe a debt of gratitude to Dr Michéa for having replaced this medicine among our therapeutic agents.

The following remarks give a brief exposition of its action, and of the facts advanced by Dr Michéa in support of its employment. It is, especially in bronchitis, chronic catarrhs, pulmonary phthisis, and asthma, that its use has been attended by the most favourable results. These seeds are at once stimulating and sedative, calm the cough, diminish the oppression, or wholly remove it by facilitating expectoration; exercising so remarkable an influence on the organs of respiration, as almost to verify the words of Lange, who said that these seeds put a stop to spitting of blood, arrested the development of pulmonary tubercles, by opposing their softening, whilst they contributed to the cicatrization of the cavities.

They may be taken twice a-day, reduced to powder, in doses of 5 decigrammes, mixed with sugar; this medicine is, however, more agreeable, and appears to act with more certainty and rapidity, when given as a syrup. From two to four spoonfuls should be given, without intermission, for six weeks or two months; as it is only after that length of time that its salutary effects are appreciable.

Amongst other observations drawn from his own practice, M. Michéa cites three cases:—one of incipient pulmonary phthisis; another of chronic bronchitis, which had resisted several other modes of treatment; and the third, of nervous asthma.

Without entering into a detailed report of facts, the symptoms described leave no room for doubting the diagnosis established by Dr Michéa; and whilst we take into consideration the mode of treatment previously adopted, the time, and the regimen prescribed, conjointly with this medicine, we cannot deny the evidently favourable action which it exercised.

It should also be remarked, in support of the practical facts recorded by Dr Michéa, that M. Recamier, more than twenty years since, frequently employed the seeds of phellandrium with undoubted success at the Hôtel-Dieu, for cases analogous to those above described.—*Bulletin de Thérapeutique;* and *Brit. and For. Med. Chir. Review*, No. 3, July 1848, p. 272.

333.—*On a Solution of Iodine in Oil.* By M. Marchal.—This preparation has superseded the other forms of iodine at the Val-de-Grace. M. Marchal, believing that cod-liver oil owes its virtues to the small quantity of iodine which it contains, concluded that a more effective preparation of this substance than the iodide of potassium is found to be, might be made by combining it with an organic body; in which state the drug would probably be longer retained in the economy. He selected an oily body, in the hope that the oil, by forming an emulsion with the bile, would allow of the substance being digested in the small intestines, and enable the stomach to become relieved of its presence. In this way, large doses of iodine can be administered, if requisite, without irritating the latter organ; while the iodine

is eliminated by the urine much more slowly than is the case with the iodide. At the same time, its absorption is made certain by the fact of its not being detected in the fæces. The iodine is dissolved in fresh almond oil as wanted, in the proportion of one part to fifteen, and of this an emulsion is made with gum tragacanth and the milk of almonds. The minimum dose is one grain, gradually increased to six grains. M. Marchal has used it extensively in the treatment of buboes and other glandular enlargements, with the best effects, in promoting and hastening their cure; M. Ricord also adds his testimony in favour of this preparation. —*Gazette des Hôpitaux*, 1848. No. XIII.

334.—*Denial of the supposed Virtues of the Aristolochia Indica as a Remedy for the Bite of Venomous Snakes*—The Aristolochia serpentaria, or Virginian snake-root, formerly enjoyed the traditionary reputation of being able to cure the bite of the rattlesnake; but no authentic proof of its utility was ever advanced. Recently in India, another member of the same genus, the A. Indica, was alleged to possess remarkable powers as an antidote for the bite of all venomous snakes; but experiments on animals have demonstrated, in the most conclusive manner, that this assertion is untrue. It failed, in every instance, to retard even the fatal action of the poison. The plant was used in the form of the powdered root, either alone or mixed with black pepper (one of the prescribed modes of preparation), and as the juice of the leaves, carefully expressed. We give the details of one of the experiments. A full-sized dog was bitten in the scrotum by a large cobra de capella; in three and a half minutes the remedies were applied; the powdered root mixed with pepper was forced down his throat, along with the expressed juice of twelve leaves; and the juice with the fresh leaves were well rubbed on the external wound. The dog showed no symptoms of uneasiness for some time: after thirteen minutes his movements exhibited a slight languor; in another minute he lay down, vomited some of the Aristolochia, and was convulsed with spasms, which gradually became feebler; in seventeen minutes from the infliction of the bite, he was lying extended on his side, exhibiting only slight twitches; and, in five minutes more, he was quite dead.

[The medical gentlemen who maintain the efficacy of the antidote, found their opinion also on the results of experiments; and the writer of the article from which this notice is taken, supposes that they must have been performed with cobras, the poisonous fangs of which had been previously removed by the snake charmer. It is astonishing that they should have allowed themselves to be deceived by so common a trick, and which a comparative experiment, without the use of the supposed remedy, would have at once detected.]—*Overland Athenæum*. Madras, May 9, 1848.

335.—*Indian Hemp in Facial Neuralgia.*—Dr Rahman, of Potsdam, has made several trials of the *Cannabis Indica*, in cases of facial neuralgia, with very satisfactory results. In more than thirty cases great benefit was experienced, and many were entirely cured. Very delicate persons were seized with a little giddiness, lassitude in the limbs, &c.; others were affected in an opposite manner, and evinced great excitement, mirth, and vivacity; but these symptoms disappeared after an hour or two, and left no unpleasant sensation behind them. The dose was from sixteen to twenty drops of the tincture, containing about one grain of the resinous extract.—*Medical Times.*

336.—*Emollient Drinks in Lead Colic.* By M. Martin Solon.—The author submitted twenty-two patients to the free use of emollient drinks, with emollient enemata twice daily. All were cured by this simple treatment in from six to fourteen days.—*L'Union Médicale*, June 15, 1848.

[The duration of the "traitement de la Charité," which consists in active purgation, is from six to eight days.]

337.—*New Method of preparing Copaiva.* By M. Lobel-Andre.—M. Lobel-André has submitted to the Academy of Medicine at Paris a new mode of preparing copaiva, which guarantees the purity of the substance, and offers a more certain mode of cure. This method consists in the saponification of the resin of the balsam of copaiva. The resin, in itself indigestible, becomes saponified, and holds in solution the volatile oil. By this method, none of the constituents of the balsam are eliminated, but are all rendered completely assimilable. The experiments made by M. Lobel-André himself, and several other practitioners, leave no doubt of the relative advantages of this method, by which, moreover, all pains in the epigastrium, malaise, eructation, and vomitings are avoided.—*Gazette Médicale;* and *Brit. and For. Med. Chir. Review*, No. 3, July 1848, p. 271.

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I.—MEDICAL PHYSICS, CHEMISTRY, AND NATURAL HISTORY.

338.—*Researches on Endosmose.* By PH. JOLLY.—This paper enters into a very full consideration of the whole subject of endosmose, and commences with a criticism of the methods hitherto employed for its measurement, in which the author shows that the indications of Dutrochet's Endosmometer are imperfect, and liable to be affected by a variety of different errors. In order to avoid these, the author has contrived a new method of measuring the amount of endosmose. For this purpose he employs a small tube from about three-fourths of an inch to an inch in diameter, over the one end of which a piece of pig's bladder is tightly tied. The bladder is then introduced for some time into spirit of wine, by which treatment it is enabled to resist putrefaction for a longer time than it does when unprepared. The substance whose diffusion is to be measured, is then brought into the tube either in the dry state or in solution, in a known quantity of water, the whole is then weighed, and the covered end of the tube inserted about a line under the surface of water in a vessel containing about four pints; the water in which is frequently changed during the course of the experiment. The tube is then weighed at definite intervals, and the weight is found to increase at first rapidly and afterwards more and more slowly, until at length, in place of increasing, a slight diminution begins to make its appearance. The experiment is then at an end: the whole of the substance introduced into the tube has disappeared, and nothing but water remains. The small diminution noticed at the end still continues, and is proved by the author to depend upon evaporation from the surface, the amount of which is determined in each experiment by the loss of weight in a tube of exactly similar form containing water only. The experiments have shown that this complete diffusion of different substances takes place in very different time, the gain in weight being with some at an end in a few hours, while with others it goes on increasing during several days. It is further proved that the weight of water which, so to speak, replaces the different substances is constant, especially if the same piece of bladder have been employed, whether the substance have been employed in the dry state or in solution in different amounts of water. The quantity of water which replaces a unit of the diffused substance, the author calls the endosmotic equivalent, and the following table contains the results of his experiments. The number placed before each refers to the piece of bladder employed in the experiment.

		Endosmotic Equivalent.
1.	Common Salt, -	4·316.
1.	„ - -	4·58.
2.	„ - -	3·991.
2.	„ - -	3·820.
10.	„ - -	4·352.
11.	„ - -	4·092.
5.	Sulphate of Soda, -	12·44.
7.	„ - -	12·023.
7.	„ - -	11·033.
6.	„ - -	11·066.
1.	„ - -	11·581.
1.	Sulphate of Potass,	11·42.
2.	„ - -	12·65.
4.	„ - -	12·76.
5.	Sulphate of Magnesia,	11·503.
6.	„ -	11·802.
6.	Sulphate of Copper,	9·564.
9.	Bisulphate of Potash,	2·345.
3.	Sulphuric Acid, -	0·391.
5.	„ - -	0·308.
7.	Hydrate of Potass,	200·09.
1.	„	231·4.
6.	Alcohol, - -	4·140.
8.	„ - - -	4·132.
4.	„ - - -	4·336.
6.	Sugar, - - -	7·250.
7.	„ - - -	7·064.
5.	Gum, - - -	11·79 (?).

The author also gives a series of

experiments from which he draws the conclusion, that the quantity of any substance passing through a membrane in a unit of time is proportional to the density of the fluid. Some observations are also made which tend to show that the endosmotic equivalent increases with the temperature, at least this is generally the case, though common salt appears to be an exception to the rule. The paper concludes with a discussion of the physical cause of endosmose, for which we refer our readers to the original.—Henle und Pfeufer's *Zeitschrift für Rationelle Medizin*, Vol. 7, p. 83.

339.—*Heating Power of Low Charges of Electricity.*—In a lecture delivered at the Royal Institution, Mr Faraday demonstrated by a simple experiment, that coal-gas might be ignited by a very feeble electric spark. He insulated on a glass stand a globular iron vessel containing the condensed gas. He then applied to it, twice, a glass tube which had been each time rubbed with a hare-skin. On applying the point of the forefinger near to the mouth of the jet from which the gas was escaping, the small spark which escaped was sufficient to ignite the gas. —*Medical Times*, July 1, 1848.

340.—*Absorption of Carbonic Acid by Sulphuric Acid.*—In our February number we inserted a notice of an observation by Professor Rodgers, that sulphuric acid was capable of absorbing 94 per cent of carbonic acid. That notice has since been copied from our journal into the pages of the *Chemical Gazette*, and has called forth communications from Messrs Noad and Morley, whose experiments concur in refuting the statements of the American chemist. Mr Morley passed a current of dry carbonic acid gas for an hour through sulphuric acid, and found that at the 340 of that time it had not gained in weight.—*Chemical Gazette*, Nos. 133 and 136.

341.—*Method of detecting Minute Quantities of Opium.* By M. HENSLER.—This method is founded on the reddish-purple colour, which porphyroxine gives when heated with dilute hydrochloric acid. In order to employ it, the substance to be tested is mixed with a little potash, and agitated with ether. A piece of bibulous paper is dipped several times in the etherial solution, allowing it to dry between each immersion. It is then moistened with dilute hydrochloric acid, and exposed to the vapour of water, when it acquires a red colour more or less intense, according to the quantity of opium present.—*L'Union Médicale*, June 24, 1848.

[M. H.'s experiments appear to have been confined to the detection of opium in mixed medicines; it is not stated whether the test is applicable to medico-legal cases, but it is not improbable that it may be so.]

342.—*New Organic Base in Opium.* By Dr G. MERCK.—The author, in the examination of a quantity of opium residues from the manufactory of M. Merck of Darmstadt, has detected a new base, for which he purposes the name of papaverine. Papaverine crystallizes in groups of pointed crystals from its spirituous solution. It is sparingly soluble in cold alcohol and ether, but much more so in these menstrua at the boiling temperature. It is insoluble in water. It scarcely affects reddened litmus paper; with sulphuric acid it gives a blue colour. The salts of papaverine are for the most part sparingly soluble in water, and the hydrochlorate is especially remarkable for the facility with which it crystallizes. It is obtained in right-rhombic prisms, the angles of which are 80° and 100°. The sulphate and nitrate are also readily crystallizable. With bichloride of platinum it gives a double salt in the form of a yellow powder, insoluble in water and alcohol. The analyses of Dr Merck establish the following as the formulæ of the base and its compounds:—

Papaverine, - - $C_{40}H_{21}NO_8$.
Hydrochlorate, $C_{40}H_{21}NO_8+HCl$.
Platinum Salt, $C_{40}H_{21}NO_8,HCl,P+Cl_2$.
—*Annalen der Chem. und Pharm.*, April 1848.

343.—*Creatine, a Constituent of Human Flesh.* By Dr SCHLOSSBERGER.—The existence of creatine in human flesh not having been yet ascertained, although it is found in the urine, the author treated six pounds of human flesh by the usual process, and extracted from it a quantity of creatine, amounting in all to about two grammes, a proportion approximating very closely to that obtained by Liebig for the quantity existing in ox and horse flesh. Dr Schlossberger did not obtain the slightest trace of inosinic acid in this experiment. — *Annalen der Chem. und Pharm.*, April 1848.

344.—*Chemical Constitution of Cholesterine.* By Dr ZWENGER. — The per centage composition of cholesterine has been determined by various analysts, but no attempt has hitherto been made to ascertain its true formula, which can only be done by the study of its products of

decomposition. When cholesterine is treated with sulphuric acid, it loses its crystalline character, becomes of a reddish colour, and is then converted into a mixture of three different carbo-hydrogens, to which the author gives the common name of cholesteriline, and distinguishes by the letters *a*, *b*, and *c*. The three substances are separated from one another by ether, which leaves a cholesteriline undissolved, and the ether on evaporation deposits a cholesteriline in crystals, while the third remains in the mother liquor. The analysis of these three substances gave the following results :—

	a Cholesteriline.	*b* Cholesteriline.	*c* Cholesteriline.
Carbon,	88·05	88·29	87·92
Hydrogen,	12·09	12·18	11·99
	100·00	100·00	100·00

These analyses lie within the limits of the error of experiment in several analyses of the same substance, and the carbo-hydrogens might therefore be assumed to be polymeric bodies, and that one only was first formed, and then by the further action of sulphuric acid partially converted into the other two, exactly as occurs in many instances when sulphuric acid acts on carbo-hydrogens. The author, however, has observed that these substances are always formed simultaneously, even when the sulphuric acid is caused to act so as to leave a quantity of cholesterine undecomposed. He considers it more likely, therefore, that their constitution is different, and gives to them respectively the following formulæ:—$C_{32}H_{26}$, $C_{22}H_{18}$, $C_{27}H_{22}$. From the previous analyses of cholesterine, he deduces for that substance the formula $C_{81}H_{69}O_3$. The action of sulphuric acid consists, then, simply in removing 3HO when the three carbo-hydrogens are simultaneously produced; thus :—

$$C_{81}H_{69}O_3 - 3HO = C_{32}H_{26} + C_{22}H_{18} + C_{27}H_{22}.$$

—*Annalen der Chim. und Pharm.* April 1848.

[The formula of cholesterine, as well as those of the three carbo-hydrogens above given, appear to us of a very questionable nature. It is more probable that the three substances described by the author are in reality polymeric, and their analyses tally sufficiently well with the formula $C_{80}H_{64}$, which would bring them into the same class with oil of turpentine, and the other $C_{10}H_8$ oils. Cholesterine would then be represented by the formula—$C_{80}H_{67}O_3$, which comes very close to the results of the analyses of Marchand, Schwendler, and Meissner.]

345.—*On the Fatty Acids of Castor Oil.* By M. Saalmuller.—Castor oil was investigated by Bussy and Lecanu, who obtained from it a solid acid, which they called margaritic acid, and two fluid acids, to which they gave the names of ricinic and elaiodic acids. It would appear from the researches of M. Saalmuller, that these chemists had in reality, under the name of margaritic acid, analysed a substance containing a considerable quantity of fixed alkali in union with a solid acid; but his experiments do not show clearly the constitution of this acid, which indeed would appear to differ in different quantities of the oil, as the results in one case agreed pretty nearly with the formula of stearic, in another with that of palmitic acid. The oily acid he has also found to be a uniform substance, and not a mixture of two, as Bussy and Lecanu supposed. He gives it the name of ricinoleic acid. This substance is prepared in a state of purity by a process identical with that of Gottlieb for the preparation of oleic acid. Ricinoleic acid is a pale yellow fluid of a syrupy consistence; specific gravity 0·94 at 59°. It has a disagreeable acrid taste, but no smell. It is soluble in all proportions in alcohol and ether. The alcoholic solution is acid to test-paper, and expels carbonic acid from the alkaline carbonates. When distilled ricinoleic acid is entirely decomposed, the first portions being very fluid, the latter very thick and oily; no sebacic acid is formed. Its salts are mostly crystallizable, and are not altered by exposure to the air. From his analysis the author deduces for this acid the formula $C_{38}H_{36}O_6$, and for its baryta salt $C_{38}H_{35}O_5BaO$. Boudet has stated that castor oil is converted into palmin by sulphurous acid in exactly the same manner as by nitrous acid. M. Saalmuller endeavoured to repeat this experiment, but without success.—*Annalen der Chimie und Pharmacie*, vol. 64. p. 108.

[M. Saalmuller's results do not agree with those of a recent investigation of ricinoleic acid by Svanberg and Kolmodin, who have obtained the formula $C_{36}H_{34}O_6$ for the acid, and $C_{36}H_{33}O_5BaO$ for the baryta salt. A formula of especial interest as the acid would then differ from oleic acid ($C_{36}H_{34}O_4$) in the amount of oxygen only. Neither of these formulæ admit of being brought into harmony with that of palmic acid, for which the researches of Playfair give $C_{34}H_{33}O_6$; and as the conversion of oleic into elaidic acid is known to be unattended by any change in constitution, we should naturally expect the passage

of ricinoleic into palmic acid to be of a similar character, which of course it cannot be if either of these researches is correct. The whole subject appears to require further investigation.]

346.—*On the Functions of the Air-sacs of Birds.* By M. SAPPEY.—In a work replete with interesting and elaborate anatomical details as to the structure of the respiratory organs in birds, M. Sappey brings forward entirely new views as to the functions of those remarkable reservoirs of respired air, which, it is well known, exist in all birds, and which are universally supposed at present to be accessory organs of respiration. The author denies that they have any relation to the aeration of the blood; his arguments are as follows:—If the blood were aerated in these reservoirs (*i. e.* in the systemic vessels), it would result that the venous and arterial blood would be similar in birds; whereas this is not the case, the difference being as great as in mammalia. The reservoirs are supplied with red arterial blood, directly from the aorta, which is returned into the vena cava; it is impossible to conceive that this blood, fresh from the heart and lungs, undergoes a second aeration in the reservoirs. Moreover, the mucous membrane of these reservoirs is of quite a different structure from that of the lungs, the latter being provided with great numbers of vessels, while the former is very little vascular. The air also which penetrates into the air-sacs is, according to M. Sappey, almost invariably a respired air.

The uses of the sacs the author conceives to be fourfold: 1*st*, to diminish the specific gravity of the animal; 2*d*, to render the equilibrium more stable; 3*d*, to render the respiration more independent of general muscular exertion than in mammalia; 4*th*, to give diffusiveness and strength to the voice. This last effect he ascribes exclusively to the diaphragmatic reservoirs.—*Gazette des Hôpitaux*, Aug. 5 and 10, 1848. (Analysis of a work "*Recherches sur l'Appareil Respiratoire des Oiseaux.*")

II.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

347.—*On the Nerves of the Liver.* By C. H. JONES, M.B.—The liver receives a pretty ample supply of nerves from various sources: branches of the left pneumogastric, branches from the semi-lunar ganglia, and some from the right phrenic, are usually described as entering the organ at the transverse fissure. Having entered the portal canals, they run in the areolar tissue which surrounds the vessels, and may be seen distinctly in great numbers when the coats of the vein are dissected off. By ordinary dissection they may be followed some distance along the portal canals, but nothing satisfactory can in this way be determined respecting their distribution and arrangement. By careful dissection, and removal of the coats of the vessels, which were treated with acetic acid and examined under a power of 200 diameters, Mr Jones has succeeded in tracing the nerves attached to the vessels of the liver further than has yet been done. His principal conclusions may be stated as follows:—1*st*, The nerves of the liver are almost exclusively composed of fibres of the kind termed by Henle *gelatinous;* a very few isolated tubular fibres are sometimes present. 2*d*, They are distributed along the whole of the vessels, and have a very complicated plexiform arrangement; and appear even in their minutest ramifications to be quite distinct from all the other tissues around them. The termination of the nerve-filaments appears to be in loops, but it is difficult to determine this point with certainty. 3*d*, The hepatic artery has a larger supply of nerves, in proportion to its size, than any other vessel; next in order follows the portal vein, and lastly the hepatic veins, which are very scantily supplied. The ducts also have but few nerves. 4*th*, The smaller hepatic arteries appear not to possess so many nerves as the larger; and it appears probable, that the nerves cease altogether with the circular fibres of the vessels. No nerves have been observed in the lobules. 5*th*, The organic nerves of the liver appear to consist of bands of a finely striated or granular material, in which elongated nuclei are set at intervals; and this basic substance has a tendency to divide longitudinally, although it is doubtful whether the so-called ultimate fibres are not the result of an artificial division.—*Medical Gazette*, July 14, 1848.

348.—*Ciliary Epithelium in Mammalia.*—It has been recently found that this variety of epithelium, besides lining the interior of the nasal cavity, and of the frontal and maxillary sinuses communicating with this cavity, is continued up the lachrymal canal into the lachrymal sac,

and is also spread over the mucous surface of both eyelids, but not over the conjunctiva covering the eye itself. From the posterior part of the nasal cavity, the ciliary epithelium passes to the upper part of the pharynx, which it lines to about opposite the lower border of the atlas: it is also spread over the posterior surface of the root of the soft palate, and latterly it is continued to the orifice of the Eustachian tube, up which canal it extends into the cavity of the tympanum.

It was until recently believed that the ciliary motion is entirely wanting in the urinary apparatus of Vertebrata. But it has been found by Mr Bowman, that in frogs a layer of ciliary epithelium lines the urinary tubules just at their junction with the Malpighian capsules; and this observation has been verified by Bischoff, Valentin, and others. Valentin was able to trace the ciliary motion even within the Malpighian capsules; so also was Pappenheim. In the kidneys of lizards, Kölliker states he has observed ciliary movements along the entire length of the urinary tubules, except at their exit from the gland, and just where they dilate into their terminal extremities within the substance of the organ. No trace of cilia has yet been found in any part of the urinary apparatus of Mammalia.

M. Rossignol finds that the ciliary epithelium along the mucous lining of the respiratory passages, ceases at the vesicular structure of the lung, its place in the vesicles themselves being occupied by simple pavement epithelium, composed of roundish or oval cells. The cessation of the ciliary epithelium at the commencement of the cellular structure of the lung, has been observed also by Mr Rainey, who states, however, that the intercellular passages and the air-vesicles in which the ultimate branches of the bronchial tubes terminate, are destitute of epithelium of any kind.

Ecker has discovered ciliary epithelium in the semicircular canals of the internal ear of Petromyzon marinus (sea lamprey). The cells were of different forms, oval, roundish, flask-shaped, and angular, with nuclei and granular contents. None of the cells possessed more than one cilium. The movements of the cilia were principally of a lashing, fanning kind. This is the first example of a ciliary structure being found in any other part of the auditory apparatus of a vertebrate animal, than the Eustachian tube.

Of the phenomena of ciliary motion.—An interesting observation in regard to the mode of action of the cilia, has been made by Mr Quekett in the case of the gill rays of the mussel, which explains more completely than could otherwise be done, the power possessed by the cilia of propelling fluid or solid particles in any determinate direction. He observed, that besides their ordinary lashing movements, each cilium possesses a kind of rotatory motion on itself, by which it turns on its own axis, through the space of about a quarter of a circle, with a movement very similar to that performed during the *feathering* of an oar in rowing.

Nature of the ciliary motion.—From experiments made on the epithelial cells of the nasal mucous membrane of man, E. H. Weber has shown that the vibratile movements of their cilia are diminished almost to one-half their usual rate by cold, and are sensibly increased by heat. In this, as well as in their rhythmic action and its persistence after death, the ciliary movements bear a close analogy to those of the heart. The influence of heat and cold is less manifest on the movements of the cilia, and also on those of the heart, in cold than in warm-blooded animals.—*Baly and Kirkes' Supplement to Müller's Physiology.*

349.—*On the Non-absorption of Narcotic Poisons by the Lymphatics.* By E. Welby Day, M.R.C.S., Birmingham.—Emmert (Meckel's *Archiv.* i. p. 176) tied the abdominal aorta of a dog, and into a wound of one foot introduced ferro-cyanide of potassium, into a similar wound of the other decoction of nux vomica. The ferro-cyanide was absorbed and detected in the urine, but the nux vomica produced no poisonous effects. In another experiment, after tying the abdominal aorta, Emmert introduced prussic acid into a wound of the foot; after the lapse of seventy hours, no poisonous effects having presented themselves, the ligature was loosened, when symptoms of poisoning were observed in half an hour. These experiments were confirmed by Schnell and Schabel. Ségalas (Magendie's *Journ. de Physiol.* ii. p. 117), after tying the blood-vessels of a loop of intestine, and injecting half a drachm of solution of extract of nux vomica, observed no sign of poisoning after the lapse of an hour.

Opposed to these facts, we have an experiment by the Academy of Medicine of Philadelphia. After tying the vena portæ, nux vomica was injected into a loop of intestine; tetanus and death ensued in twenty-three minutes. Of this experiment it may be remarked, that it has been repeated by Mr Blake (Edin. Med. and Surg. Journ. vol. liii. p. 45) with opposite results, and that, admitting the

accuracy of the observation, it cannot be allowed that the poison was absorbed by the lacteals, for the communications which exist between the veins of the intestine and those to the vena cava, enable us to account otherwise for the result.

To account for the non-occurrence of poisoning under these circumstances, we are compelled to allow the truth of one of three propositions. 1st. The poison is altered and rendered inert in the lymphatics. 2d. It cannot enter them. 3d. Having entered, it cannot be conveyed by them.

The last of these views is that of Henle, who supposes that narcotic poisons, by suspending the contractility of the lymphatic vessels, deprive them of the power of propelling onwards their contents. This hypothesis appears to be borne out by the experiments of Behr (Henle's *Zeitschrift*, Heft 1, Bd. 1. p. 35), in which it is shown, that lymphatics placed under the influence of a narcotic poison, are disabled from conveying into the system not only the poisonous agent, but also inert solutions, which under normal conditions they absorb with facility. Behr's experiment consisted in tying the abdominal aorta of an animal, and introducing into a wound in one of the lower extremities 100 drops of solution of strychnia, mixed with 120 drops of solution of ferro-cyanide of potassium. The animal was killed after two hours and a half, without symptoms of poisoning ; and neither in the urine, nor in the blood, could the ferro-cyanide be detected. In two out of six similar experiments, a mere trace of ferro-cyanide was found in the urine ; in the rest none could be discovered.

The experiments of Bischoff (Henle's *Zeitschrift*, Band 4. Heft. 1, p. 62) are in some points opposed to the above. The strychnia was introduced into a wound in the thigh, the aorta having been tied in the abdomen. In one dog, symptoms of poisoning appeared in half an hour, and death took place in an hour and a quarter. Another showed no symptom of poisoning after two hours and three quarters ; but on putting a further quantity of strychnia into the wound, poisonous effects became developed within half an hour. In two cases, in which ferro-cyanide of potassium was introduced into the same wound with the strychnia, it was found in the urine ; and in one of these in the thoracic duct, but not in the blood. [Mr Day ascribes the result of these experiments to a collateral circulation having been established, the wounds being high in the limb ; but the assertion in last sentence is almost conclusive against this view.]

With the view of procuring more unequivocal evidence with regard to Henle's view, Mr Day has performed three experiments on dogs. The abdominal aorta was tied in all, as in Behr's and Bischoff's experiments. In the *first* dog a solution of strychnia, followed by a solution of iodide of potassium, were inserted into a wound near the right hind foot. Into a similar wound in the opposite limb a solution of ferro-cyanide of potassium was inserted. The animal was killed after two hours and a half, no symptoms of poisoning having been observed. The urine gave, on adding persulphate of iron, a precipitate of Prussian blue, but no trace of iodine was discovered. In the *second* dog a mixture of hydrocyanic acid, with solution of ferro-cyanide of potassium, was inserted into the right hind leg, and a solution of sulpho-cyanide of potassium into the opposite limb. In two hours and a quarter the animal was killed, no symptom of poisoning having arisen. The urine, on being tested by persulphate of iron, gave the deep red colour of sulpho-cyanide of iron, but no trace of the ferro-cyanide. In the *third* experiment the same salts were used, but the sulpho-cyanide was inserted along with the hydrocyanic acid, and the ferro-cyanide into the opposite limb. The result was the presence of the ferro-cyanide in the urine, in which no trace of the sulpho-cyanide could be detected.—*Provincial Journal*, May 31, 1848.

[Mr Day concludes by adopting Henle's hypothesis. His experiments are well devised ; but the reasoning against Bischoff's results is not conclusive, and we think that further trials are still necessary. In particular, the contents of the thoracic duct should always be examined.]

III.—PRACTICE OF MEDICINE.

350.—*On the Treatment of Eruptive Diseases of the Scalp.* By Dr J. MOORE NELIGAN.—The author arranges these diseases as follows :—1. Inflammatory, Herpes capitis, or true ringworm, Eczema capitis, Impetigo capitis, and Pityriasis capitis. 2. Non-inflammatory, Porrigo capitis, or the Porrigo favosa of other writers. This arrangement is preferred by Dr Neligan, as it lays the foundation

of a rational, in contradistinction to an empirical plan of treating these affections.

Dr Neligan gives an excellent description of the essential characters and differential diagnosis of the above diseases. His account of the herpetic origin of ringworm is particularly accurate, and he points out with justice the error into which Mr Erasmus Wilson has fallen in describing it as a disease not of the scalp, but of the hair itself, under the name of *Trichonosis furfuracea*. He omits to notice, however, the recently alleged parasitic nature of this affection, a view of its pathology which explains its undoubted contagious character.

"The prognosis to be given in any of these eruptions depends more on the length of time which the disease may have lasted, than on the exact variety which is present; the longer they have existed, the more inveterate and obstinate they are, as also the more liable to relapse after cure. When seen early, and submitted to judicious treatment, they are generally cured in from a fortnight to three weeks, and sometimes in a much shorter space of time; but in old standing cases the cure is rarely accomplished in less than from two to three months. With reference to the peculiar form of eruption, I have found the prognosis as to curability to be as follows:—1st, the scattered form of impetigo; 2d, pityriasis; 3d, the moist form of eczema; 4th, confluent impetigo; 5th, herpes; and 6th, the dry form of eczema.

"As respects the first group of eruptive diseases of the scalp, two principles must, I conceive, be laid down, to enable their treatment to be based on rational, and not on empirical, principles: first, that they are inflammatory, and, secondly, that they are constitutional affections. That they are inflammatory is sufficiently proved by the preceding and attendant inflammation with which they are all accompanied, and by the character of the same eruptions when they occur on other parts of the cuticular surface. That they are constitutional diseases is proved chiefly by the great advantage derived from their treatment by the administration of internal alterative medicines."

As a general rule, Dr N. never allows the head to be shaved, on account of the irritation thus produced; but directs the hair to be cut close with a sharp pair of scissors, and to be kept cut as closely as possible while the least trace of eruption remains. For the same reason, the use of a comb or hard brush is not permitted; the softest hair-brush may be used, if necessary.

The scabs having been removed by a poultice or ointment, composed of from twenty grains to half a drachm of the carbonates of potash or soda to the ounce of lard, is applied three times daily, being lightly smeared over the eruption. It is washed off with an alkaline lotion (prepared by dissolving from half a drachm to a drachm of the carbonate of soda or potash in a pint of water) every morning previous to the first application for the day.

The internal treatment consists in the exhibition of the yellow iodide of mercury, in combination with hydrargyrum cum cretâ, and aromatic powder, in the following doses. To a child six years old, half a grain of the yellow iodide of mercury, two grains of hydrargyrum cum cretâ, and two grains of aromatic powder, every second morning; for an older child, the same quantity every morning; and for a younger child only every third or fourth morning. In all cases the child is kept strictly on milk diet during the entire treatment.

"Such is an outline of the plan of treatment I have now employed for more than six years in this obstinate class of diseases, with almost uniform success, both as regards rapidity and completeness of cure. Some cases, of course, prove more rebellious than others, but I have met very few which resisted for so long as three months the remedies I have mentioned, when carefully and perseveringly employed."—*Dublin Journal*, August 1848.

[The cold water douche constitutes, according to our experience, the most effectual means of carrying out the local sedative treatment so justly insisted on by Dr Neligan. Acute eczema capitis is rapidly cured by its agency. It should be employed daily, in the morning or at mid-day, not at bed-time, and its use should be continued on each occasion from five to twenty minutes. Cold water cloths should also be applied more or less constantly during the day. The water may be as cold as the patient can bear it. When the eczema is of long standing, and the integuments are much thickened, recourse must be had to other means, the most important of which is a solution of corrosive sublimate, in the proportion of from half a drachm to two drachms to the pound of water. When the disease is extensively spread over the body, the same remedy may be used with perfect safety in the form of bath—(See *Monthly Retrospect*, p. 98.)]

351.—*On Baldness and its Treatment.* By M. Cazenave.—An intimate know-

ledge of the structure and development of the hair, is essential to a correct appreciation of the mode of action of the numerous causes of baldness. These may be arranged under three heads: (*a*) those which cause atrophy of the bulb; (*b*) those which suspend the secretion of the hair; and (*c*) those pertaining to disease of the hair-follicle, or of the skin from which the hairs grow.

To the first class of causes, are referred *congenital* and *senile alopecia;* the first rarely general over the body, and the second affecting more especially the superior and anterior parts of the head.

The most common alopecias, and on account of which the physician is most frequently consulted, are those originating in a simple default of secretion of the hair, there being no atrophy of the bulb. The baldness so often occurring after certain fevers, small-pox, during phthisis, and convalescence from severe diseases, is of this kind. We must attribute to the same cause, the baldness appearing suddenly as the effect of extreme exhaustion of body or mind, or of intense moral emotion. This head includes, moreover, two forms of alopecia, arising respectively from *Syphilis*, and *Porrigo decalvans.*

By syphilitic alopecia, M. Cazenave understands baldness arising in the course of the venereal complaint, without previous disease of the skin of the affected part. He maintains, and justly, that it is due to the syphilitic poison, and not, as some have averred, to the mercury exhibited to counteract its effect, having frequently seen it in those who had never taken that drug.

The Porrigo decalvans (Alopecia circumscripta) is characterised by more or less circular spots on various parts of the head, entirely deprived of hair, and presenting a white and polished surface. Without previous heat or itching, the hairs gradually fall, until a circumscribed portion of skin is left quite bare. The principal seat of this disease is the back part of the head, the temples, and behind the ears. It occurs at all ages; but is rare in infancy, and is more common in women than men. Its duration extends over a considerable period, never less than several months. As the cure approaches, the spot acquires a redder colour, a light down first appears, and gradually the hair assumes its normal strength and colour.

The third group of alopecias includes, first, those arising from disease of the hair-follicle, as in the baldness following eczema, impetigo, and erysipelas, the cutaneous inflammation of which is propagated to the follicle, and affects the secretion of the hair. The loss of hair consequent on these diseases is not persistent, although the hair rarely recovers its normal thickness. This is more especially the case after obstinate impetiginous eruptions.

In the *Porrigo favosa*, there is no destruction of the hair bulb, but the exit of the hair from the skin is prevented. The hair is twisted and folded on itself, and the bulb from which it grows becomes gradually atrophied. Hence the persistence of baldness originating in this disease.

The secreting apparatus remaining intact, alopecia may arise from a kind of mechanical destruction of the hair, after its escape from the surface of the skin. It is in this manner that is produced the baldness accompanying lepra, and psoriasis of the hairy scalp. But the most common sources of baldness, occasioned in this way, are pityriasis and ringworm.

Pityriasis or dandriff is the most frequent cause of baldness in women, and consists in a more or less abundant furfaraceous desquamation. The hair, surrounded and compressed at its exit by cuticular scales, becomes dry, readily breaks, and falls off. The efforts made to remove the disease usually increase the loss of hair, and this simple affection may in the female become the source of most poignant grief. According to our author, the cuticular exfoliation of ringworm destroys the hair in the same manner.

Treatment of Baldness.— Congenital and senile alopecia, as also that arising from favus, are considered by the author to be incurable. In baldness arising from default of secretion, ringworm, or pityriasis, on the contrary, the hair may be restored as strong and thick as before; but not so in syphilitic alopecia, where the restoration is less perfect.

As a local application M. Cazenave recommends an ointment made of beef marrow, 30 grms.; tincture of cantharides, cloves, and cannella, of each 1 grm.

This is applied night and morning, the part having been previously washed with salt water. Repeated shaving and dry rubbing are also very advantageous. When general debility is present, sulphurous baths, with tonics and full diet are indicated. In *Pityriasis capitis* it is recommended to interrupt for a time the dressing of the head, and to wash frequently with weak alkaline and emollient lotions. With this treatment an occasional purgative, and the daily use of the warm bath, may be beneficially con-

joined.—*L'Union Méd.* Nos. 91 and 92, 1848.

352.—*Partial Leucopathia.* By MM. Rayer and Rognetta.—This affection consists in the presence of white spots of various size occurring on the surface of the body. They are seen most frequently on the face, hands, back, and scrotum, and constitute a very unpleasant deformity when seated on uncovered regions. They are more prominent when they exist in the middle of the beard, or on the hairy scalp, as the hair growing from the affected part participates in the white colour. The spots are equally sensible with the surrounding integuments, and are not the seat of any morbid sensation. They are very smooth, and somewhat below the level of the skin. According to M. Rognetta, their vascularity is diminished, and the dermoid papillæ have lost their normal prominence.

M. Rayer has been often consulted on account of this affection by Brazilians, in whom, from the normal colour of their skin, it constitutes a shocking deformity. A blister, accurately adapted to the diseased part, has formed, in his hands, the most successful treatment; the spot becomes less apparent, or disappears completely, in virtue of the coloration that the vesicatory leaves naturally on the skin. —*Annales de Thérapeutique*, Vol. VI. p. 59.

[It is not mentioned whether the improvement is of a permanent character; we fear that it will gradually disappear, as in the case of other blister marks. It has been proposed to tattoo these spots, and, if done skilfully, we see no objection to this plan of treatment.]

353.—*Case of Hydatid Disease of the Liver cured by Operation.* By Dr Rees. —The patient was a man, aged thirty-one; admitted into Guy's Hospital on the 13th of October 1847. Examination of his abdomen detected a distinct tumour, occupying the right hypochondriac and epigastric regions. Fluctuation could be felt. On the 4th of December the tumour was tapped by Mr Hilton, with a trocar and canula not larger than an ordinary exploring needle, straps of plaster having previously been passed round the body, so as to fix the tumour in position, and to exert pressure upwards. Thirty-eight ounces of clear fluid were removed. The wound quickly closed. On the 7th of January, the tapping was repeated with the same instrument, and with the same precautions, as before. On this occasion, pus of a very offensive odour escaped, and only ten ounces were obtained, owing to the canula becoming obstructed. On the 9th of January the tumour was tapped a third time with a full-sized trocar and canula, an elastic gum-tube being passed through the canula. Twenty-four ounces of fœtid pus escaped, with membranous flakes, and partially destroyed hydatids. The opening was maintained, and fœtid pus, with occasionally hydatids, continued to be discharged (the capacity of the sac at the same time diminishing) till the commencement of April. On the 11th of April the discharging orifice had closed, and there remained only a body about the size of a walnut, below the right lobe of the liver.—*Royal Med. Chir. Soc. Meeting, London.*

354.—*Case of Hydatids within the Cranium, giving rise to some singular Phenomena.* By Dr Stewart. (Communicated to the Medico-Chirurgical Society, London, by Dr Gregory).—In the first portion of this paper, Dr Gregory remarks on the greater rarity of acephalocysts, or hydatids, in the intra-cranial structures than in the thoracic or abdominal tissues, and he refers to Dr Craigie's observation that in the greater number of recorded cases only solitary serous cysts existed, not clustered hydatids. After noticing briefly three cases, one described by Rendtorff, a second related by Mr Mowatt of Worthing, in the second volume of the Medico-Chirurgical Transactions, and the third communicated by Mr Burnell to the late Dr Baillie, who remarked that none such had ever fallen under his own observation, Dr Gregory states, as the result of his reading, that the normal series of symptoms flowing from the development of intra-cranial hydatids seem to be the following:—Pain in the head, succeeded, after a considerable time, by epileptic fits, and terminating in apoplexy. The Pathological Museum of the Army Medical Department at Fort Pitt, Chatham, contains two specimens of hydatids of the brain. An account of all that is known relative to these cases has been furnished to Dr Gregory by Dr French. In the first case no cerebral symptoms were noticed during life. After death, cysts, described as hydatids, were found beneath the pia mater, covering the hemispheres, in the right corpus striatum, and in the substance of the cerebrum in its immediate vicinity. In the second case, epileptic fits were present for three years and five months before death. Here were found small round bodies, like hydatids, some hard and almost cartilaginous, not only

beneath the pia mater, but also generally throughout the substance of both the cerebrum and cerebellum. They were collected to the amount of an ounce or more. Each consisted of a distinct membranous sac, which sometimes appeared double, and in layers like an onion. All the cysts contained a clear fluid, with more or less cheesy-looking matter. Dr Gregory then communicates the following case, which, at his request, had been transmitted to him by Dr Stewart:—The patient, a gunner of the Royal Artillery, aged twenty-four years and nine months, was admitted into the Artillery Hospital Woolwich, on the 29th April 1848, immediately on his arrival from Malta, with the following history:—He had arrived in Malta with his company in February 1847, and from that time suffered from constant headache. In November 1847, he had a severe epileptic fit, followed by coma. Subsequently imbecility showed itself, and his vision became impaired, the pupils being sluggish, and the left eyelid affected with slight ptosis. His memory became defective, and he became subject to immoderate and uncontrollable fits of laughter when spoken to. When he arrived at Woolwich, he still presented the last-mentioned most remarkable symptom. His hearing was little affected, but both eyes were amaurotic; he staggered in his gait like a drunken man, and the expression of his countenance was idiotic. On the 22d of May, a large piece of meat which he had attempted to swallow stuck fast in the œsophagus, and he was only saved from suffocation by tracheotomy. A few hours afterwards, epileptic fits ensued, and were followed by coma, in which he died on the following morning. On examining the body, there was found in the middle fossa of the base of the cranium, between the cranial bones and the dura mater, a mass, the size of a closed fist, which proved to be a nest of hydatids. The hydatids were very numerous, and varied in size from that of a large pea to the dimensions of a small orange. The contiguous bones were roughened. The substance of the brain, which, together with the dura mater, was pressed towards the right side, presented no abnormal appearances. The lateral ventricles were filled with a clear fluid.

355.—*Paralysis of the Tongue from Passion.*—A man, aged fifty-nine, of delicate constitution and choleric temperament, while engaged in a dispute, suddenly lost the power of articulation. This was found to proceed from inability to move the tongue freely; no cerebral or other important symptoms were present. The faculty of speech returned, after five days, under the use of electricity from five to ten minutes daily.—*Journal of Psychological Medicine*, No. 2; and *Medizinische Zeitung*.

356.—*Paralysis from a Stroke of Lightning cured by Galvanism.* By R. ORTON.—A blacksmith was in the act of putting coals on the fire with a long iron shovel; this seems to have attracted the electric fluid, which passed up the arm, and discharged itself through the body. The consequence was immediate and complete paralysis of the right arm and hand. Motion and sensation were both lost. The limb continued in the same condition for three days, when the patient applied to Mr Orton. Moderate electric shocks were passed through the arm, *from* the shoulder *to* the hand, with immediate improvement; and after a second application on the evening of the same day, the power of motion and sensibility of the limb were completely restored.—*Med. Times*, July 1848.

357.—*On the Antagonism between Intermittent Fever and Phthisis.* By MM. DOROTEA and RENZI.—This memoir comprises a number of detailed reports by physicians inhabiting localities where intermittent fever prevails endemically, in answer to a request on the part of the authors, that they would state whether phthisis and scrofula were rarely presented to their observation. All the replies show that there is no correct foundation for the doctrine of antagonism between phthisis and intermittent fever.—*Il Filiatre Sebezio. Gaz. Méd., Paris*, No. 31, 1848.

358.—*Opening of the Ranine Veins in Angina.* By M. CEGLIE.—M. Ceglie has derived much advantage from this mode of bleeding in diseases of the throat. He explains the success by reference to the anatomical distribution of the blood-vessels. He has seen it afford great relief in the acute stages of inflammatory croup, the symptoms of oppression, the agitation, suffocative cough, &c., ceasing almost instantaneously.

To perform the operation, the tongue is drawn forward, and after puncturing the veins, the mouth is frequently gargled with warm water. The bleeding may be repeated three or four times in twenty-four hours.—*Gazetta Toscana delle Scienze Medicofiseche*, and *Prov. Journal*, Aug. 9.

359.—*Alkalis in Diabetes.* By M.

Mialhe.—The author relates the case of a gentleman, who, during the great heat of 1847, in consequence of an excessive use of acid drinks, suddenly presented all the symptoms of diabetes. The urine showed a density of 1040, and gave with caustic potass and heat a very dark purplish yellow colour, indicating the presence of a large quantity of sugar. The acid drinks were discontinued, and he was ordered to take in the twenty-four hours, five drachms of bicarbonate of soda, one drachm fifteen grains of calcined magnesia, and two bottles of Vichy water. Next day the urine presented a density of 1026, and contained no sugar. The alkaline treatment was continued for several days; there was no return of the diabetic symptoms.—*Académie de Médecine*, Paris, *Gaz. Méd.* No. 31, 1848.

360.—*Medical Diseases consequent on the Events of the Revolution in Paris.*—[The recent events in the French capital have afforded an ample field for observing the effects, and the results of treatment of surgical injuries. These have been so numerous as almost to exclude medical cases from admission into the public hospitals, although of these also there has been a great increase during the last few months.]

Among the morbid affections which have arisen in consequence of the forced marches, bivouacking in the open air, irregular diet, and excessive fatigue to which the French troops and *garde mobile* have been exposed during the last month, the most prominent has been a low fever, characterised by extreme lassitude, severe pains in the lower limbs, foul tongue, and complete anorexia, with the other symptoms which usually accompany a febrile condition of the system. Though somewhat grave in appearance, this fever has been readily cured by appropriate treatment. Sulphate of quinine in small doses, and acidulous drinks were employed with advantage at the Val de Grace.

Articular and muscular rheumatism have been very frequent. They were generally of a mild character; and in the wards of M. Champouillon at the Val de Grace, the removal of the complaint was readily obtained by local hydropathic applications.

The most serious disease to which the events of the revolution has given rise is *cerebral menengitis*, the fatal effects of which, during the month of March, have not been forgotten. During the past month, many have fallen victims to this disease, which has its origin in the combined effects of fatigue, moral excitement, and intoxication.

[We postpone a detailed description of this affection, until the appearance of a memoir on the subject promised by M. Levy.]—*Gaz. des Hôp.*, Aug. 3.

IV.—PRACTICE OF SURGERY.

361.—*The Question of Amputation in Gunshot Wounds.* By M. Malgaigne.—This question has formed the subject of a most interesting debate in the Academy of Medicine, Paris. MM. Roux and Baudens having concluded their communications,

M. Malgaigne observed, that the point towards which it was more especially his desire to call the attention of the Academy, was the treatment of fractures of the femur by war projectiles. It was a generally received opinion, more particularly promulgated by military surgeons, that such fractures required amputation. This was the practice of Ravaton, one of our great military authorities; Larrey, less exclusive than his predecessor, thought the extremity might be still preserved when the shot had only occasioned a simple fracture of the lower fourth or even third of the femur; but that all fractures occurring higher, in consequence of a gunshot wound, absolutely required amputation. M. Malgaigne then recalled the opinion of Ribes, who inclined towards considering all injuries of the femur, occasioned by musket balls, as cases of amputation. M. Malgaigne himself had adopted at one time this mode of thinking, and had applied it upon a field of battle; but the results were most unsatisfactory, and in the Polish campaign he had lost all the cases of amputation performed upon the thigh after gunshot wounds. On his return to France, M. Malgaigne had endeavoured to explain to himself this frightful mortality; and, on reading over the memoirs of M. Ribes, he was struck with an important fact, which that author honestly acknowledged:—"Out of 4000 invalided soldiers," said M. Ribes, "he had not found a single case of injury of the femur by shot. This was a proof, in his opinion, that all the men who had suffered from such wounds had died." But, on the other hand, amongst these 4000 cases, M. Ribes had not found a single case of amputation of the thigh—a

fact which proved to M. Malgaigne that all these operations had been fatal, and that amputation did not afford more chances of preserving the lives of the wounded than the opposite practice.

On inquiring further into the details of the question, M. Malgaigne had arrived at this conclusion, that the same doubts might with justice be applied to all amputations performed in the treatment of injuries by war projectiles.

The question of immediate amputation might be said to be one of the most important points of modern surgery. In the ancient Academy of Surgery it was the object of a long debate; and Boucher had said that two-thirds of the cases of amputation terminated fatally.

After Fontenoy, out of 300 cases, Faure asserted that only thirty or forty were cured.

Bilguez states that, during the seven years' war, scarcely one or two cases had been saved out of numberless operations.

On the other hand, M. Malgaigne would lay before the Academy more recent statistics of a very different tendency.

Fercoq said that, of 60 primary amputation, only 2 cases did not recover, *i. e.*, 1 out of 30.

Percy was not quite so fortunate; of 92 amputations of the leg, thigh, and arm, 6 cases died, *i. e.*, 1 out of 15.

Guthrie, at New Orleans, performed 45 immediate amputations, 7 cases terminated fatally—1 out of 7; at the battle of Toulouse, 47 amputations, 9 deaths— 1 out of 5.

The English forces during the Spanish war presented 291 amputations, 24 deaths —1 out of 8.

Del Signore, at Navarino, 31 amputations—1 death.

The English surgeons at Aboukir and Camfordomer reported 30 amputations; all were successful.

Larrey, on the 27th and 29th Brumaire, 13 amputations—2 deaths.

M. Malgaigne had further drawn up a list of the amputations performed in the hospitals of Paris, for traumatic lesions, during a period of ten years—from 1836 to 1846. These statistics were instructive. 165 amputations had been performed upon men, and 17 upon women. The mortality had been 107 for the former, and 10 for the latter. How were these amputations subdivided? The following was their classification for the men:—

	Amputations.	Deaths.	
Thigh,	44	34	over 3-4
Leg,	67	42	near 2-3
Foot,	8	5	over 1-2
Shoulder,	7	7	
Arm,	29	17	nearly 2-3
Forearm,	10	2	„ 1-5

Thus, in Paris, in the best hospitals, under the care of the first surgeons in the world (!), the average mortality of primary amputations was equal to two-thirds of the cases.

These were certainly unexpected results, and must, doubtless, cast some doubts upon the numerous successes which had been previously enumerated.

Circumscribing the question to narrow limits, *i. e.*, to the results of amputation in fractures of the thigh or leg, M. Malgaigne could bring forward an equally important document. In 1830, Dupuytren had under his care 13 fractures of the thigh in which he did not operate; 5 cases cured, 7 died, another was operated at a later period, and proved fatal.

In fractures of the knee or leg, Dupuytren performed 5 primary amputations of the thigh, 3 patients died; 4 secondary amputations, 4 deaths.

For the other fractures of the leg, in which the same surgeon did not amputate, 14 were fractures of both bones, 8 died; 2 of the tibia, 1 death; 2 of the fibula, 1 death. He performed two primary amputations of the leg: both cases terminated fatally.

Such were (continued M. Malgaigne) the precise documents existing in science; they tended to prove that the opinion of military surgeons, relative to the advantageous results of primary amputations, did not rest upon a very solid basis.

The following general conclusion might be adopted, viz., that, in attempting to preserve the limbs of the wounded, the surgeon did not cause them to incur any greater risks than if amputation were performed.

All these considerations had greatly modified M. Malgaigne's opinions on the subject, and had changed his practice in similar cases.

The events of June had furnished him with a melancholy occasion of verifying again the correctness of his newly adopted views; and this led him to expose before the Academy the results he had obtained at the Hôpital Saint Louis, in a service where an enormous number of wounded had been admitted.

He would acknowledge at once, that in some wounds all debate about the propriety of amputation should be set aside; thus in gunshot wounds of the hip or knee joints the operation was evidently unavoidable. These cases excluded, the following had been the result of the

fractures, in which M. Malgaigne had refrained from amputation :—

5 fractures of the thigh ...	2 recovered.	2 deaths	1 secondary amput.
6 fractures of the leg	2 doing very well	4 deaths	
2 fractures of the tibia.....	2 ditto		
4 fractures of the fibula...	2 ditto	2 deaths	
3 fractures of the arm.....	1 recovered	2 deaths	
5 fractures of the forearm	5 ditto		
2 fractures of the metacarp.	1 doing very well	1 death	
27	15	11	1

M. Malgaigne had performed only one primary amputation, which he was almost ashamed to acknowledge, after the energetic reprobation of which it had been the object from M. Roux, an amputation of the elbow. It might be pleaded in extenuation that the patient had recovered. M. Malgaigne would acknowledge he did not understand M. Roux's motives for proscribing this operation.

Thus, out of 17 fractures of the thigh and leg treated without operation, 8 cures had been obtained. Dupuytren, out of 31, had obtained 13 recoveries. M. Malgaigne's results were, therefore, more satisfactory than those of M. Boucher, who considered that primary operations sacrificed the lives of two-thirds of the patients.

M. Gosselin, Dr Malgaigne's colleague at Saint Louis, had also abstained from operations. The following were his results :—

3 fractures of the thigh...	1 gives hope	2 deaths	
3 fractures of the leg.....	1 uncertain	2 deaths	
4 fractures of the tibio-tarsal joint	1 doing well	1 death	2 secondary amput.
2 fractures of the shoulder	2 ditto		
2 fractures of the arm.....	2 ditto		
3 fractures of the elbow...	1 uncertain	2 sec. amput.	2 deaths
8 fractures of the forearm	8 well		
25	16 cases of success.		

The difference of the mortality amongst the insurgents and soldiers had been as follows :—

Out of 17 fractures of thigh and leg—

5 insurgents	4 deaths	1 recovery (fract. of the thigh)	
12 soldiers.....	4 deaths	7 doing well	1 amput. cured.

This considerable mortality amongst the insurgents depended in some measure, of course, upon the moral depression consequent upon their defeat, but also upon the interrogations which those unfortunate men were submitted to, without the authorization of the surgeons to whose care they were confided.

These satisfactory results were due (said M. Malgaigne) to various causes, amongst which it was only fair to place the special treatment employed. He avoided, as much as possible, all scarifications and incisions, employed only the simplest dressings, and gave food to the patients as soon as any appetite was present. With regard to venesection, he scarcely ever employed it ; being a pupil of Broussais, he formerly recommended the practice, but had been deterred from its use by the fatal effects he had witnessed. A document, which unfortunately had never been published, and which had been prepared by the orders of the administration of hospitals, was most peremptory in this respect. It was the statistical account of the mortality amongst the wounded admitted in 1814 into the hospitals of Paris. In these tables French, Prussian, Austrian, and Russian subjects had been entered, together with a statement of the mode of treatment. All except the Russians were submitted to a severe regimen. The mild cases amongst the latter received what was called a portion of food ; others received the half portion, and this *half* allowance consisted of—

Bread, - -	1 lb.
Meat, - -	½ lb.
Vegetables, - -	¼ lb.
Wine, - - -	12 oz.
Brandy, - -	12 oz.

These figures might naturally astonish the meeting ; but the tables of mortality would still further surprise the Academy. The mortality was—

For French soldiers,	1	out of	7
— Prussian —	1	—	9
— Austrian —	1	—	11
— Russian —	1	—	27

These were eloquent ciphers ; they had been sufficient to convert M. Malgaigne, who, it was true, did not allow brandy to his patients, but a reasonable amount of wine.—*Dr M'Carthy's Report in Medical Times*, Aug. 19.

362.—*Case of Obturator Hernia, with Symptoms of Intestinal Obstruction within the Abdomen, to relieve which the Abdomen was opened.* By John Hilton, F.R.S.—Miss ——, aged thirty-six, in September 1847, had some severe pain and local tenderness on pressure on the right side of the abdomen, above Poupart's ligament,

with continued constipation and some vomiting. During several days these symptoms were relieved by the local application of leeches and fomentations, and the use of aperients and purgative injections. From that time she continued in her usual health until January 20th, 1848, when she was suddenly seized with symptoms of strangulated hernia; but no hernia could be detected, although she was repeatedly examined in reference to that point. Various means were employed, without any permanent relief to the symptoms of strangulated intestine. These means were continued during eleven days. On the twelfth day from the first symptoms of strangulated intestine, Mr Hilton opened the abdomen by cutting in the median line below the umbilicus, and ascertained the existence of an obturator hernia, which had not been at all suspected to exist. The intestine was withdrawn from the obturator opening, by laying hold of it within the abdomen; no external tumour could be at that time detected in the upper part of the thigh. The operation was performed (with the patient under the influence of chloroform) in the morning, and the patient died in the evening of the same day. The post-mortem examination gave evidence of extensive recent peritonitis. The portion of intestine which had been in the hernial sac was distinctly seen, and, on examination, was found to have been in a condition favourable to recovery; the hernial sac remained fixed in the thigh. —*Med. Chir. Soc. London, in Med. Gaz.* July 21.

363.—*Excision of the Os Calcis and Astragalus.* By Mr T. WAKELY.—In a case of disease of these bones and of included articulations, excision has been practised by Mr T. Wakely.

An incision was made from the prominence of the internal malleolus, backwards and downwards to the middle of the heel. A similar incision was then made from the external malleolus downwards and backwards, to join the foregoing. A third incision was next carried along the edge of the sole, from the middle of the first to a point opposite the astragalo-scaphoid articulation, and a fourth, on the opposite side of the sole, from the vertical incision to the situation of the calcaneo-cuboid joint. These latter incisions enabled the operator to make a flap of about two inches in length from the under part of the sole. In the next place a circular flap of integument was formed between the two malleoli posteriorly, the lower border of the flap reaching to opposite the insertion of the tendo-Achillis. This flap being turned upwards, the tendon was cut through, and the os calcis having been disarticulated from the astragalus and cuboid bones, was removed, together with the integument of the heel included between the two incisions. The lateral ligaments connecting the astragalus with the tibia and fibula were now divided, and the knife was carried into the joint on each side, extreme care having been observed to avoid wounding the anterior tibial artery, which was in view. The astragalus was then detached from the soft parts in front of the joint, and from its articulation with the scaphoid bone, and the malleoli of the tibia and fibula were removed with the bone-nippers. The only artery requiring ligature was the posterior tibial.

The operation was performed on the 27th of December 1847. On the 10th of June following, the wound was healed; the patient had quite regained his health, and, with the aid of a stick, walked very well on a high-heeled shoe, the power of flexion and extension of the foot being retained.—*Lancet.*

364.—*Operation for Hare-lip.* By M. GUERSANT (Fils.)—M. Guersant, who has had extensive opportunities of judging of the most favourable period for operating in hare-lip, gives the preference to the period recommended by Dubois, during the first fortnight after birth. He advises against undertaking the operation when the child is about a year old, or during the process of dentition. It may again be performed with much greater hope of success when the child has attained the age of five or six years. Deiffenbach latterly gave a similar preference to the early operation.—*Gaz. des Hôp.*

365.—*New Mode of treating Deafness arising from Destruction of the Membrana Tympani.*—Mr YEARSLEY (*Lancet*, July 1,) mentions a simple means of remedying the loss of the membrana tympani, with which he became accidentally acquainted through the instrumentality of a patient. This consists in inserting a small portion of cotton-wool moistened, into the meatus, and passing it with a probe to the site of the missing tympanum. He relates two very astonishing instances of the improvement in hearing, thus accomplished. The remedy is a simple one, and its usefulness or fallacy will doubtless soon be ascertained —*Prov. Jour.* Aug. 9.

366. — *Treatment employed by M. Ammon in the Purulent Ophthalmia of*

New-born Children. By Dr Wengler of Dresden.—*External Treatment.*—As soon as the principal symptoms appear, viz. the secretion of pus, recourse must be immediately had to a collyrium, composed of from three to four grains of the extract of belladonna, six to eight drops of chlorine water, and from three to four ounces of distilled water. This collyrium is used tepid. The matter secreted between the eyelids is first removed with a sponge dipped in tepid water; then some drops of the collyrium are allowed to fall on the mucous surface of the lower eyelid, which ought to be depressed for the purpose, and, when the whole of the secretion has been washed away, the eye is covered with a thick compress soaked in the same liquid. As the infant is very restless, this compress is fixed by means of a bandage, so that it cannot be deranged or taken off. The compress is renewed every half hour when the secretion is not very abundant, and every quarter of an hour if there is considerable swelling of the eyelids, and much discharge of muco-purulent matter. When such is the case, it is not sufficient simply to apply the moist compress; but it is necessary each time to free the eye of the purulent secretion. If requisite in a more advanced stage of the disease, the proportion of extract of belladonna is increased to five or six grains, and that of the chlorine water to ten, twelve, or fifteen drops. This treatment is continued so long as the muco-purulent secretion remains; only, if the swelling becomes greater, and the secretion more ichorous, the temperature of the collyrium is increased.

The action of the agents entering into the composition of this collyrium is as follows:—In purulent ophthalmia, so long as the eyelids are spasmodically contracted on the globe, they prevent the escape of the purulent secretion, which accumulates, and so augments the irritation. It is therefore important to allay this spasm, and belladonna possesses in a special manner this property. Belladonna exerts in addition a local sedative effect on the capillary vessels of the conjunctiva, and its power is manifested still more deeply, for it extends to the pupil; there it not only prevents adhesions of the iris, and closure of the pupil, but its action is also seen on the turgescence of the whole anterior chamber, and tension of the cornea, which it diminishes, or even causes to disappear altogether. The purulent secretion of ophthalmia neonatorum readily undergoes putrefaction, becomes acrid, and exerts a most destructive influence on the tissues of the eye, but especially the cornea, which ulcerates. In this way are produced staphyloma and its complications. The advantage of an antiseptic, as chlorine water, in arresting the putrefactive tendency, and so protecting the eye from disorganization, is thus obvious.

Internal Treatment.—Though not to be neglected, this is of much less importance than the local treatment. The two following indications are chiefly worthy of attention: 1st, To allay fever, and procure for the infant a refreshing sleep. 2d, By the use of purgatives, to diminish the increased flow of blood to the head. For these purposes, Ammon prescribes nitrate of potash four to six grains, powder of oyster shells six to twelve grains, distilled water and syrup of manna, of each an ounce; and of this he gives one to two teaspoonfuls every hour. In general this medicine fulfils well the above indications; but if the symptoms are very urgent, half a grain of calomel twice daily is exhibited. — *Annales d'Oculistique*, January 1848.

[We recommend those of our readers, who may adopt the above plan of treatment, to substitute for the belladonna its alkaloid atropia, as being a much more cleanly and efficient preparation.]

367.—*Treatment of Anchyloblepharon.* By M. Dijon.—In cases of adhesion of the eyelid to the globe, M. Dijon passes a lancet-shaped needle across the base of the cicatrix, as deep as possible, but parallel with the margin of the eyelid. Through this aperture he passes a piece of fine silver wire, the extremities of which he joins, and leaves this ring in for fifteen or twenty days, at the end of which time the trajet is free and its sides cicatrized: he then cuts out the wire. It is found, he says, to answer the purpose perfectly.—*Gazette des Hôp.*, Dec. 2, 1847; *Dub. Quarterly Journal*, May 1848, p. 475.

368.—*Scrofulous Ophthalmia.* By M. Morand.—The irritability of the Schneiderian membrane in this disease, and the sneezing and other phenomena which it so frequently presents, are well known to every practical surgeon, yet, until lately, the actual condition of the mucous membrane lining the nose has not received much attention. M. Morand has lately directed particular notice to this circumstance. He says:—"In scrofulous ophthalmia the olfactory membrane participates with the conjunctiva in the inflammation that is set up; that it is especially about the turbinate bones, and in the anfractuosities of

the nasal fossæ, that the inflammatory action resides; and that this shows itself in the form of an œdematous engorgement, precisely similar to what is observed in the eyelids. The more I study this disease, the more convinced am I that this is the case. A little attention suffices to show that the redness and tumefactions of the pituitary membrane almost always precede or accompany that of the conjunctiva. This can be more positively determined by means of the speculum auris. On examining attentively the interior of the nasal fossæ, one cannot fail to observe that the redness and swelling of the nostrils, and even of the upper part of the lip, that are so commonly observed in persons of a scrofulous habit, are merely an evidence of the inflammatory action going on in that membrane. It is by proceeding in this way that we can best appreciate the degree and extent of this inflammatory action, the extension of which to the palpebral and ocular mucous surfaces is often very rapid; sometimes, however, it remains for a long time stationary, without showing any disposition to extend." For the relief of this disease M. Morand applies the nitrate of silver, either in substance, solution, or ointment, extensively over the surface of the pituitary membrane. The value of this remedy has been extensively attested by Dr Edwards of Bath, and, according to his experience, with the most decided benefit, even in cases of long standing, and where other remedies had failed.—*Dublin Quarterly Journal*, May 1848, p. 477.

369.—*Fatal Tetanus from Injury of the Cornea.*—Mr Pollock has related a case of a man, aged thirty-three, who had received a lacerated wound of the cornea from the lash of a gig whip. The cornea was completely divided, but there was no prolapsus of the iris. Violent inflammation ensued, and on the evening of the sixth day tetanic symptoms set in; on the ninth trismus was fully established, general tetanus ensuing; he died upon the tenth morning, the globe having previously suppurated.—*Med. Gazette*, June 4, 1847; and *Dublin Quarterly Journal*, May 1847, p. 482.

370.—*Statistics of Operations for Cataract.*—Dr Edward Jäger, son of the celebrated ophthalmologist, has given the following statistics of his father's operations for cataract, performed at the Josephine Academy in Vienna.

From 1827 to 1844, Professor Jäger operated on 1011 cataracts, of which 764 were lenticular, 207 capsulo-lenticular, and 40 capsular. The kinds of operation to which he had recourse were as follows:—

Extraction by the superior section in	728
„ by the inferior section	9
Partial extraction . . .	58
Depression	129
Breaking down the lens . .	87
	1011

Of the above number, 63 lost their sight; and it will be seen by the subjoined table, what were the processes employed that gave the worst results:—

Of the	58	operated by partial extraction	3
„	737	„ by extraction	33
„	87	„ by breaking down the lens	6
„	129	„ by depression	21
			63

It follows, from this statement, that extraction has been the most successful; as the proportion of those who lose their sight, to the number in whom the operation succeeded, is 4½ per cent. in extraction; 16 per cent. in depression; and 8 per cent. in breaking down the lens or absorption. In order, however, to derive full satisfaction from these statistical returns, we ought to have been apprised of the considerations, that influenced Professor Jager to have recourse to one operation, in preference to another.—*Bulletin Méd Sciences*, from *Ueber die Behandlung des granar Staares.* Vienna 1845, and *Ranking's Abstract.*

371.—*Extraction of Cataract by Suction.*—M. Blanchet presented to the Academy of Medicine a patient who had been affected with soft cataract for fifteen months, and on whom he had operated by this method with complete success. The pupil having been previously dilated by belladonna, he made a puncture in the cornea at the limit of this dilatation, in order that the slight mark, which would result from the wound, should not remain over the pupil. He then introduced through the incision in the cornea, as far as the crystalline lens, a tube resembling an anal syringe, but differing from it in having a greater diameter, and in its extremity being drawn out like the mouthpiece of a flute; he then aspired through the instrument.

If, after having tried the suction, he found the capsule of the lens opaque, he then proceeded as usual.

The patient had been operated upon ten days, the pupil was perfect, vision

completely established, and no accident occurred as a result of the operation. M. Blanchet has employed this method, since June 1846, on other patients, with variable success; he has also resorted to it in certain purulent and sanguineous effusions into the eye.—*Gaz. Méd.*, Juillet 1847, and *Ranking's Abstract.*

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

372.—*The Duration of Labour a Cause of Danger to the Mother and Child.* By Professor Simpson.—In opposition to the general opinion of obstetric writers, Dr Simpson maintains that the mere duration of labour has a direct and decided influence upon the degree of danger and fatality accompanying parturition. It is by means of statistical data compiled from the practical treatise of Dr Collins, a strong opponent of this doctrine, that our author proves the propositions he lays down. The doctrine itself is not new. It was maintained by Dr Simpson's predecessor in the chair of midwifery, Professor Hamilton.

I.—*The Maternal mortality attendant upon parturition increases in a ratio progressive with the increased duration of the labour.* The results of 15,850 cases of labour in which the duration of the process was noted, and among which 138 cases proved fatal, substantiate this proposition beyond doubt. The following table exhibits the rate of increase of the maternal mortality corresponding to the increased hourly prolongation of labour.

Table of the Proportion of Maternal Deaths in relation to the Duration of Labour in 15,850 *Cases of Delivery.*

Duration of Labour.	Proportion of Mothers Lost.
Within 1 hour,	1 in 322 died.
From 2 to 3 hours,	1 in 231 died.
From 4 to 6 hours,	1 in 134 died.
From 7 to 12 hours,	1 in 80 died.
From 13 to 24 hours,	1 in 26 died.
From 25 to 36 hours,	1 in 17 died.
Above 36 hours,	1 in 6 died.

II.—*The Infantile mortality attendant upon parturition increases in a ratio progressive with the increased duration of the labour.* The following table shows the proportion of children lost in labours of different degrees of duration.

Table of the Proportion of Infantile Deaths in relation to the Duration of Labour in 15,850 *Cases of Delivery.*

Duration of Labour.	Number of Infants Still-born.
From 1 to 2 hours,	1 in 20 was lost.
From 3 to 6 hours,	1 in 18 was lost.
From 7 to 12 hours,	1 in 11 was lost.
From 13 to 24 hours,	1 in 6 was lost.
From 25 to 36 hours,	1 in 3 was lost.
Above 36 hours,	1 in 2 was lost.

These two tables given above, refer to the proportion of maternal and infantile deaths as regulated by the duration of the labour. But the occurrence also of complications and accidents during the process, is regulated and influenced by the same law of duration.

III.—*The mortality of most of the Morbid Complications connected with labour increases in proportion as the labour is increased in its duration.*

The truth of this proposition might be proved with regard to each complication separately, such as convulsions, rupture of the uterus, retention of the placenta, hemorrhage, &c. &c., but it may be sufficient to show, that taking these complications collectively, the tendency to their general occurrence becomes greater and greater in proportion as the length of the labour is allowed to become increased.

Table of the Proportion in which 305 *Morbid Complications occurred in* 15,850 *Labours of different Durations.*

Duration of Labour.	Proportion of Complications.
Within 1 hour,	1 in 114 was complicated.
From 1 to 2 hours,	1 in 90 was complicated.
From 2 to 3 hours,	1 in 69 was complicated.
From 4 to 6 hours,	1 in 58 was complicated.
From 7 to 12 hours,	1 in 32 was complicated.
From 13 to 24 hours,	1 in 12 was complicated.
From 25 to 36 hours,	1 in 9 was complicated.
Above 36 hours,	1 in 5 was complicated.

Further, when operative interference, such as by the forceps, crotchet, turning, &c., is required in order to terminate a labour, the *time* of the labour at which that interference is had recourse to regulates the amount of attendant danger, much more than the details and effects of the operation itself. In other words,

IV.—*The mortality resulting from Operative Interference increases in amount according as the period of the performance of the operation is proportionally more distant from the date of the commencement of labour.* The following table demonstrates this proposition, as far as forceps' operations are concerned:—

Table showing the Maternal Mortality attendant on twenty-four Forceps' Operations, to be regulated by the previous Duration of the Labour.

Duration of Labour.	Results to Mothers.
Within 24 hours	1 in 13 died
From 25 to 36 honrs	1 in 6 died
From 37 to 48 hours	1 in 4 died
Above 48 hours	1 in 2 died

Again, the following table of the results of seventy-six cases of craniotomy, affords direct evidence of the proposition :—

Table of the Maternal Mortality attendant upon seventy-six Craniotomy Operations, as regulated by the previous Duration of the Labour.

Duration of Labour.	Results to Mothers.
Under 24 hours	1 in 19 died
From 25 to 48 hours	1 in 8 died
Above 48 hours	1 in 3 died

—*Prov. Med. and Surg. Journ.*, March 1848.

373.—*Causes of Abortion.* By Dr W. TYLER SMITH.—Our author divides the causes of abortion into two great classes; I. Those depending on irritation of extremities of excitor nerves—*eccentric causes.* II. Those depending on irritation of the spinal centre—*centric causes.*

I.—*Eccentric Causes of Abortion.*

Irritation of the *mammary nerves* is first enumerated. Among other evidence of their influence may be adduced that of cases in which, owing to the synergic action between the uterus and breasts, the mammary secretion has been almost entirely stopped by conception. In such a case the child will suck vigorously to obtain the milk and in vain, until the uterus is excited to the expulsion of the ovum, after which event the secretion of milk returns abundantly.

2. Irritation of the *trifacial nerve.*—Sometimes abortion happens without any other assignable cause than the appearance of the dens sapientiæ, just as teething may excite strangury in the infant.

3. Irritation of the *vesical nerves.*—As in cases of abortion from the presence of stone in the bladder or any vesical irritation.

4. Irritation of the *ovarian nerves.*—As evidenced by the fact of abortion occurring generally at the menstrual epoch, or, in other words, at the period of the ovarian nisus.

5. Irritation of the *rectal nerves.*—As shown in cases of abortion brought on by the irritation of hemorrhoids, ascarides in the rectum, violent purging, dysentery, &c.

6. Irritation of the *vaginal nerves.*—Plugging the vagina is a plan sometimes resorted to for artificially producing abortion.

7. Irritation of the *uterine nerves.*—This is undoubtedly the most important of all the causes of abortion. In evidence may be adduced the influence of the death of the fœtus in producing abortion, also the influence of separating the membranes, of a diseased placenta, of effusion of blood into the uterine cavity, irritation of the os uteri, plugging the os uteri, &c. &c.

It is remarkable that irritation of the stomach, between which and the uterus there is such a distinct relation, should not produce abortion. After delivery, the slightest gastric irritation will excite contractions of the uterus; but during pregnancy, gastric irritation and sickness even to death, may occur without disturbing the fœtus in utero. Again, in regard to the lungs, utero-gestation retards the progress of disease in them, but if the most extensive disease of the lungs exist, it does not excite abortion.

II.—*Centric Causes of Abortion.*

Among these are certain *erythematic* conditions of the system. Such are the exanthemata, particularly small-pox and syphilis. Again, we have the *pyretic* state of the system, as at the commencement of fevers and acute inflammations, also *diseased states of the blood*, whether idiopathic or artificially produced by oxytoxic agents.

We have also in this class of causes the influence of *mental emotion.*—*Lancet* April 15, 1848.

[We cannot avoid expressing our belief, that in discussing this subject our author has refined to a degree not justified by clinical observation. His theoretical views are, in many respects, well founded, but too much stress is certainly laid on the influence of the nervous system. The whole course of lectures, from one of which the above notice is extracted, can be recommended to the student of obstetricy as worthy of careful perusal.]

374.—*Cases of Vaginal Hysterotomy.* By Dr Gunning S. Bedford.—The first case was that of a female, who had previously been made to abort by the notorious Madame Restell, and in whom the os uteri became completely closed after she had been again impregnated. On labour coming on, a bilateral section of the vaginal portion of the uterus was made; and in ten minutes after the operation the patient was delivered of a full-grown living child. Both mother and child did well.

The second case occurred in the practice of Dr Clinton. The woman had been in labour upwards of forty hours; the pains were frequent and expulsive, and the case was assuming a serious character. Dr Bedford proceeded with a probe-pointed bistoury covered to within a few lines of its extremity with linen, and made a bilateral section of the neck of the womb, extending the incision to within a line or two of the peritoneal cavity. The head of the child was felt through the opening made. Six hours afterwards, no advance having been made, although the pains were severe, another incision was made in the posterior lip of the uterus. Twenty-four hours after the operation the os uteri was enlarged to the size of a dollar. The pulse was 140, and the patient's strength was evidently giving way. It was resolved to deliver with the forceps, which was then done with great difficulty. Both mother and child did well.—*British American Journal of Med. and Phys. Sci.*, June 1848.

375.—*Prolapsus of the Uterus during Labour.* By Dr Watson.—This woman had been some time in labour with her first child, under the charge of two midwives, when Dr Watson was called in. On examination, he found the uterus entirely without the vulva, containing a fœtus at the full time; the os uteri dilated to about the size of a twenty-five cent piece, very thick, firm and unyielding, with the caput succedaneum projecting through the orifice. Dr W. proceeded to envelope the protruded uterus in linen cloths soaked in warm water, and, after several applications, the uterus began to act with such force as to give strong fears that laceration might take place, but the pains had no effect in enlarging the os uteri. Dr W. then proceeded to enlarge the os by incising it at three points, and after this, the child was soon expelled. Although still-born, it was easily resuscitated. After the placenta was extracted the uterus contracted firmly. It was then returned to its proper position. The mother made a very good recovery.—*The Medical Examiner and Record*, Philadelphia, April 1848.

376.—*Sudden Death after Delivery.* By Dr Reynolds.—This woman, æt. twenty-three, in her first pregnancy, had been for some months troubled with severe cough, which was believed to be sympathetic of her condition. After a labour of about two hours' duration, she was delivered of a still-born infant, and immediately she began to sink, and died in less than six hours. There had been no flooding. On a post-mortem examination, the only morbid appearances of any importance were found in the lungs. That on the right side was small and wasted, and the air-cells engorged with venous blood. The left lung was also very small, and had a peculiarly exsanguine appearance. There were no tubercles in either lung.—*British American Journal of Med. and Phys. Science*, June 1848.

377.—*Insertion of the Umbilical Cord upon the Membranes of the Ovum. Rupture of a Branch of the Umbilical Vein, and Death of the Infant.* By M. Lamestre.—On the evening preceding delivery, this mother was taken with a violent pain in the loins and belly, and presently a large quantity of blood escaped per vaginam; but by this abundant hemorrhage the mother was in no way affected. The child was born dead. On examining it after birth, the cord was found pale and exsanguine, and inserted upon the membranes five or six inches from the border of the placenta. At its insertion, the cord bifurcated into two branches, consisting each of an umbilical vein and artery, which, after advancing undivided for about two inches, then gave off several branches, which proceeded to the placenta.—*Archives Générales de Medecine*, June 1848.

378.—*Fracture of the Cranium before Delivery in a Fœtus at the full time.* By M. Blot.—A woman, æt. twenty-seven, who had been in labour for a short time,—hav-

ing the os uteri somewhat dilated, and the membranes still entire,—fell from a second story, and fractured the right thigh. When carried into bed and examined, the child's head was found low down in the pelvis, and the bones crepitated as if broken in several parts. The child was delivered by the forceps; it was still-born. There was a great effusion of blood below the scalp; the parietal bones were broken into several parts. The dura mater and meninges were unhurt.—*Archives Générales de Med.*, June 1848.

379.—*Removal of a Fibrous Tumour of the Uterus.* By M. RECAMIER.—This woman, æt. fifty, had suffered for a year and a half from repeated uterine hemorrhagies which increased at each recurrence. On examination, the uterus was found retroverted, the os uteri patent, and within the cavity of the uterus a large sessile fibrous tumour projecting from the posterior wall, and having an ulceration on the surface at its lower part. It was evident that very soon this woman must succumb to the violent floodings to which she was subject, and consequently it was determined to attempt to remove the tumour. A very incomplete account is given of the operation. The uterus was pressed down by means of one hand applied on the hypogastrium and a finger introduced per rectum, with the object of hooking down the uterine mass. The tumour was removed in successive slices till only the healthy tissue of the uterus remained. This woman made a good recovery.—*L'Union Méd.* July 15, 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

380.—*On the Use of Chloroform.* By Mr HUMPHREY.—"Since its introduction, chloroform has entirely superseded ether in our practice; we have been in the daily habit of using it during the last nine months, and I am not aware that its administration has been productive of any ill consequence in a single case. The only formidable symptoms which I have witnessed from the administration of chloroform have been those of fainting. On one or two occasions these were rather alarming. Splashing the face freely with cold water was found to be the most effectual means of inducing re-action. I cannot tell what conditions of the system decidedly contraindicate the use of chloroform, but I should be unwilling to administer it to persons in whom fainting was likely to be attended with serious consequences—such as old people, or persons with feeble or diseased heart, intermitting pulse, or disease of brain.

"I have observed chloroform and ether to act exceedingly well on delicate and enfeebled persons, those very cases in which we have most to apprehend from the pain and shock of an operation; and the knowledge of this fact has induced me to recommend amputation in some cases where I should have been unwilling to submit the patient to the unmitigated pain of such a procedure.

"Of the influence of chloroform in preventing the sufferings of the patient, during an operation, there can be no doubt, and if it do no more, it is a wondrous boon; but the more important question of its influence upon the ultimate recovery of the patient, can be decided only by the carefully collected results of extensive experience. I can venture only to give my own impressions, which have gradually grown, from the observation of many patients, and which are decidedly in favour of the agent. Though quite prepared for occasional fatal accidents during its administration, I believe that the average success of operations will be increased by its cautious and discriminate use. The shock to the system (a very important item in an operation) is so closely connected with the pain felt during the time, and is so greatly lessened by the absence of pain under the influence of chloroform, that in several instances, and those cases in which its effects were most to be dreaded, I have been unable to trace any of its usual consequences. There has been certainly, on the whole, less prostration followed by feverish re-action, after operations under ether and chloroform, than we used to witness before the introduction of these agents."—*Prov. Jour.* August 9.

381.—*Traumatic Tetanus cured by Chloroform.* By Mr BAKER.—A man had his finger jammed in machinery, and severe tetanic symptoms supervened on the fifth day. He had lost all power of articulation and deglutition. The chloroform was administered on a handkerchief, and in three minutes the muscles began to yield, and in a short time the patient fell into a sound sleep, with the muscular system relaxed and free from convulsions. The tetanus did not return, but the finger

continued much swollen, and was amputated on the twelfth day after the accident. The case did well.—*Lancet*, June 3.

[This is a very interesting case, and, in conjunction with others that have been recorded, points to chloroform as the remedy from which most is to be hoped in the treatment of this intractable malady.]

We subjoin a short account of two of the fatal accidents which have recently occurred from the use of chloroform. Melancholy results of a similar kind have followed its employment in Birkenhead, London, Boulogne, and Paris. We defer till next Number some general remarks which we intend to offer on these cases:—

A young woman presented herself with disease of the distal phlanx of the middle finger of the left hand, requiring amputation at the middle joint. As she appeared of timid disposition, and exhibited more than usual reluctance to submit to the operation, a drachm of chloroform was administered in the usual way, namely, by sprinkling it on a pocket-handkerchief and causing her to inhale the vapour. She coughed a little, and then gave a few convulsive movements. When these subsided, the necessary incisions were performed, which did not occupy more than a few seconds. Scarcely a drop of blood escaped. The patient was then put into the recumbent posture, with the head low. Active means were taken to bring her out of the state of collapse into which she had fallen. But although these means, including artificial respiration, were perseveringly employed for five hours, the unfortunate woman never breathed again. Death was almost instantaneous, for, after the convulsive movements above described, she never moved or exhibited the smallest sign of life. No opportunity was afforded of making a post-mortem examination; so that it is not known whether or not there were any special circumstances, such as aneurism of one of the great vessels, or disease of the heart.—Dr Hardinge in *Overland Athenæum*.

A young man, 24 years of age, corpulent, of a lymphatic habit, was admitted into the Hôpital Beaujon on the 25th of last June, having been struck in the left thigh by a ball, which, traversing the limb from before backwards at its middle part, had broken the diaphysis of the thigh-bone into large splinters. The disarticulation of the thigh, judged indispensable, was decided on. The patient was submitted to the action of chloroform by means of a small bottle pierced with several holes, containing a peculiar diaphragm saturated with chloroform, and surmounted, at its opening, with a large cone adapting itself to the mouth of the patient. The nostrils were closed by the finger of an assistant. At the end of three or four minutes there were slight convulsive movements, and soon afterwards the patient was in a state of complete relaxation. M. Robert commenced immediately. The femoral artery being compressed in the groin, he plunged in a long straight knife at a point three fingers' breadth beyond the antero-superior iliac spine, and made a large anterior flap. During this part of the operation, the patient (although the artery had for a very short time not been perfectly compressed) lost but a very small quantity of blood. At this period the patient began to recover consciousness. M. Robert wished to prolong the state of insensibility, and directed, with this view, a renewal of the inhalation while he continued the operation; but a quarter of a minute had scarcely elapsed when the respiration became stertorous, and he immediately discontinued the inhalation. The patient's face was very pale; his lips discoloured; his eyes, the pupils being dilated, were turned upwards under the upper eyelid. The operation was immediately suspended, and M. Robert hastened, with the help of assistants, to attempt to recover the patient, whose respirations had become infrequent and sighing, whose pulse was no longer perceptible, and whose limbs were in a state of perfect relaxation. Frictions to the skin, irritation of the pituitary membrane, frequent movements of the arms and the thorax, were all employed with energy and perseverance. Several times respiration seemed to return, and the pulse became appreciable; but the amelioration was but for the moment, and, after three quarters of an hour of incessant efforts, the patient had ceased to live.—*Med. Gaz. and L'Union Méd.*

382.—*On the Action of Diuretics.* By Dr Golding Bird.—Diuretic agents are divided into two classes by Dr Bird. The first, termed *specific diuretics*, comprises those remedies which exert no chemical action on organic matter out of the body, and appear to be incapable of augmenting the quantity of solids in the urine, and hence they are only of use in increasing the elimination of water—they may, and do act as renal hydragogues, but not as renal depurants. To this class belong squill, copaiba, broom, juniper, turpentine, digitalis, &c. All these have the power of increasing the discharge of fluid by the kidneys; but the quantity of solids present in the urine will never be found

to exceed much the normal quantity. Hence, these drugs are only of service in the removal of dropsical accumulations.

The second class (termed *chemical* or *alterative diuretics*) comprehends those medicines which increase the amount of solid elements in the urine, and thus act as true depurants. It includes "the alkalies, their carbonates, and their salts, with such acids as in the animal economy are capable of being converted into carbonic acid, including the acetates, tartrates, citrates of soda and potass. These remedies all act alike; they all actively stimulate the excreting function of the kidneys, and increase the bulk of the urine; but they do more, they actually increase the metamorphoses of tissue by, in all probability, a direct chemical action on the elements of worn-out and exhausted tissues, or other matter in the capillary laboratory of the body. It is well known that alkalies and their carbonates powerfully dissolve albumen out of the body, and even break it up into various secondary bodies: thus, digested with an alkali, albumen yields leucine, protid, and erythro-protid, bodies allied to gelatine, formic acid, and other compounds. In like manner casein is broken up into tyrosin, leucine, valerianic acid, and other elements. From some such changes occurring in the body, and in the living organism itself, we find the chemical diuretics easily effecting important changes." This Dr Bird has frequently confirmed by direct experiment; and he relates the case of a lady in whom, by the use of three drachms of the acetate of potass, the amount of solid ingredients of the urine passed in the twenty-four hours was increased from 416 to 782 grs., the increase consisting chiefly of creatine, creatinine, uroxanthin, and matter rich in sulphur. The quantity of urine passed daily was at the same time increased from sixteen to forty ounces. "Now, admitting that the elements of our frames resist chemical influences in the ratio of their vitality, it would follow that such constituents of our fibres as present the greatest departure from health are less highly vitalized, and thus yield the easiest to the chemical force exerted by the alkaline diuretics. On this account it is fair to presume that, when we cause an alkaline carbonate to circulate through the blood, it exerts an influence on the nascent elements of those matters less highly influenced by life, allied to that which they exert on dead matter, aids their resolution into substances allied to those produced out of the body, and actually causes the matter to assume so soluble a form as to allow of its ready excretion."

"I would earnestly (Dr Bird observes) beg a careful and steady trial to the *depurating or chemical diuretics*, especially the salts of potass with vegetable acids, in the treatment of chronic affections, in which the exciting cause, or existing disease, depends upon the presence of some product of less vitality or imperfect organization. I fully believe that in many instances such matters will be often found to yield, whether they present themselves as albuminous deposits in glands, furuncular disease of cellular tissue, or incrustations on the skin, as in some of the squamous and tubercular cutaneous diseases. That they will succeed in increasing the waste of matter, is, from my observation, beyond all doubt; that the lowest vitalized matters will yield to the solvent the readiest is most probable, and that an important and powerful addition to our supply of therapeutic weapons is thus certain."—*Med. Gaz.* Aug. 11, 1848.

383.—*On the Utility of Trisnitrate of Bismuth in the Diarrhœa accompanying Phthisis.* By Dr T. THOMSON, London.—The author considers the trisnitrate of bismuth to surpass in efficacy our most approved remedies for this complaint. He has taken every opportunity, during the last twelve months, of testing its powers, and has preserved notes of twenty-one of the cases in which it was administered. Of these, eighteen were phthisis in various stages of progress, and three bronchitis. In fifteen of the patients the diarrhœa was entirely removed; in four, transient benefit was experienced; and the remedy proved useless only in two instances. The dose administered was about five grains three or four times daily, usually combined with a little magnesia and gum arabic.—*Royal Med. Chir. Soc. Meeting, London.*

VII.—FORENSIC MEDICINE AND TOXICOLOGY.

384.—*Asphyxia by Drowning; Ingesta in the Bronchi.* By Professor TOURDES, Strasburg.—A woman of thirty drowned herself in the Ill. She was taken out without delay, and means were used in vain for resuscitation. The face was pale; the tongue was retracted; there was distinct vascular injection at its base, also of

the soft palate, the epiglottis, the larynx, and the whole extent of the bronchial ramifications. In the mouth, in the trachea, and in the bronchi, were found alimentary matters white and pulpy; and in the gullet and stomach, matters with the same characters. A great quantity of water mixed with a fine froth was also contained in the air-passages. The lungs were of uncommon size, and there was some subpleural emphysema. The heart contained a dark liquid blood, more pitchy in the left than in the right cavities. There was much water in the stomach. The brain was considerably injected. There was much serosity under the arachnoid, and in the ventricles. The introduction of alimentary matters into the air-passages must have been the cause of the speedy death. — *Gazette Médicale de Strasbourg*, March 20, 1848.

385.—*Asphyxia by Drowning; Bloody Froth in the Bronchi.*—The body of a young man was taken from the canal of the Rhine, who was drowned the day before. The cuticle of the hands and feet was hardly blanched. The windpipe and air tubes contained much water, and a fine red froth glued to the walls of the tubes, the mucous membrane of which was strongly injected. The lungs were large, of a deep red colour, gorged with a red froth, and had on their surface emphysematous protuberances of a pale colour. The blood in the heart was fluid and reddish. The stomach contained much colourless fluid, and some greyish remnants of aliment. The ileum exhibited a remarkable development of isolated follicles, covering the extremity of the small intestines, like an extensive eruption. This is a well-marked case of asphyxia. The close of life had been long and painful; the froth was mingled with blood—a rare occurrence in man.—*Ibid.*

386.—*Asphyxia by Drowning in a Child.*—The body of a female child, of ten years of age, was taken from the water eighteen or twenty days after drowning. All the signs of asphyxia had disappeared; the whole body showed marks of gaseous putrefaction. The face was swollen, and as black as that of a negro. The eyes were sunk, the nose flattened, the tongue projected between the arches of the teeth. The skin, deprived of its cuticle, was green and blue over the trunk and extremities. The cuticle of the hands and feet was thickened and wrinkled, and easily detached; the nails still adhered with some force. The heart, distended with gas, contained a little frothy blood in the right auricle. The two ventricles showed each a very different colour, dependent, without doubt, on the unequal quantities of blood in the respective cavities at the moment of death. The right ventricle was black, the left red. The lungs were green and emphysematous; the brain and the cerebellum softened, green and fetid. The state of the hands and feet here afford the indication of an immersion between fifteen and twenty days.—*Ibid.*

387.—*Asphyxia by Suspension.*—The bodies of two men who had hanged themselves, were examined on the same day. The one, aged fifty, was found hanged on a tree with a new cord. The face was blue, the pupils dilated, the tongue between the teeth; no effect on the genital organs; the mark of the cord was oblique, ascending from right to left, and passing over the thyroid cartilage in front, and behind over the occipital bone, where there was a deep impression corresponding to the knot of the cord. This mark of the cord was brownish, dry, between five and six lines broad, streaked, without any trace of ecchymosis, spread over with oblique furrows, and small red elevations arising from the impression of a hard and strongly-twisted cord. A slight brownish injection was observable on both lips. The larynx, the muscles and vessels of the neck, before and behind, showed no sign of lesion. The lungs were depressed, considerably engorged; there was some froth at the commencement of the bronchi; the mucous membrane of the air-tubes was injected, as was also the base of the tongue. The heart, particularly on the right side, contained black liquid blood. The stomach was empty.—The other was a younger man, who hanged himself with his handkerchief. The face was pale, the tongue pressed against the arches of the teeth. On the right side of the neck was an irregular superficial groove, varying in breadth from 1-5th to 4-5ths of an inch, ascending from the thyroid cartilage towards the ear. On the left side the groove divided into three branches, corresponding to the folds of the handkerchief, and was marked out by a whitish line on a blue ground over the upper part of the sterno-mastoid muscle, and was lost behind the ear. The head had been surrounded by a simple ring, formed by the handkerchief. A clot of blood, the size of a bean, was on the left side under the skin of the groove. The lungs were depressed; the pulmonary congestion was moderate. There was an abundant frothy liquid in the bronchi, which were much injected. The base of the tongue was somewhat red. The heart

was hypertrophied; it contained, particularly on the right side, liquid blood, with some diffluent clots. The stomach was empty, as well as the bladder.—*Ibid.*

388.—*Incomplete Suspension—the Feet touching the Ground.*—A man, about fifty, passed the night in a public-house. In the night he called to a girl to bring him a light. In a few minutes she went into the apartment, and found him suspended by his neckcloth from a hook in the wall, his feet resting on the floor. There was no mark of violence. A groove of a yellowish colour, broad, irregular, superficial, oblique, occupied the middle of the larynx, covering the thyroid cartilage to the extent of a little more than an inch. This groove was a little more marked on the left than on the right side; it ascended towards the mastoid processes, and was lost in the hair at the back part of the head. There was no ecchymosis and no erosion—every thing indicated a slight compression. The larynx, the muscles of the neck, the carotid arteries, the cervical column, were uninjured. The tongue was deeply injected at its base, and was retracted far from the dental arches. The mucous membrane of the air-passages showed slight vascular ramifications, and was covered with yellow mucosities, without froth. The two lungs were reddish, and contained a considerable quantity of blood, particularly the right, and the pleuræ were strongly adherent. The heart was hypertrophied; it contained, particularly on the left side, a black liquid blood, mingled with some diffluent clots. The stomach was filled with whitish alimentary matters, not much altered, exhaling an acid odour. The bladder was distended with a turbid urine; the sexual organs were unaffected. The brain was bnt slightly injected. Insufficient as seems to be the cause of death in this case, there was no reason to suspect that the deceased had met with any foul play.—*Ibid.*

389.—*Poisoning by the Seeds of the Jatropha Curcas, or Physic Nut.* By H. LETHEBY, M.B., Lecturer on Chemistry at the London Hospital.—A labourer in the London Docks, at the instance of two sailors, ate the kernels of five physic nuts. In about a quarter of an hour he began to experience a burning sensation in his mouth and throat, and the abdomen felt sore and distended. In the course of a few minutes, he was seized with violent sickness, and, within an hour, vomited five times, and was severely purged. The other symptoms continued, and he was hot and feverish. An hour and a half after taking the seeds, a profuse perspiration broke out over the whole surface of the body, and he became so weak as to be hardly able to walk about. In the next half hour this debility increased; he became very giddy, and ultimately quite insensible. In this state he remained for twenty minutes, but after a time recovered so far as to walk for aid to the London Hospital, where he arrived about four hours after he had taken the poison. He was then very weak, and complained of heat and dryness in the mouth and throat, of numbness of the tongue, and of pain in the abdominal region. His countenance was pale, and somewhat anxious; the pupils were natural; the hands rather cold; the pulse 140, and weak. By means of an opiate and cordial he was soon relieved, and enabled to return home. The author of this case states that the kernels of the physic nut are used in this country as a purgative for cattle, and that he believes they are also used for the manufacture of what is now and then met with at our drug sales under the name of English Croton oil.—*London Medical Gazette*, July 21, 1848.

390.—*Wound of the Heart, Fatal after Seventy-Eight Hours.* By Dr ALEXANDER.—The subject of this case received two wounds in the chest, while engaged in a scuffle. The wounds were inflicted by a knife, and were followed by little external hemorrhage; death took place, however, seventy-eight hours afterwards. On dissection, one of the wounds was found to be trivial, having penetrated only to the second rib; the other had penetrated above the fifth left rib, three-fourths of an inch from its junction with the cartilage, and had divided the rib and the intercostal artery. The pericardium was wounded obliquely, and contained a few ounces of bloody serum. The left pleura was filled with blood and serum. The wound likewise passed entirely through the heart, about half an inch from its apex, opening and traversing the left ventricle. The diaphragm was also wounded.—*American Journal of Med. Science*, Nov. 1847; and *Prov. Med. Journal*, July 26th, 1848. [Of twenty-nine cases of penetrating wounds of the heart, observed by Ollivier and Sanson, only two were fatal within forty-eight hours. —*Devergie, Méd. Legale*, Vol. II. p. 246.]

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I.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

391.—*On the Pathological Changes in Mucous Inflammations.* By RUD. VIRCHOW.—All inflammations are to be considered as alterations of the nutritive process, by which the plasma of the blood is thrown out of the vessels in increased quantity. In inflammations of mucous membranes, their anatomical relations cause the exudation of this plasma upon a free surface. The plasma itself may be unchanged in constitution, or its fibrine may be increased in quantity. Differences in the constitution of the plasma determine differences in the result; and thus are established three leading forms of mucous inflammation:

1. *The Catarrhal Form.*—In this the quantity of the blood-plasma is increased, and thrown out on the free surface. The cells (of epithelium) are formed in greater quantity than normal; but they do not reach their normal developement, being replaced constantly by an increased succession of new ones. The richer the plasma, the more rapid is the self-development. In the so-called *chronic catarrh*, there are frequently found in the fluid cells quite perfectly developed, of the aspect of the ordinary epithelium. In acute cases the cells do not reach this stage of development; they do not take on the epithelial forms characteristic of the part, but are thrown off as round, more or less spherical, mostly single-nucleated cells (mucous corpuscles). In the very acute, particularly the blennorrhagic forms of inflammation, almost all the cells are found in the earliest stages of development, smaller, more delicate, and containing often three to five nuclei; in short, possessing all the characters of the ordinary pus cell. All these forms may be considered as different grades of the epithelium cell; or, if the name *epithelium* be dropped, as cells developed on the surface of a mucous membrane, and whose only difference is their different degree of development.

2. *The Croupous Form.* In this the plasma is not only increased, but is also altered in constitution, containing a large amount of fibrine, and coagulating more or less completely. The coagulum lies free on the surface of the membrane. This form is most frequent in the respiratory mucous membrane. The false membrane is either softened, friable (as in tracheal croup), and contains many cells; or it is of a more firm and fibrinous character (as in bronchial croup and exudation into the air-vessels, or true pneumonia), and contains the products of rupture of the capillary vessels, red and colourless blood corpuscles. In pneumonia the stage of hepatization, where the air-cells are filled with firm coagulated exudation, is generally succeeded by that of purulent infiltration, in which cells in every grade of development are formed in great abundance. In the first stages these cells have various degrees of resemblance to pus or epithelium; in the stage of resolution of the pneumonia, we find the air-cells full of granular cells and masses, or a finely granular emulsion, which are to be considered as the retrograde steps of the newly formed cells.

3. *The Diphtheritic Form.*—In this the exudation consists of nearly dry coagulated amorphous fibrine, and is infiltrated into the tissues composing the superficial layer of the mucous membrane, or rather of the submucous cellular tissue; for when it projects from the free surface, it is generally covered by the epithelial layer. Where organization proceeds in this kind of exudation, it is generally very imperfect; more commonly it is entirely absent, and a superficial slough is formed. Hence this form has been rightly considered as allied to a gangrenous form of inflammation; it is, in truth, closely allied to hospital gangrene.—*Archiv. für Pathologische Anatomie*, &c. Band I. Heft 2.

[We shall take another opportunity of adverting to these opinions, as well as to

other views enunciated in this able journal. In the mean time, we may state that we agree in many of the author's conclusions, although differing from him in some points; as, for instance, in regard to the constitution of the blood plasma, which we believe to be *least* altered where the fibrine is in greatest quantity, as in the croupous and diphtheritic forms; and *most* altered where, as in the catarrhal forms, the inflammatory phenomena are but a slight alteration of the ordinary secreting process. We believe that the membrane, in its healthy state, possesses a power of selecting from the blood plasma a new product—mucus; that in disease the nature of this product is changed, and assimilated more and more to the plasma of the blood; in other words, that while the vessels acquire an increased power of pouring out the elements of the blood plasma, the power of the membrane to alter and select from these elements is diminished.]

392.—*On Open Foramen Ovale.* By Dr MAYNE.—One of the consequences of this organic defect is, to permit the venous blood to pass, in quantities more or less considerable, from the right side of the heart directly into the left, without traversing the lungs or undergoing the process of respiration. The assemblage of symptoms produced in this manner by the admixture of the venous with the arterial current at the *left* side of the heart, and the consequent circulation, throughout the system at large, of blood imperfectly aërated, constitutes a form of cyanosis well known to physicians. Comparative anatomists are also aware, that the human circulation, thus perverted, is somewhat analagous to the normal plan of the circulation in many of the reptile tribes, and that individuals so afflicted resemble in certain functions the animals to which they may (not inaptly) be considered as blood relations. The records of medical science abound with examples of cyanosis thus produced.

Other cases there are, in which the foramen ovale remains permanently open *without* producing cyanosis; and certain it is (let the explanation be as it may) that a patent condition of the aperture in question is compatible with a long life, and with a healthy condition of the circulatory and respiratory functions.

Much ingenuity has been displayed by writers, particularly those of the French school, in attempting to explain such dissimilar results from one and the same organic lesion. In many instances, where an open foramen ovale produces *no* disturbance of function, the valvular disposition of the aperture, or its small size, prevents any interchange of the venous and arterial blood; and in others, the ventricles, the auriculo-ventricular, the pulmonary, and the aortic orifices, retain their proper dimensions, and the auricles their just proportions, so that the blood at either side of the septum flows onwards in its natural course, without impediment, and consequently no intermixture arises.

There is still, however, a third class of cases of the same malformation. In these, arterial blood passes from the left side of the heart into the right, through the open foramen ovale, and thus a mixture of arterial with venous blood taking place in the right auricle, the current transmitted to the lungs for aëration is a mixed fluid, consisting partly of venous and partly of arterial blood. This deviation from the natural course of the circulation is the converse of that already described as producing cyanosis; in the one, the current flows from the right auricle into the left, depriving the lungs of a portion of the blood which ought to circulate through them, and supplying the system at large with a mixed fluid, partly venous and partly arterial, thus causing cyanosis; whilst in the other, the current flows from the left auricle into the right, depriving the system at large of a portion of the blood which ought to supply it, and transmitting to the lungs a mixed fluid, partly venous and partly arterial.—*Dublin Quarterly Journal.*

393.—*Influenza and Ozon.* By Dr SPENGLER.—In our April *Retrospect*, p. 58, will be found some remarks by M. Schönbein on the substance termed *ozon* as a cause of disease. Dr Spengler's observations on this subject were made in the small village of Roggendorf, near Mecklenburg. In the end of the year 1846 slight catarrhal affections prevailed, without any observable increase in the quantity of ozon in the atmosphere. About new-year's day there was a great increase of the number of catarrhs, which also took the character of influenza. About the same time, and particularly on the 9th of January, a very great increase of the quantity of ozon present in the air, was observed.—*Zeitschrift für Rationelle Medizin.* Band VII. Heft 1.

II.—PRACTICE OF MEDICINE.

394.—*On some of the Symptoms of Typhoid Fever.* By J. B. S. Hillairet.—*Double Pulse.*—From observations made on eighty-six cases of typhoid fever of various degrees of intensity, the author concludes, first, that this is a true symptom of typhoid fever or dothinenteritis; second, that it is produced by the development and predominance of typhoid phenomena, properly so called; these being almost peculiar to the second and third periods, it is hence a symptom belonging to these two periods; for although typhoid phenomena occasionally obscure the inflammatory symptoms of the first stage, the double pulse, though present sufficiently often under these circumstances, is not so distinctly marked; third, it betokens a degree of gravity in the symptoms which must be borne in mind in the employment of remedies.

Arterial and Cardiac Murmurs.—M. Beau, in the *Archiv. Gén. de Médecine* for 1845-6, brought forward and supported statistically the opinion, that these murmurs were an almost essential symptom of this fever being present in five-sixths of the number of cases examined (twenty-five men). Dr Hillairet concludes, from careful and repeated examinations of fifty-four patients, male and female, in whom the disease varied in severity, and of whom twenty-two had these murmurs in both heart and arteries, thirteen in the arteries alone, and nineteen had none at all; first, that if primary they depend on a previous bad state of health—a state of actual chlorosis or anæmia from privation or previous disease; and second, that, when developed in the course of the disease, they arise in consequence of prolonged abstinence or energetic treatment.

Is there any direct Relation between the occurrence of Epistaxis and the subsequent Development of the Typhoid Eruption?—That a relation exists has been maintained, but M. Hillairet's observations have led him to a different conclusion. Of fifty-four cases, eighteen had neither epistaxis nor eruption; sixteen had the eruption and no epistaxis; twelve epistaxis and no eruption; and eight epistaxis with subsequently the eruption; but even amongst the latter there was no relation between the severity of the epistaxis and the amount of the eruption.

Cephalalgia.—This, if accompanied by other symptoms of nervous depression, as photophobia, vertigo, ringing in the ears, and a tottering walk, the author considers one of the most constant symptoms of typhoid fever. Of fifty-four cases, forty-eight had the headache, accompanied by the other symptoms above mentioned, the tottering walk being sometimes absent; in four none of these symptoms were present; one had giddiness without cephalalgia, and another cephalalgia without giddiness. In every case but two the cephalalgia yielded to the first bleeding, and in those two the fever became irregular—the cephalalgia was almost always seated in the frontal region, and accompanied by a feeling of weight above the eyes; occasionally it was general.—*L'Union Médicale*, August 1848.

[M. Hillairet is decidedly wrong in regarding the *double pulse* as a *true* symptom of the fièvre typhoide. The double pulse (pulsus dicrotus, recidivus, doppelschlag) is a symptom of debility, and may present itself in any disease accompanied by typhoid symptoms. Thus we have observed it in continued fever, pneumonia, bronchitis, phlebitis, chlorosis, phthisis, &c. It indicates, we believe, diminished contractility of the arterial walls, and is associated with a full and soft pulse. To account for its formation is difficult; but the following appears to us the most probable explanation:—The wave of blood advancing from the heart occasions the first beat, then passes on to the hand, in entering the capillaries of which it meets an obstacle sufficient to throw it back to a certain extent, or, in short, to produce a wave of reflux. In the healthy and firmly contractile artery, this wave of reflux is not perceived at the wrist, but we can suppose that it may be felt in an opposite condition of the vessel. The fact that the double pulse may often be perceived at the wrist, while only a single pulse is felt in the arm, favours this view. In England, the important indications of treatment and its results, derived from the pulsus dicrotus, are, we may safely say, almost entirely overlooked. We purpose returning to this subject in an early number of the *Retrospect*.

The author's view of the origin of arterial and cardiac murmurs is probably correct. They are certainly not an essential symptom of typhoid fever, as they are frequently present in typhus, and may occasionally be heard during the course of acute inflammations of a severe character.]

395.—*On the State of the Spleen in Intermittent Fever.* By M. Piorry.—[The following opinions were emitted by

M. Piorry, in a recent and lengthened debate at the French Academy of Medicine, on the condition of the spleen in intermittent fever. Although we by no means yield entire assent to his doctrines, still, as emanating from one whose experience in this department of medicine is very extensive, they merit notice.]

According to M. Piorry, the miasm primarily absorbed into the blood exercises its first morbific influence on the spleen, and on the nerves of the splenic plexus. This is manifested by enlargement of the spleen, congestive or hypertrophic, according to the duration of the disease; and from this morbid condition of that organ as a starting-point, spring all the peculiar symptoms of intermittent fever. Accordingly remedies having the effect of diminishing the volume of the spleen cure the disease. Sulphate of quinine has this power.

If to a person in health a dose of twelve or fifteen grains of this medicine be administered, either in the usual way, or in the form of an alcoholic solution—in which case, says Piorry, it is much more energetic—an immediate and considerable diminution of the spleen is observed. When the organ is enlarged, this effect is still more observable, and it is found to be lessened an inch or more in its long diameter in the space of two or three minutes. This fact is demonstrated by careful percussion, and may be shown experimentally by exposing the spleen of a dog, and injecting sulphate of quinine into a vein, in which case a notable shrinking of the spleen is perceived.

There are, however, some intermittent fevers which do not depend on splenic congestion, and are, therefore, not curable by sulphate of quinine; as, for example, those connected with neuralgia of the intercostal nerves of the left side, with inflammation and displacement of the spleen—all of which are benefited by an appropriate treatment. When, from alteration of tissue, or from thickening of the investing membrane, the morbid condition of the spleen is incurable, then all the quinine in the world will not cause the complete disappearance of the febrile symptoms.

In the course of an acute disease, as typhus fever, periodic exacerbations may occur in connexion with a splenic affection, and may disappear under the use of quinine, although the original disease runs its course.

In intermittent fever, so long as the enlargement of the spleen remains, although the more prominent symptoms have disappeared, the patient will still be subject to many irregular ailments, or to a cachectic state of the system, and will be liable to a relapse, without a renewed exposure to the miasm. The administration of quinine should accordingly be continued until the spleen has completely resumed its natural volume.—*L'Union Médicale*, August 1848.

396.—*Causes of Asiatic Cholera.* By M. Fourcault.—All the usually alleged causes of cholera, such as contagion, poisonous principles in the air, sporules, insects, &c., are insufficient to explain the fact of its limitation, in by far the greater number of instances, to the northern hemisphere. M. Fourcault holds a different view of the cause of cholera, which he considers to harmonize well with the fact in question. He considers this disease to be owing to a want of equilibrium between the electricity of the atmosphere and the terrestrial magnetism, in consequence of which, bodies at the surface of the earth, and among others living beings, are deprived of their electricity. Many other diseases, both of animals and vegetables, may be due to the same cause; in particular, M. Fourcault considers the potatoe disease as having the electrical origin here mentioned.

In proof of this theory as regards the cholera, M. F. writes that the disease in question arises most frequently in the circumstances under which electricity is developed with the greatest difficulty; that is to say within the tropics, in the summer season, at night. The observations of M. Leblond show that in the tropical latitudes, in which cholera most frequently arises, the electrical machine possesses but little power, even on calm days. The same fact has been observed lately in Russia by M. Demidoff, during the prevalence of epidemic cholera.—*L'Union Médicale*, Sept. 12, 1848.

[We cannot enter at length into the arguments by which M. Fourcault defends his theory, which seems, like others of the same author, too vague for general acceptance. Nevertheless, amid the host of speculations to which the cholera has given rise, it may be well to keep those views in mind.]

397.—*Proposed Remedies for Cholera.*—The near approach of this disease has induced many practitioners to lay before the profession the results of their experience in the last epidemic. The multiplicity and often contradictory nature of the modes of treatment recommended, show too distinctly "the absence of rational indications based upon a knowledge of the

pathology of the disease." For an excellent general account of the rational treatment of cholera, we refer to a review, from which the above quotation is taken, in the *Monthly Journal* for March last, p. 679.

A more heterogeneous list could scarcely be conceived than the following, selected from among the remedies and modes of treatment suggested by different writers in the medical journals during the last month :—Calomel and opium, mustard (internally and externally), oil of cajeput, cloves or peppermint, acetate of lead, astringents and cretaceous mixtures, naphtha, salt and water, phosphate of soda, chlorate of potash, rhubarb and magnesia, hot water, cold water, ice, the vapour or hot air bath, bleeding, chloroform, strychnia, Indian hemp, with numerous nostrums and alleged specifics, chiefly consisting of tonics and aromatics.

398.—*Phosphate of Soda in Cholera.* By Dr Twining. — Adopting Liebig's view, that the blood contains no carbonate of soda, nor free soda, but that it owes its alkalinity to the presence of the phosphate of that base, Dr Twining suggests that this last salt might be advantageously substituted for the muriate and carbonate of soda in the *saline* treatment of cholera.—*Prov. Journ.* Sept. 6.

399.—*Mineral Naphtha in Cholera.* By Mr Guthrie.—At a recent meeting of the Medico-Botanical Society, Mr. Guthrie read letters which had been received from Prince Woronzow, the commander-in-chief of the Russian forces in Circassia, and from Dr Andreosky, his physician, detailing a new and successful plan of treating cholera. It would appear that the prince's attention was first drawn to the matter by noticing that a certain regiment of Cossacks suffered but slightly from cholera, as compared with the other troops. On inquiry of the colonel, he learned that the recovery of the Cossacks was attributed to the use of an elixir, called the Elixir of Woronege—a preparation of a somewhat quackish description, the principal important ingredient of which was naphtha. Dr Andreosky, finding the quantity of elixir in possession of the colonel to be but small, determined to try naphtha by itself; he first used it in mild cases of cholera, and of choleraic diarrhœa; proving successful with these, he administered it in the more severe cases with equal advantage, and finally found it effect a cure even during the most extreme collapses. The dose which he gave was from ten to fifteen and twenty drops in a glassful of wine, repeated if the first dose did not remain on the stomach, or if the symptoms required it, which was not often the case. The naphtha used in the Russian army is not the ordinary naphtha of the shops, but the mineral naphtha obtained from Beker, on the shores of the Caspian. It should be of a white or rose colour, and used without previously undergoing the process of distillation.—*Pharmaceutical Journal*, July 1848.

400.—*Sydenham's Treatment of Cholera.* —"Let a chicken be boiled in about three gallons of spring water, so that the liquor may scarce taste of the flesh. Several large draughts of this are to be drunk warm, or, for want of it, of posset drink. At the same time I order a large quantity of the same to be given at several times successively by way of clyster, till the whole be taken in and discharged by vomiting and stool. In this manner the sharp humours are either evacuated, or their acrimony blunted. When this business is over, which requires three or four hours, an opiate completes the cure.

Swan's Observations, 1742, *in Sydenham.*—"The general indications of cure in this disease are—1st, to correct and soften the acrimonious peccant matter, and fit it for expulsion, and, if there be occasion, to expel it by art; 2nd, to check the violent motions in a proper manner; and, 3rd, to strengthen the weakened nervous parts.

"The discharge of fermented and corrupted diet should be encouraged by gentle emetics, lenient cathartics, and plentiful dilution with whey, thin water-gruel, the small chicken-broth recommended by our author, and the like, and afterwards give strengthening medicines to complete the cure."

Dr Maxwell of Calcutta confirms the value of Sydenham's indications of treatment in cholera, from their successful application in his own person. The derangement of the gastro-intestinal secretions, by interrupting the functions of digestion and assimilation, leads ultimately to the fermentation and putrefaction of the contents of the stomach and bowels. Hence arise, according to Dr M., the swelling and increasing uneasiness of the abdomen. Nausea rapidly supervenes, followed by vomiting and purging; and reflex spasms are induced by the acrid matters remaining in the intestines. If these are in the stomach or upper portions of the bowels, the spasms will be in the chest and upper extremities; if in the lower part of the canal, the spasms will be in the inferior

extremities. Examination after death reveals the origin of these spasms in the mucous membrane of the bowels ; it is found more or less destroyed in various parts, or covered with ulcerations in protracted cases. The contents of the bowels are in a putrid state; there are no healthy secretions, and not a drop of bile.

An important indication in the treatment of cholera is therefore to blunt the acrimony of the intestinal contents, and, if possible, to obtain their evacuation. Dr M. found that the most effectual, at the same time that it was the most agreeable, mode of answering this indication, was the frequent administration of effervescing draughts.—*Medical Times*, July 22, 1848.

III.—PRACTICE OF SURGERY.

401.—*Case of Double Lactocele.* By M. Vidal de Cassis.—G., aged thirty-six years, of a strong frame and robust constitution, was admitted into the hospital, under M. Vidal, 3d of August 1848. He served in Africa several years, and was afterwards employed twelve years in the mounted police of the Antilles. He had had numerous gonorrhœas, but the testes were never the seat of any inflammation or disease. About eight months since he perceived for the first time that the scrotum was enlarged and painful; the colonial surgeons examined the tumours, but, not having ascertained any transparency, abstained from operation, and the patient returned to France. The tumours, when he was admitted into the hospital, had the special form of hydrocele; they were not by any means translucid, but fluctuation was evident. On the introduction of a trocar, a white milky fluid escaped from each side, and was received in two different vases; an injection of equal parts of water and tincture of iodine was performed. The testes were small, and the spermatic chord perfectly sound; the prostate was also ascertained to be in a healthy condition.

Chemical Analysis of the Fluid—(by M. Grassé, chemist of the hospital, and professor at the School of Pharmacy.)—The fluid, in quantity twelve oz., was white, opaque, with a very slight yellowish tinge; its consistency was exactly that of milk; its taste slightly saline; its density at +20C. was 1·01. The microscope betrayed the presence of an immense number of very minute corpuscles, more or less spherical, and closely resembling butter globules. This fluid, of an alkaline nature, was not coagulated by heat, but, on being boiled, rose like milk, in consequence of the formation of a thin pellicle on the surface. Acetic acid caused coagulation only when assisted by heat. Muriatic and sulphuric acids coagulated the fluid, and the coagulum was immediately dissolved by the addition of potass. Notwithstanding the addition of ammonia, it preserved its fluidity, a circumstance which would not have been observed if pus had been present. Ether separated a fatty substance which presented the physical characters of butter. Finally, the liquid was found to contain—1. Water; 2. A substance closely resembling casein; 3. A fatty substance analogous to butter; 4. Sugar; 5. Chloride of sodium; 6. Very small quantities of lime, probably in combination with chlorine.

The blood of the patient was also submitted to chemical analysis. The following were the results:—

Water, - - -	730·34
Globules, - -	116·79
Albumen and salts,	149·97
Fibrine, - -	2·99
	1000·09

The difference between the blood of the patient and the average of the elements of healthy blood, consisted, therefore, in a diminution of its water and globules, and a notable increase of its albumen and salts.—*Dr M'Carthy's Report in Medical Times*, September 9, 1848.

402.—*Case of Œsophageal Fistula.* By M. Ansiaux.—The patient, a robust young man, presented a fistulous communication with the œsophagus, which opened externally on the inferior part of the right side of the neck, in the triangle bounded by the clavicle, sterno-mastoid, and trapezius muscles. Fluid matters escaped from the orifice during the act of deglutition, and an elastic tube, passed along the fistula, entered the œsophagus.

The disease began by the formation, in the site of the present opening, of a small tumour, which, increasing gradually, acquired at the end of three months the size of a hen's egg, when fluctuation was detected. It was opened, and a considerable quantity of sanguinolent pus, mixed with air, escaped. Some days afterwards the patient observed that, when he swallowed *warm* fluids, a portion escaped at the opening. Cold drinks and solid food

passed freely into the stomach. Such is the present condition of the patient. No particular treatment has been employed; but the author proposes, in the event of its not closing soon, to cauterize the fistulous canal. No cause is assigned for the complaint.

The editor of the *Gazette des Hôpitaux*, from which the above case is extracted, cites two instances of this disease which have occurred in his own practice—one in a woman fifty years of age, and in whom the canal closed without the aid of any special treatment; in the other case, a boy of seventeen years, the disease, after long resistance to ordinary means, at length yielded to the assiduous injection of cod-liver oil into the fistula.—*Gaz. des Hôp.*, 7th September 1848.

403.—*Removal of a Tumour from the Sole of the Foot. Local application of Chloroform.* By Mr Spry.—A man, aged twenty-three, had a tumour on the left foot, which had existed for seven years, but for some months had been rapidly increasing. It extended from the centre of the sole obliquely upwards and inwards towards the arch of the foot. It was very painful when touched, and caused great suffering when he attempted to walk. Removal of the tumour being determined on, a portion of lint was saturated with chloroform, and placed on the tumour, the foot being afterwards enveloped in oilskin. In a quarter of an hour pressure could be borne without complaint; the application was, however, renewed. In a quarter of an hour more the operation was commenced, and consisted in dissecting the tumour from the plantar fascia, to which it was firmly attached. The patient said he felt no pain during the division of the skin, but some slight pain at the deepest parts of the incision; this, however, was so slight as not to be worth mentioning.—*Provincial Med. Journal*, August 23, 1848.

404.—*Spina Bifida treated by the Injection of Iodine.*—Professor D. Brainard relates (*Illinois and Indiana Med. and Surg. Jour.*) a case of spina bifida treated by injection of tincture of iodine. The patient, a girl of thirteen years of age, had a tumour at the top of the sacrum, nine inches in circumference, and about three in height, with thin walls. She had been paralytic in the lower members, but within three years had acquired a partial use of them. She was idiotic, and passed both the fæces and urine without regard to place. From neglect of cleanliness, numerous ulcerations and large cicatrices had, from time to time, been formed upon the pelvis and thighs. Under these almost hopeless circumstances it was determined to inject into the sac a solution of iodine, with a view of exciting inflammation and procuring absorption.

This was done on the 2d of December 1847, in the following manner:—A small puncture was made with the lancet on the sound skin, about half an inch from the base of the tumour, and a trocar, of the size of a common knitting needle, carried obliquely into the sac. Through the canula of this, a solution of 1 gr. of hydriod. potass., with ½ gr. of iodine, in 1 dr. of water, was thrown into the sac, and the instrument withdrawn; a sharp pain followed, which soon subsided. Compresses and a bandage were applied, to prevent the escape of the fluid, and the child was laid in bed. There succeeded redness, heat and tension of the tumour, with tenderness to the touch, and some febrile symptoms, for which a cathartic was administered, and evaporating lotions applied to the part. In the course of a week these symptoms subsided, and the tumour became soft, yielding, and diminished in size. Compression, by means of a roller around the pelvis, was then applied, and kept up with as great a degree of force as could be borne; but the filthiness of the patient, and her indocility, prevented this from being applied with regularity. It was frequently removed for twelve hours or more at a time. Still it diminished, and on the 27th of December was about half its former size. At this time a second injection was used of half the strength of the first. This produced but little heat or pain, and the compression was continued. On the 15th of January 1848, the fluid was so far absorbed as to render it easy to press it down almost to a level with the surrounding skin. A spring truss was then substituted, and at the present time the sac lies in wrinkles, the bony opening can be distinctly felt, and there is no increase of swelling when the pressure is removed. Recently there has been manifested a decided improvement in the intellect of the child; the other difficulties remain the same, but, with the removal of the cause, the partial paralysis will, doubtless, gradually disappear. The retention of the natural evacuations must depend upon the development of the intelligence, and the gaining of a control over the voluntary muscles.

In its present condition this case shows that the injection of a solution of iodine, followed by suitable treatment, is capable

spiration suddenly come on, and, these increasing, the patient dies unexpectedly. This event is usually preceded by her spitting a very small quantity of blood; and, on examining the body after death, an oozing or effusion of blood in the air-vessels of the lungs has clearly shown the cause.

"Fourthly, in cases of extreme debility from other causes, particularly in the ædematose swelling of the leg, in which there is often a surprising degree of weakness, with much disturbed action of the whole frame, on the patient's making any effort beyond her strength, and perhaps against her inclination, a fatal and sudden faintness is sometimes brought on before an action to which she seemed competent is completed; and death seems more unexpected and instantaneous under these than any other circumstances; in some cases several weeks after delivery. Of this I have seen three instances."

409.—*Puerperal Articular Rheumatism.*—After relating a few cases of this affection, the author lays down the following as the most important practical conclusions to be derived from them:—1. That anti-puerperal and post-puerperal rheumatism should be considered as a formidable malady, demanding instant and serious attention. 2. That there is no single medicine upon which reliance can be placed. Blood-letting and the internal use of quinine, tartar emetic, or nitrate of potash, are the most powerful remedies. The author has found cold water the best and most soothing application to the joints affected with acute rheumatism.—*Annales de Thérapeutique*, Juillet 1848.

410.—*Inflammation and Abscess of the Uterine Appendages.* By Dr Bennet.—The almost universal view of the profession, that this disease is all but characteristic of the puerperal state, and very rarely occurs under other circumstances, our author considers as very far, indeed, from the truth. The disease is not at all rare in the non-puerperal state, and is often confounded with acute or chronic metritis, iliac abscess, or some other pelvic lesion. In the puerperal form of this affection, and owing probably to the increased quantity of fibrin contained in the blood, there is a greater tendency to active inflammation. Hence, if the structures contained in the lateral ligaments are attacked with inflammation it has a tendency to spread to the peritoneal folds and the surrounding tissues, giving rise to the formation of large pelvic inflammatory tumours, abdominal adhesions, intestinal perforations, &c., often ending in death. In the non-puerperal inflammations the purulent collections are more limited; the inflammation seldom attacks the peritoneum, and the abscess generally disappears in a latent manner, bursting into the rectum or vagina.

The most frequent seat of this inflammation is the cellular tissue which separates the peritoneal folds and surrounds the ovaries, round ligaments, and Fallopian tubes. It may be produced by any cause which exaggerates the vitality of the uterine system. It may occur in connexion with ulcerative disease of the cervix, or from a severe fall.

The swelling to which it gives rise may often be felt above the pubes, but an accurate diagnosis can be made only by a vaginal examination. The whole may disappear by resolution, but more generally it ends by suppuration, and the discharge of pus by the rectum, vagina, bladder, or through the abdominal parietes.

The treatment in the acute stage is the same as in ordinary phlegmonous inflammation, only it requires to be more active. Bleeding, leeches, cathartics, and mercurials are the chief means to be resorted to. Dr Bennet places most reliance on the repeated application of leeches to the abdominal parietes, immediately over the seat of the inflammation. In the chronic stage, when the parts are not so tender as at first, the application of leeches internally is very useful.—*Lancet*, Feb. 5, 1848.

411.—*Prolapsus of the Ovary.* By Dr Rigby.—After relating a case of inflamed ovary, where one of its most marked effects was profuse and long-standing menorrhagia, Dr Rigby remarks, that in the case the symptoms varied from their ordinary course, and depended upon the position of the ovary, being much more backwards than usual, and almost approaching to the hollow of the sacrum; hence the inguinal pain generally felt in cases of oophoritis was absent, and, as usual in cases of retroversion, the pain was confined to the region of the sacrum, and greatly increased by the passage of solid fæces through the rectum. This displacement of the ovary downwards and backwards into the recto-vaginal pouch, when in a marked degree, forms a most agonizing affection. In three or four cases which Dr Rigby has seen, the ovary has been found lower than usual, and approaching nearly to the central line. The slightest touch produces severe pain, of that sickening intolerable character which pressure on the testicle produces in the male, and especially when it is inflam-

ed. Prolapsus of the ovary is the name given to this affection by Dr Rigby.—*Medical Times*, August 26, 1848.

412.—*Warts of the Vulva.* By Profesor Meigs.—It sometimes happens that the vulva is covered with a luxuriant growth of warts. "They are, in certain cases, so abundant as to dispart the labia, filling up the entire sulcus, and rising as a great convex mass of pale cauliflower-looking tumour, quite convex above the general level. Upon separating further the labia, so as to open the sinus pudoris, they are perceived to be small warty excrescences from the mucous body of the mucous membrane, and differ not from the warts on children's fingers except by their greater softness, which depends on their being always bathed with the sort of milky humour of the labial membrane. They often bleed when touched; and, when pinched off with the finger-nails, the broken surface trickles with blood, which soon ceases to flow. I have found that, when the entire labium, right and left, has been quite incrusted with warts as above, I could with the probe separate them any where; for they are distinct from, though in lateral contact with, one another. You will readily include a great number of them in a ligature, which, being tightly tied, they drop off after some hours. The readiest way to remove them is to snip them off, several at a time, with scissors curved on the flat. This being done, and the surface being lightly touched with the nitrate of silver pencil, or with a solution of sulphate of copper, the mucous tissue is not very likely to reproduce them."—*Females and their Diseases.* Philadelphia, 1848.

413.—*On the Mucous Membrane of the Uterus.* By M. Robin.—In a lengthened memoir upon the anatomy and pathology of the uterine mucous membrane, Dr Robin lays down the following as the conclusions resulting from his observations. 1. There is a mucous membrane of the uterus, and, far from being excessively thin, especially within the cavity of the uterus, it is there that it has its greatest thickness,—a thickness which exceeds that of any other portion of mucous membrane in the human body. 2. This membrane contains, in its substance, tubular glandules visible to the naked eye when the uterus is unimpregnated. 3. These glands are joined together by a peculiar tissue and by vessels, and it is the union of these different elements which constitutes the chorion of the mucous membrane, although there is in it nothing analogous in exterior anatomical disposition with that of the other internal tegumentary tissues of the body; this peculiar structure is the fibro-plastic tissue, which, normally, is found no where else than in this organ. 4. This mucous membrane is covered hy an epithelium, which alone is the part ordinarily described as constituting the mucous membrane.

M. Robin agrees with MM. Coste and Bischoff, that there is no such thing as the decidua vera and reflexa, as far as these are considered membranes newly formed. The decidua vera is the hypertrophied or otherwise changed uterine mucous membrane. The decidua reflexa is an expansion of the former, or of its folds around the ovule. It is a sort of maternal placenta, whose chief functions continue only as long as the chorion is covered on all its surfaces with villosities, which play the part of the fœtal placenta.—*L'Union Médic.* 7 Septembre 1848.

414.—*State of the Internal Surface of the Uterus after Delivery.* By Dr Colin. The extensive researches of this author have led him to the following conclusions regarding the state of the internal surface of the uterus after the expulsion of the mature ovum. They agree with the doctrines of Sharpey, Coste, &c., and we believe them to be well-founded.

1. It is not the case that, after delivery, the internal layer of the muscular tissue of the uterus is laid bare. 2. A vascular membranous layer is retained, and covers the muscular tissue. 3. This layer does not differ from the decidua vera, or, in other words, the uterine mucous membrane. 4. This layer is not carried away with the lochiæ, nor destroyed even when the discharges are purulent. 5. Some flakes of membrane, probably detached during labour, are sometimes discharged with the first of the lochiæ; but the essential vascular part remains. 6. This part is the seat of the process set up to reproduce the perfect internal membrane of the uterus. 7. Purulent lochiæ, instead of resulting from the disorganization of this layer, are the consequence of the reparatory process set up in it. 8. This layer regains its natural mucous constitution twenty or thirty days after labour. 9. The new mucous membrane is, at first, pulpy, thicker and more vascular than normally. 10. From this time its elements recontract; and, 11. About the sixtieth or seventieth day it has regained its own proper condition.—*L'Union Médicale*, 29 Aout 1848.

V.—PSYCHOLOGICAL MEDICINE.

415.—*Use of Chloroform in Insanity.* By Dr M'Gavin.—The importance of the subject induces us to give entire the following remarks on cases in the Montrose Lunatic Asylum:—The introduction of chloroform, immediately after the nature of this wonderful agent became known, has constituted the only new feature in what may be styled the purely medical part of the treatment. Its beneficial effects have been conspicuous in many cases in which it has been used during the latter part of the last year. The first two patients selected for experiment with the chloroform, were the most noisy and excited in the establishment. One laboured under acute mania; the other was a decided melancholic. In the first case, all the ordinary and approved means for calming excitement and allaying irritability had been, for two or three days, steadily persevered in without much benefit. It then occurred to me that chloroform might be tried. The patient was accordingly secured, which, by the way, was not a very easy task, and the inhalation commenced. The first inspiration was succeeded by a struggle; but this resulted more from dread on the part of the patient that some mischief was to befall him than from any other cause. After a few more inspirations, he complained of sickness; and in less than a minute and a half from the commencement of the inhalation, the functions of the brain were completely suspended. He remained in the comatose state for a minute or two after the withdrawal of the vapour. While recovering from his state of unconsciousness, he looked confused, and reeled about the room like a person under the influence of some intoxicating liquor. In a short time he completely recovered from the immediate effects of the chloroform, but its soothing influence was conspicuous for the greater part of the day. He became drowsy—slept a short time—and was afterwards less excited, and more collected and rational than he had been since his admission. The chloroform was exhibited from time to time in this case, and sleep almost invariably followed. The patient ultimately got better. The second patient operated on was a woman possessed of a strong suicidal tendency, who had been moaning and crying incessantly for days and nights without intermission. She had not been observed to sleep for nearly seventy-two hours. The chloroform was exhibited in the usual way, and very soon reduced her to a state of unconsciousness. On recovering, she complained of sickness, and vomited; after which she was, at her own request, placed in bed, where she enjoyed a sound and refreshing sleep for upwards of three hours. So sensible was this patient of the benefit she derived from the chloroform, that, when afterwards agitated and overwhelmed with despair, she would implore the medical superintendent to repeat the exhibition. In this she was often indulged. In the first case alluded to, I have very little doubt that the chloroform had a considerable share in conducing to recovery, or, at least, that it paved the way by suspending the functions of the brain, and thus affording rest to its substance. No doubt the same thing is accomplished in similar cases, and might have followed in this case also, by the exhibition of sedatives and hypnotics; but before sleep is procured in this way, days and weeks sometimes intervene. The rapidity with which the chloroform acts, and the consequent saving of time to the physician, and of nervous energy to the patient, are strong arguments in its favour. It is difficult to say, *a priori*, how far the prolonged exhibition of chloroform may be useful in correcting morbid trains of thought in cases of insanity unattended with excitement. Experiments, with a view to the solution of this question, could not but prove interesting.—*Dr M'Gavin's Report of the Montrose Lunatic Asylum*, 1848.

416.—*Insanity cured by Sulphate of Quinine.* By M. Piorry.—Four cases of mania are reported, in which a complete cure was effected in periods varying from twenty-four to forty-eight hours, by the use of this medicine. The cases were recent and acute; they were characterized by various sensory illusions, and by the occurrence of a paroxysm about the same hour every evening. We give the details of one case.

A woman, thirty-five years of age, was brought into the hospital in a state of furious delirium, which rendered necessary the use of the strait-jacket. She imagined that she heard the voices of several persons constantly talking beside her, and in particular of an individual who had excited her jealousy, and of whom she wished to rush in pursuit. The attendants were obliged to tie her down in bed, and the house-surgeon proposed sending her to the Salpétrière.

Two days afterwards, M. Piorry saw her at his morning visit, and found her very irritable, but succeeded in getting from her some account of her complaint. Her disease commenced with noises in the ears and imaginary voices, followed by delirium, of which she was herself sensible. All these symptoms were much aggravated at night. She was ordered fifteen grains of quinine; no other treatment. Next day there was no delirium, and the day after she was perfectly well.

These cases are very remarkable from the rapidity with which they were cured. M. Piorry considers the delirium of insanity as often induced by certain abnormal sensations, and functional derangement of the organs of sense, and of other parts of the system. In this point of view, it is analogous to various nervous and neuralgic complaints, which are frequently periodic in their attack. Periodicity, indeed, according to his view, is the normal mode of action of the nervous system, and it is therefore not improbable that certain morbid phenomena should obey the same law. In such cases, quinine is indicated from its anti-periodic powers.—*Gazette des Hôpitaux*, August 1848.

417.—*Diminution of the Brain in Insanity.* By M. Parchappe.—The author has endeavoured, in his work on mental derangement, published in 1841, to establish a pathological law, founded on the comparative weight of the brain with a great number of patients—namely, that in simple derangement the cerebrum gradually diminishes in size as the intelligence gets weakened. The author has pursued his investigations since the publication of his work, and has collected many microscopic facts which have confirmed the anatomo-pathological conclusions which he had put forth in his treatise. In comparing the tables which he has drawn up, M. Parchappe found that the mean of the two classes—acute mania and chronic derangement—differed in weight to the amount of two ounces and six drachms for the men, and two ounces and five drachms for the women, or in the proportion of $\frac{77}{1000}$ for the men, and $\frac{67}{1000}$ for the women. The existence of the law of decrease is still more evident, by the comparison of the mean in the four categories of chronic alienation, where the weight of the brain is observed to diminish with the sinking of the intellectual powers, the difference of the mean between acute derangement and the last degree of chronic alienation reaching as high as four ounces and seven drachms, or the proportion of $\frac{114}{1000}$ for the men, and $\frac{106}{1000}$ for the women.—*Communication to the Academy of Sciences, Paris; Lancet*, Sept. 16.

VI.—MATERIA MEDICA AND THERAPEUTICS.

418.—*Tests of the Purity of Chloroform.* By Dr Letheby.—Wash the chloroform three or four times with its own bulk of water; decant the water carefully after each operation; then introduce it into a retort, with about four or five times its bulk of powdered quicklime, and carefully distil it by means of a water or steam-bath. The chloroform thus obtained will be generally quite pure; and it should have the following properties:—

1. It should be perfectly free from opacity.
2. It specific gravity should be near 1.496.
3. It should neither redden nor bleach litmus paper.
4. It should not become opaque when it is dropped into water.
5. It should not occasion any whitening with a solution of nitrate of silver.
6. It should not whiten or coagulate the white of egg.

The last two are very important tests, and they are easily applied. The white of egg should be used as it is obtained from the raw egg; and a little of it—say as much in bulk as a pea—is to be dropped into the chloroform, and allowed to remain there for an hour. If any alcohol is present, it will whiten it.—*Lancet*, September 9, 1848.

419.—*Decomposition of Chloroform.* By Mr Morson.—According to Mr Morson, pure chloroform, under certain conditions, undergoes spontaneous decomposition, which renders it unfit for the purposes of respiration. Air and light appear to be the agents causing this change, which takes place most readily when the chloroform is exposed to the direct rays of the sun, in bottles containing only a small quantity of the liquid, and, therefore, a large proportion of common air. Free chlorine, hydrochloric acid, and probably other compounds of chlorine are formed; but Mr Morson is not at present prepared to state the order of their formation. Fortunately they are easily detected and removed. For the former purpose it is only necessary

to examine the specimen with litmus paper, the colour of which will not be changed if the chloroform be good. If, however, the colour of the litmus be reddened or destroyed, the chloroform must be submitted to a process of purification before using it. The purification may be completely effected by repeated agitation with distilled water, until it ceases to change the colour of blue litmus. He has observed that, if the chloroform be kept under water, the decomposition alluded to does not take place.—*Pharmaceutical Journal*, August 1848.

[Mr Morson's observations do not accord with the experience of our druggists in Edinburgh. See Dr Simpson's paper in this Number, p. 245, note.]

420.—*Cold as a Local Anæsthetic.* By Dr ARNOTT of Brighton.—Every one is familiar with the power of cold to destroy the sensibility of the skin. Dr Arnott asserts, that it may be applied so as to remove all feeling of pain in the integuments when cut; but that the anæsthetic action is limited to the cutaneous textures. Whether it can render much service in practical surgery, can only be seen on trial; but we fear a negative result.—*Lancet*, Sept. 9.

421.—*The Coca of Peru.* By Dr TSCHUDI.—[We have already, on more than one occasion (see *Retrospect* for February and March), presented our readers with extracts from Dr Tschudi's very interesting "Travels in Peru." From the following account of the coca, it appears to supply to the natives of Peru the place held in Europe by tobacco and alcohol, and in Turkey, China, and the East Indies, by opium and Indian hemp. There are probably few nations, however barbarous, who do not possess some kind of stimulant, sedative, or narcotic, which is used to refresh exhausted nature, or produce temporary oblivion of care and vexation.]

The coca (*Erytroxylon coca*, Lamb), is a small tree of about six feet in height, with fine green leaves, and beautiful white flowers. The fruit is a small scarlet berry. The part used is the leaves, which, when full grown, are collected and carefully dried. They are afterwards packed in cloth, and kept scrupulously from moisture, which destroys them. The Peruvians chew the coca. Each individual carries a leather bag containing the leaves, and usually, three or four times a-day, the Indian suspends his work to masticate the coca; one man consumes, on an average, about an ounce and a half of the leaf daily.

The taste is agreeable, slightly bitter and aromatic, resembling that of green tea. The general health of those who use the drug in moderation does not suffer. They have a pale sallow colour, but they work well, and live to a good old age. It is considered by Dr Tschudi to be highly nutritious, as it enables the Indian to endure fasting for a long period, at the same time that his power of undergoing unusual fatigue is undoubtedly increased. The unsteady gait, yellow colour, sunken eyes, trembling lips, and general apathy, readily betray him who indulges to excess.

In its action, it resembles thorn-apple and belladonna in dilating the pupil; but, on the other hand, it differs from these cerebro-spinants in not disturbing the intellectual functions. It has no hypnotic power.

The Indians extol it as one of the best means for relieving the difficulty of breathing experienced in ascending high mountains, and, of its value in this respect, Dr Tschudi adds his testimony from personal experience.—*Travels in Peru.*

422.—*Preparation of Collodion.* By M. MIALHE.—The gun-cotton which is prepared as follows, is, according to Mialhe, that which is best adapted for solution in ether. Carded cotton, 1 part by weight, nitrate of potassa, 20 parts, concentrated sulphuric acid, 30 parts. Mix the nitre and acid in a porcelain capsule, and add immediately the cotton; stir the mixture for three *minutes;* wash it immediately with water, and, when it has become quite tasteless, express it firmly in a cloth, and dry it at the stove. The material thus obtained is less inflammable than the ordinary gun-cotton, and leaves a residue.

Collodion.

Cotton prepared as above,	8 parts.
Sulphuric ether, rectified,	125 ...
Alcohol, rectified,	8 ...

Introduce the cotton and ether into a bottle, and agitate briskly for some minutes; then add the alcohol, and continue to agitate until the mixture acquires the appearance of a homogeneous syrup; pass it through a cloth; lastly, preserve it in a well-corked bottle.

In the preparation of collodion, the presence of water ought to be carefully avoided; and the skin of the part to which it is to be applied, should be thoroughly dried.

Collodion prepared as above directed has been used by M. Malgaigne and others with complete success.—*L'Union Méd.* 7 and 9 Sept.

423—*Ergot of Rye in Retention of Urine.*

By M. Allier.—According to this author:—1. Ergot restores contractility to a bladder which has been paralysed by over-distension. 2. It has been equally successful in paralysis of the bladder following apoplexy. 3. It exerts no beneficial influence over hemiplegic limbs. 4. The medicine must be given in repeated small doses; but these may amount to a drachm and a half per diem.

[A case illustrative of the good effects of the ergot in retention of urine is related by Dr Jeffreys (of Shrewsbury), in the *Prov. Journal* for 1844, p. 44. Dr Ross of Cambusmore, in the county of Sutherland, reports a similar case. See *Monthly Journal* for January 1844. See also Johnson's *Medico-Chirurgical Review* for July and October 1839.]

424.—*On the Inconvenience of writing Directions in Latin.* By Mr Donovan.—[Many physicians, whose classical knowledge is beyond a doubt, have shown their good sense by dispensing with the useless mystery of a Latin direction. It is difficult to conceive what object medical men have, when they write in a language which the patient cannot read that which is intended for his perusal. It is often troublesome, even in plain English, to convey with precision all that is necessary within the compass of a short sentence; and, indeed, many directions are very imperfect, and are only intelligible to the patient, from his having previously received from the physician a full verbal description of what is to be done. Many of the Latin directions in common use are extremely vague, and leave too much to the discretion of the patient; but even when given fully and correctly, they may be inaccurately rendered by the apothecary. Moreover, we have frequently seen Latin directions of a very imperfect character, from the author's ignorance of the words necessary to give full expression to his meaning.

Mr Donovan complains of the practice on account of the great difficulty which the apothecary has in rendering, in the narrow space of a label, the exact intention of the prescriber from a language which frequently admits of several interpretations.]

One of the common nuisances in medical Latinity is the expression "pro re nata," which was once translated by a pharmaceutical *savant*, "for the newly-born infant." We often find that this direction is given for the exhibition of a medicine of no definable power. If a medicine have a peculiar and recognizable effect, such as an aperient, and is directed to be taken "pro re nata," the meaning cannot be mistaken. But when no well-marked and obvious operation can be discovered, which can be expressed as a title, written at the head of the label, according to the custom of apothecaries, the "pro re nata," becomes a difficult phrase to translate, or to be understood by the patient, if translated. Suppose a mixture, consisting of several nervous, antispasmodic, or anodyne medicines, is directed to be taken "pro re nata," it may be intended for many conditions or emergencies, not one of which the apothecary has been made acquainted with. How, then, is he to translate the direction? Several modes are technically made use of. One is "to be taken occasionally." The patient, little the wiser, puzzles himself or the apothecary with questions about the interval between the doses; and he comes to the conclusion that "occasionally" means nothing, and perhaps he is not far from the truth. It may be supposed that the deficiency has been supplied by the prescriber in a private direction to the patient. I wish it were always so; all then would be right. Another translation often used is, "when necessary." The patient exclaims, "To be sure! medicine is never taken but when it is necessary; but when is that?" Unless previously instructed, he is no judge of the intervals of pain, sickness, or suffering, at which it is safe to take his dose. A third translation, "as occasion may require," is liable to the same objection: neither the apothecary nor the patient may know what is the "occasion" meant. The blame of so vague a direction is sure to fall upon the apothecary; and hence the physician is bound, in common justice, to write in English the exact words which are to be copied on the label,—the intention of the prescriber would thus be better fulfilled, and the apothecary relieved from a most embarrassing responsibility. * * *

If prescribers were obliged to write their directions in English, they would soon discover the difficulties under which they place the apothecary by the use of Latin words which have no corresponding English words in common use. Thus applications are directed to be made *faucibus internis*. What is to be written on the label? If the apothecary translate the words by the euphonic terms the *gorge* or the *weasand*, the patient would not be much the wiser. When the application is to be made *faucibus externis*, the case is as bad; for there is no English word to express these parts accurately, neither *throat* nor *jaws* will suffice. We find local remedies directed for the epigastric, hypogastric, umbilical, and hypochondriac regions: none of these parts can be desig-

nated, in the short compass of a label, with any thing like exactness. * *

The word "urgente" is another of the puzzlers which often occurs in prescriptions, and which cannot always be translated by a manageable word on a label. How is "urgente dolore" to be expressed? "when the pain is distressing" is sometimes written: is pain ever agreeable, or otherwise than distressing? Others write, "when the pain comes on;" but the pain may be persistent, and the prescriber may have meant when it becomes very great: yet, with the condition of the patient, the apothecary is supposed to be unacquainted.—*Dub. Med. Press*, Aug. 2, 1848.

425.—*Cod Liver Oil in Lupus.* By M. EMERY.—When M. Emery first began the use of cod liver oil in lupus, he gave it in doses varying from 8 to 60 grammes. Not obtaining any decided improvement, he augmented the dose to from 400 grammes to 1 kilogr. These large doses were followed with the most happy results. An amelioration in the character of the sore was often detected after a few days, and complete cicatrization of very bad ulcers has been obtained in two months. Of seventy-four cases of lupus thus treated with large doses of the oil, twenty-eight were dismissed the hospital completely cured, and twelve left with the ulcer almost whole. Of the remainder some were not benefited by a fair trial of the remedy; and others left the hospital prematurely. In many individuals, especially females, these large doses could not be given, on account of the painful symptoms which they occasioned.—*L'Union Médicale*, September 5, 1848.

[During our attendance at the Hôpital St Louis, Paris, we saw several of the cases of lupus, here referred to by M. Emery, under treatment with cod liver oil. Although what we then observed convinced us of the utility of the drug, more especially in scrofulous lupus, we were not prepared for the flattering numerical results above recorded. MM. Devergie and Gibert, physicians of the same hospital, and who had also employed the oil extensively in this disease, were not so certain of its value as their colleague M. Emery. It is right to mention, however, that they prescribed it only in the ordinary doses; now Emery insists on the necessity of the large doses.]

426—*Clinical Notes taken in the Hospitals of Paris and Vienna.* By Dr ALEXANDER FLEMING.—*Cod-liver Oil in Rickets.* By M. TROUSSEAU.—During my attendance at the Hôpital Necker, several children affected with simple rachitis were admitted. The rapid amelioration of the symptoms which followed the use of the oil in these cases, was most gratifying to witness; and, indeed, there is no disease in the now somewhat extensive range of affections in which this drug is employed, where its value is more evident.

Simple rachitis appears in children from the tenth to the fourteenth month. This being the period of dentition, it was formerly supposed that the rachitis had some connexion with the constitutional disturbance accompanying that process. There are several considerations opposed to this view, the most important of which are, (1), rachitic children have no teeth; and (2), many children are severely affected with the fever of dentition, without becoming rachitic. But it is also at this period that an important change takes place in the diet of children; and it is to the *premature* weaning that Professor Trousseau attributes the rachitis of infancy; indeed, in the majority of cases the operation of this cause may be established. The interesting experiments of M. Guérin have thrown new light on this point, and leave little doubt in my mind of the connexion between premature weaning and rachitis. When to young animals other food than the mother's milk is given, the stomach is unequal to its duty—the functions of digestion and nutrition, and, more especially, the nutrition of the bones, which is especially active at this period, are disordered. The bones become soft, and rickets is developed. M. Guérin selected a number of puppies. Some of these were allowed to take the mother's milk; the others were prematurely weaned. Of the latter again some were fed on bread and milk, and the remainder on flesh. The first and second sets grew strong and healthy; but the third set was soon attacked with diarrhœa, became emaciated, and finally *rachitic*.

M. Bretonneau, in 1829, was the first to make known in France the utility of cod-liver oil in this affection; but it is only of late years that it has come into extensive use, chiefly in consequence of the strong recommendations of Trousseau. The dose is at first a dessert-spoonful three times a day, increased gradually to a table-spoonful. As young children have little sense of smell, they take it readily, indeed often with avidity. The first sign of improvement is the diminution of the acute tenderness of the skin, which is the source of so much agony to the child in this disease. This may appear in forty-eight hours from the commencement of the treatment; and

a decided change in the state of the osseous system may be observed in from four to six days. I have seen a child who could not be touched without giving indications of acute pain, and whose legs were too soft to sustain the body, running about the ward in from two to three weeks. In Mollities ossium, Trousseau said that he had employed it with nearly equal success, but its action is slower.

Bretonneau denies any special virtue in the cod liver oil, which is expensive in France, and uses in preference common whale oil. Others maintain that they have used olive oil, poppy-seed oil, and common lard, with the same excellent results as when the cod-liver oil is employed.

The observations of M. Marchal, recorded at p. 183 of this Retrospect, tend to show, however, that the iodine is by no means a neutral ingredient in the cod-liver oil, and the phosphorus and salts of lime which it contains probably play an important part in the cure of rickets.—(*To be continued.*)

427.—*On the internal use of Turpentine Oil in Hæmorrhages.* By Dr Percy of Lausanne.—The author, after noticing the fact that several writers—Adair, Nichol, Johnson, Warneck, Copland, Ashwell, and Pereira—have spoken of the efficacy of the essential oil of turpentine in hæmorrhagic diseases, observes that this remedy seems nevertheless to be little used by practitioners. In the case in which he first made trial of it, hæmaturia of two years' standing, in an old man of eighty, was stopped in twenty-four hours by eight drops of oil of turpentine, and did not return. He has since used it in different cases of hæmorrhage, and always with a favourable result. The cases in which its use is indicated are those of passive hæmorrhage. It must not be employed where there is an active determination of blood, and where the pulse is full. When the discharge of blood is the consequence of organic disease, as of disease of the uterus, or of tubercular disease of the lungs, the action of the remedy is not so efficacious; but the author has seen a case of scirrhus of the womb, in which the hæmorrhage was for some time stopped by this remedy. Its action is very rapid, an effect being often manifest in a few hours, after one small dose. In order better to ascertain its power, he used it alone, without having recourse to local astringents or cold applications, where he could do so without fear of endangering the life of the patient. He has employed it most frequently in cases of menorrhagia and epistaxis; but he mentions, that it appears to him to be particularly applicable in the cases of hæmorrhage attending typhus. He noticed the fact that turpentine exerts different actions on the body according as it is taken in large or small doses, being more readily absorbed in the latter case; and, as its beneficial action in cases of hæmorrhage must depend on its being absorbed, the doses ought to be small. He has always found a dose of from eight to thirty drops sufficient. The best vehicle is almond emulsion, with a little gum arabic. When there is pain in the abdomen, a few drops of laudanum may be added.—*Royal Med. Chir. Soc. Meeting, London.*

428.—*Carbonate of Ammonia in Chronic Bronchitis.* By M. Guérard.—From extensive trials made at the Hotel Dieu, Paris, the author finds that the employment of carbonate of ammonia in chronic bronchitis, accompanied or not with emphysema, is very advantageous. It facilitates the breathing, favours expectoration, and gradually secures permanent improvement. The formula of M. Guérard is carbonate of ammon. 18 to 36 grs.; syrup of tolu, ½ oz.; camphor water, 3 oz. A table spoonful every three or four hours. The treatment is continued during two or three weeks.—*Annales de Thérapeutique*, Vol. VI. p. 50.

[Giacomini recommends the carbonate of ammonia in asthma and chronic catarrh. —*Mat. Méd.*, French translation, p. 54.]

429.—*Quinine in Acute Diseases.* By M. Guérard.—We noticed, on two former occasions, the alleged general prophylactic powers of quinine in febrile diseases.—(See *Periscope*, January 1848, p. 519, and *Monthly Retrospect*, 1848, p. 149.) For several months past M. G. has employed it extensively, and has been led to the conclusion, that in all cases of acute disease (including pneumonia, erysipelas, fever, small-pox, &c.), in which cerebral symptoms, as delirium and subsultus, appear early in the course of the attack, quinine is a most valuable remedy. Five to ten grains every four hours are given for two or three days. The delirium, &c., gradually disappear, the pulse is improved, and the whole character of the case is said to be remarkably changed for the better.—*Annales de Thérapeutique*, Vol. VI. p. 56.

430.—*Blindness from the Use of the Sulphate of Quinine.* By Dr M'Lean.—The fact that sulphate of quinine, in large

doses, will sometimes occasion blindness, has received additional illustration by the publication of several cases by Dr John M'Lean. The "heroic" treatment pursued by the Americans in this instance, as in some others, is calculated to afford the profession important information. In one case, about sixteen grains of the medicine were administered hourly for a low remittent fever, until nearly an ounce had been taken. In another case three grains were given hourly for three days. In another, three drachms were taken in thirty-six hours, in six-grain doses. In these and other cases perfect blindness was the result, the amendment from which was very slow indeed; in one instance, there was a gradual improvement during the first year; in another, the sight was partially restored after some weeks, but continued imperfect.

Trousseau also relates a case in which, after a dose of forty-eight grains of sulphate of quinine, the patient became temporaily blind and deaf.—*Illinois and Indiana Med. and Surg. Journ.*, Dec. 1846, and *Ranking's Abstract.*

431.—*New Vehicle for holding Camphor in Solution.*—Sir James Murray proposes a new vehicle for holding camphor in solution, which may be exhibited in doses considerably greater, and with less irritation, than it has hitherto been given. It was known that camphor is insoluble in water, and that when given in almond emulsion it very readily separates on the addition of water, and that the same separation takes place on adding water to a solution of camphor in spirits of wine. Now, Sir James Murray has found that the fluid magnesia was capable of dissolving camphor to the extent of three grains to the ounce of the solution, and that adding water to the mixture did not cause any cloudiness or separation of the camphor. An ounce of this solution contains three grains of camphor, which appears perfectly clear, like water; and, if any thing is added to the solution capable of withdrawing a portion of the water, such as dry common salt, a rough estimate may be formed of the quantity of camphor which it contains. To employ camphor as a sedative, it must be given in large doses; but it is also necessary to have it perfectly dissolved. It is obvious, then, that given for this purpose, it would not do to employ the camphorated spirit, nor will the solution in emulsion be any better, as it readily separates from it in the stomach. We have therefore, he observes, a menstruum in the fluid magnesia, which answers better than any method hitherto known.—*Dub. Med. Press*, Dec. 15, 1847; and *Ranking's Abstract.*

VII.—FORENSIC MEDICINE AND TOXICOLOGY.

432.—*Case of Malapraxis in Midwifery.*—It would appear from a summary of the evidence, derived not from newspapers but from an authentic source, that Mr Flint was called to attend the deceased, Elizabeth Riley, while in labour. On examining the woman three times, he said it was a cross-birth, and he had turned it. About seven hours afterwards, having sent for his instruments, he employed them, as it appeared, for about an *hour and a half*, under the bed-clothes. He declined having further advice, although this was suggested to him by the friends. The deceased appeared to sink, and died, undelivered, about twelve o'clock, *i. e.* between two and three hours after the accused commenced his manipulations with the instrnments under the bed-clothes. He told a witness that he had brought one child into the world, and there would be another in a few minutes. An attendant, perceiving that the woman was dying, turned the clothes off, and saw "a leg and foot, an arm and a hand, and something like intestines, hanging out nearly a foot." There was also an open penknife lying on the bed covered with blood, and for which the accused had previously inquired. The child which Mr Flint said he had brought into the world turned out to be a portion of the woman's bowels, with a part of the vagina and uterus attached to it; this was found under the chair in which the accused had been sitting! The inspection showed that there was no deformity of the pelvis; that a hand and foot of the child were protruding, the latter having on it a deeply incised wound. With these there was projecting a loop of intestine, which had passed out through the lower part of the uterus. The perinæum was destroyed, and the orifices of the vagina and rectum were continuous. The uterus was ruptured at its anterior inferior portion; the head was lying on the left superior side of the abdominal cavity, having protruded through an extensive laceration or rupture of the uterus in that position. There were several wounds about the body of the fœtus and the posterior walls of the uterus; and

the abdominal cavity throughout showed proofs of extraordinary instrumental and manual violence.

We have been obliged to enter into these horrible details in order to make our comments intelligible. At the trial of the accused, the line of defence, by cross-examination, was, that the deceased female had died from a rupture of the uterus, and that it could not be determined whether the rupture had arisen from the *manual interference* of the prisoner, or from *natural causes*. It was suggested that the injuries to the viscera might have operated secondarily in accelerating death; but that the rupture of the uterus was the real cause. Upon this the judge stopped the case, and summarily directed an acquittal.

There can be no objection to the legal principle, that every accused person should have the full benefit of every reasonable doubt. On the other hand, the lives of the public require to be protected, especially when, as it is alleged in this instance, persons not legally qualified to practise will take upon themselves the responsibility of attending a female in labour. Now, the question here was, as it appears to us—Did this patient die from the gross ignorance or criminal inattention of the person who undertook to attend her in a medical capacity? Would she have died but for the want of knowledge on his part to adopt the proper measures for her delivery? An accident might occur to any one; but the plan pursued by the prisoner appears to us to have been in violation of all professional rules, and such that could not fail to lead to the death of any female so situated. That the uterus, near the seat of the rupture, had been improperly interfered with by the violent use of instruments, was rendered in the highest degree probable from the discovery on its posterior wall of several wounds, evidently instrumental; some being superficial, and others *having passed entirely through the organ*. As the primary cause of death was assigned to rupture of the organ, we consider this to have been a most important fact for the consideration of the jury; but no further evidence was allowed to be gone into, although, as we are informed, some accoucheurs of great experience were present to speak to the probable cause of the rupture and death. In the cross-examination of Mr Simkins the usual ingenious plan was adopted of extracting an answer to a general question, and then making it applicable to a particular case. Ruptures of the uterus may undoubtedly occur under the hands of the most skilful, and lead to death; but the question here was, whether, on this particular occasion, the rupture had not proceeded from gross ignorance and unskilfulness in the use of instruments. The wounds upon the uterus, evidently caused by instruments which had passed through it, furnished *primâ facie* evidence against the suggested occurrence of the two extensive ruptures from *natural* causes. We think additional evidence should have been received, and the jury have been allowed to form their judgment from the whole of the facts, whether a sufficient amount of gross ignorance on the part of the accused had not been proved to account for the death of the woman. As it was, the case was hastily stopped, the facts were not laid fully before them, and the only inference that we can draw is, that, because a fatal injury may occur spontaneously under the hands of a skilful man, or be occasioned by the unskilful use of instruments, its origin will be imputed to natural causes, in spite of evidence from wounds through the walls of the uterus, and involving the surrounding viscera of the abdomen. We do not think such verdicts likely to give satisfaction; and, as the law thus declares itself to be inoperative for the protection of females who have their bowels removed by such extraordinary instrumental manipulations with penknives, &c., during a delivery, it is the duty of the colleges to take the matter in hand, and to insist that the practice of midwifery shall be entrusted only to those who are really qualified to practise. We fear, however, there will be great difficulty in procuring the enactment of such a law, although its necessity, for the preservation of the lives of the poor class of females, is rendered apparent by the not unfrequent occurrence of these disembowelling cases.—*Medical Gazette*, August 25, 1848.

433.—*Poisoning by Belladonna.* By Mr Jackson.—"T. G——, aged seventy-five, a man of spare habit, had a box of extract of belladonna, containing five drachms, given him with a view to its being spread as a plaster for his chest. The poor old man mistook the verbal directions, and took a portion of the extract. The dose taken was represented, by a female who was present at the time, as so small as not to exceed four or five grains. Whether this person was mistaken as to the quantity taken is uncertain. This occurred about six o'clock in the evening. In a short time the symptoms became manifest, and at seven he had lost the power of articulation, and presented the general appearance of a person seized with slight

paralysis. He was quite unable to stand or walk, and his limbs were in a state of tremor and agitation. He became cold, and nearly approaching a state of insensibility; the eyes had a wild, vacant appearance; the respiration was laborious, and occasionally stertorous; and he moved the body almost incessantly backward and forward, as if his inward suffering (not otherwise expressed) was very great. At ten o'clock, the temperature of the body had increased; face swollen; mouth and throat extremely dry; and insensibility more complete. Castor oil had been given, but was rejected. One of the attendants stated that nausea prevailed at various times. No active delirium was manifested, but from the general appearance of the eye and features, no doubt that peculiar derangement existed, subdued partially by the pressure upon the cerebral organ, so as more nearly to approach the character of apoplexy. At six the following morning, he appeared considerably exhausted, but had still sufficient power to take some wine and water, and for the first time indistinctly uttered a few words. His mouth and fauces at this time (to give the language of an attendant) were as dry as a chip. His face was so much swollen and red, as to quite change his usual appearance. His daughter remarked that the wrinkles of old age had disappeared, and he appeared much fatter than usual. Between nine and ten in the morning, he appeared quite exhausted, and he died at eleven, being seventeen hours after having taken the extract."

The post-mortem examination showed the presence of great congestion of the brain, particularly at the base, and of the medulla oblongata, together with considerable (serous?) effusion. There was also congestion of the lungs, and dark discoloration of a portion of the great curvature of the stomach.

The points of interest Mr Jackson considered to be—the rapid accession of the symptoms, particularly those affecting the voice; their resemblance in some respects to the early progress of congestive fever; and to the fact that the chief action of belladonna was on the medulla oblongata. The author does not hesitate to say that death was caused by belladonna, acting as a poison; yet the jury returned a verdict of "Death from natural causes."—*Proceedings of Prov. Med. and Surg. Association.*—Bath Meeting, 1848.

434.—*Poisoning by the Use of Emerald Green in Confectionary.*—An inquiry has been instituted at Northampton, before the county coroner, Mr Hicks, respecting the death of Mr William Cowfield, an accountant, who, with twenty others, was poisoned at a public dinner, given on the 7th of June. The magistrates, hearing of the fatal result, directed the police to seize the remnants of the dinner, and all the cooking utensils, in order that they might undergo a close examination by the medical gentlemen. Mr Sharp, one of the magistrates, questioned Franklin, the pastry-cook, who provided the dinner, as to what he used in the colouring matter for the blanc-mange. He replied, emerald green. He was told that it must be poison, as all mineral greens were poisonous. He remarked that he had frequently been told so, but he did not know it of his own knowledge, as he thought it was extracted from spinach. He then added that Randall, his assistant, made the blanc-mange and jelly, and he made the soup. Messrs Faircloth and Bryan, surgeons, who made the *post mortem* examination, deposed to the highly inflamed state of the stomach and intestines of the deceased, the result of some violent irritant poison. Mr Greville, who analyzed a small portion of the colouring matter left on the blanc-mange, stated that he had succeeded in detecting copper in it. The whole of the evidence having been taken, the coroner addressed the jury, and at some length explained the law as it applied to the case. The jury then consulted together, and at eleven o'clock at night returned a verdict of manslaughter against Edward Franklin and Edward Randall. The necessary documents were then made out and signed for their trial at the ensuing assizes. The deceased was sixty years of age.—*Pharmaceutical Journal*, July 1848.

435.—*Death from a Foreign Body in the Trachea.—General Hospital, Vienna.*—The subject, a corpulent and healthy-looking woman of middle age, was brought to the hospital dead, who, from the account of the bearers, had been quarrelling, and received a blow on the head, from which, after some convulsive movements, she quickly died.

When placed on the table, there was no lividity of the face, nor other peculiarity of visage; there was a superficial lacerated wound of the front of the scalp, about an inch and a half in length, and situated over the central part of the frontal suture, its anterior edge somewhat bruised, and the posterior slightly torn from the pericranium. There was slight ecchymosis around the wound, but no injury of the skull, which, indeed, was nowhere denuded of the pericranium, and on being

laid open, displayed the brain and base of skull altogether uninjured. The abdominal and thoracic viscera were then laid bare, and according to the rule in examining all bodies here, whatever the nature of the case may be, the trachea was slit open, and to the surprise of all, exposed at once the cause of death. A plug of boiled saurkraut, nearly an inch in length, was so firmly impacted in the trachea, an inch and a half below the larynx, that it must have instantly destroyed all respiration; a few strips of the vegetable were also found in the ventricles of the larynx, and the pharynx was likewise nearly full of it; the stomach contained some food, and, like the other viscera, was quite healthy.

The explanation of the case appears very simple; the body with which she had been struck must have been blunt, and, as usually happens, slipped obliquely from the skull, making a mere superficial wound, without doing further mischief there. She was, however, eating at the time, and there can be little doubt that the blow was unexpected; and, as occurs in all cases of injury and fright, it caused her to take a sudden and violent inspiration, and, in consequence, produced the sucking in of the vegetable she was about to swallow. The firm manner in which it plugged up the trachea, demonstrated the great force with which it had been drawn in, and the insufficiency of the convulsive efforts that followed to dislodge it. Had the trachea not been examined (and how often is it neglected), the cause of death would no doubt have been at once set down as the result of the direct effects of the blow upon the brain; and as I have not heard the issue of the legal proceedings, I cannot say how far,—if, indeed, in any degree,—the discovery of the true cause of death lightened the legal guilt of the prisoner in the eyes of the Viennese jurists. —*Lancet; Dub. Med. Press*, September 1848.

436.—*Laceration of the Heart and Pericardium, with other Internal Lacerations, and without External Wound.* By M. Casper.—A man was thrown with great force from a cart descending a hill, and, striking against a tree, was killed. There was no appearance of external injury. There were ecchymoses between the deep muscles of the back. One of the spines of the vertebræ was broken off, and lay loose in the soft parts. The spinal marrow was uninjured. The left side of the thorax contained 30 oz. of blood. The pericardium was ruptured, the heart torn from the great vessels, and lying loose in the depth of the thoracic cavity. The left lung was nearly torn across, and the right lobe of the liver had a deep laceration. —*Casper's Wochenschrift*, and *Schmidt's Jahrbücher*, 1848, No. 7.

[So far as we know, this case is unique. A near approach to it, however, is found in a case related by Dr Gairdner, in the *Medico-Chirurgical Transactions of Edinburgh*, Vol. I. p. 662. This case is not mentioned in works on medical jurisprudence. A girl, ten years of age, was killed by the wheel of a cart passing over her body; there was no external lesion, except a very slight extravasation under the left nipple. The heart was ruptured. "Both ventricles and both auricles were laid open by the laceration, and the septum torn to shreds. About one half of the substance of the heart had burst a way for itself through the pericardium into the right cavity of the thorax, where it was found immersed in a very large quantity of grumous blood, and still attached to the other part by means of a small portion near to the apex, where the cart had stopped." The ribs were uninjured. Dr Geoghegan of Dublin, relates a case in which the heart was ruptured by external violence, without any external indication or any fracture of the ribs.—(*Dublin Med. Press*, II. 271.)

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

437.—*Comparative Physiology and Pathology of the Human Races.* By M. Boudin, Principal Medical Officer of the Army of the Alps.—The author has insisted in several memoirs, formerly published by him, on the imposibility of the acclimatisation of Europeans when engaged in labour (*à l'état de travailleur*) in different quarters of the globe. He now addresses himself to a consideration of the question, as to whether this is equally true of other peoples and races as it is of Europeans, in the hope of throwing some light on the comparative physiology and pathology of different human races. Facts already known seem to demonstrate, that the different races of the human family obey special laws, in relation to births, deaths, and pathological tendencies. The French and British governments have already availed themselves of the partial experience of this, to diminish the mortality among their national troops in certain colonies, by adding to their armies local

auxiliary corps recruited from among races adapted to the climate.

The mortality among the British troops in the Antilles from 1817 to 1836, is shown by a tabular statement to be among white troops 80 per 1000 whilst among the black troops it was only 40 per 1000. This has led to the substitution of a black for a white regiment, and by this prudent measure, conjoined with a frequent change of the white troops, based upon a practical renunciation of the hypothesis of acclimatisation, an unexpectedly great diminution of mortality has been accomplished.

This is proved by a statement from a paper read by Leut.-Col. Tulloch to the Statistical Society in 1847, quoted by M. Boudin, but which we regret not to have seen. From this document it appears that the mortality per 1000 among the British white troops in the West Indies, previous and subsequent to 1816, was as follows :—

	Jamaica.	Lesser Antilles & Guiana.
Before 1836,	128·6	82·5.
In 1844 & 1845,	29·7	59·1.
Annual saving,	98·9	23·4.

These facts are worth more than all the best reasonings for showing the high social interest of the study of the comparative physiology and pathology of the human races.

General Kleber, in 1801, having, during the war in Egypt, sanctioned the plan of employing negroes as recruits for the French army, M. Boudin suggests the propriety of the French government adopting the plan of negro regiments in some of their colonies. He quotes the following table to show that this measure should not be adopted indiscriminately, as the European race in some stations (though not engaged in labour, it is true) maintains a fair duration of life :—

Mortality per 1000.

	French Troops before 1838.	Slave Population of all ages from 1836 to 1842.
Senegal, . .	123	No returns.
Guadaloupe, .	101	24
Martinique, ·	102	31
Guiana, . .	32	33
Isle de Bourbon,	25	32

The author then quotes, in support of his proposal, tables showing the favourable results obtained in the British service by the employment of local native corps.

[It would be an unnecessary sacrifice of space to quote these various tables *ad longum*. They are derived from the official reports of the army presented to Parliament.]

But it is not merely in respect to the amount of mortality that the various races differ from each other ; they differ also in respect to the cause of death. Thus at Sierra Leone, whilst, on the one hand, the general mortality in the negro troops is to that in the white troops as 1 to 16, the deaths by gastro-intestinal diseases are as 1 to 8, whilst the losses by fevers are as 1 to 200.

At the southern extremity of Europe, on the contrary, at Gibraltar, where a negro regiment was stationed for nearly two years, commencing in 1817, the proportional loss of white and negro troops offers quite opposite results. The deaths among the whites being 21·4, whilst among the negroes they were 62 per 1000.

From this fearful mortality among the blacks at Gibraltar, on one hand, and the ascertained fact, on the other, that the negro race in Egypt is maintained only by incessant immigrations, M. Boudin doubts the correctness of assertions which have been made on theoretical grounds, that the negro race might be acclimatised in Algeria. M. Boudin next quotes long tabular statements of the amount and causes of mortality among the British and Sepoy troops in India. From these it appears that the only class of diseases which are more fatal to the native than European troops is dropsies, which is to be accounted for by the liability of the former to, and the exemption of the latter from, *beriberi*. Two English soldiers only are mentioned in the official documents as affected by this disease, whilst among the Sepoys there were 1145 admissions, and 158 deaths from it.

The next tables quoted by M. Boudin refer to thoracic diseases. These show that the admissions for acute thoracic inflammations and catarrh, are among the Europeans, to those among the Sepoys, as 216 to 19, and the deaths as 4 to 1·4 ; whilst, in respect to phthisis, the proportions are as 18 to 12, and 3 to 1·8 respectively. Whilst, therefore, "inflammations of the lungs and catarrh" prevail with very unequal intensity among the two races, the prevalence of phthisis is nearly on a par, which he regards as a fresh evidence against the theory of the tubercular diathesis being a chronic species of pneumonia. Again, in comparing the prevalence of phthisis in the Madras presidency with what occurs among the troops in the United Kingdom, it appears that the deaths from this cause among the troops at home, are from five to twelve times greater than in the Madras presidency.

Taking this in connexion with the enormous prevalence of marsh-fevers in the latter, amounting to upwards of 18,000 cases in six years, he thinks the facts well worthy of the consideration of those who have bestowed attention upon the subject of the antagonism of marsh-miasma to phthisis.—*Gazette Médicale*, No. 29, July 1848.

438.—*Brandy Drinking, and its Treatment by the Method of* Dr Schreiber.—The Temperance Society of Stockholm in 1843, requested the medical men of that capital to make known, and try this system, and especially to report as to whether it might be practised without the superintendence of a medical man. The physicians resolved to publish all the details of the treatment, and to encourage experimental trials of it, at the same time they expressed their conviction that it could not safely be followed except under daily medical superintendence.

Dr Schreiber's method consists in isolating the brandy drinker, by shutting him up in a room, giving him for drink a mixture of one part of brandy, with two of water, preparing all his food with water mixed with diluted brandy, and giving him brandy in his coffee. Under this alimentation, the patient falls into a continuous drunkenness, and sleeps a great deal. At the end of five days, his food and drink begin to disgust him, and he asks for a change. If this is acceded to, the cure is spoiled. On the contrary, this regimen must be persevered in, until the patient cannot swallow either food or drink, and cannot even bear the smell of them. The cure may then be regarded as complete.

Dr Landblad had tried this system on the soldiers in the garrison of Gotheberg, and communicated the following results to the College of Health. As he has observed that the treatment frequently occasions cerebral and thoracic congestion, he advises to administer at the beginning an emeto-cathartic dose, and afterwards to use every three days an ounce and a half of Epsom salts.

A room in the garrison hospital was specially appropriated to this purpose, to which no one was allowed access. Only at the time when they were carrying in the brandied food, and which smelled very badly, some soldiers were admitted as spectators, and the mere sight made a profound impression. The warmer the food is, the less unpleasant is the smell, and the more readily is it taken. The shortest treatment was seven days, the longest nine. During the three first days the appetite was increased, and thirst moderated; the fourth day the thirst became rather sharp, and the appetite declined. The following days the patients could not eat without vomiting, and the thirst was unappeasable. The general state of the patients was very variable; some were depressed and mournful; others violent and excited, and wished to make a forcible escape from their restraint, so that it was sometimes necessary to put them under guard. Of thirty-five soldiers who were subjected to this treatment, three only recommenced their drunken habits; and in two of these it was interrupted, because in one there supervened an attack of convulsions, in the other vomiting of blood. The others never felt any propensity to return to the use of brandy, although some of them had previously been punished for drunkenness.

M. Sonden, who thinks that this system merits all the attention of practitioners, says, that it is attended with no bad consequences; that, on the contrary, the appetite increases and the health improves. He adds, that, to the credit of the army, several soldiers voluntarily submitted to this treatment, in the hopes of getting rid of their habits of drinking.

Dr Retzius, regimental surgeon, has, under the supervision of the battalion surgeons, made an extensive trial of this method in the garrison of Stockholm, of which the following are the principal results:—The treatment was never adopted by compulsion, as its effects were comparatively unknown. Those who voluntarily submitted to it were subjected to a rigid examination as to the state of the thoracic and abdominal viscera, and as to the existence of any predisposition to apoplexy, or cerebral congestion. They were carefully watched, and the state of their health accurately noted. The first trials were made in May 1844, and the treatment was commenced without any preliminary preparation. For the first five or seven days the new regimen pleased the patients much; they were in a constant state of joyous inebriety, and there was rarely vomiting at this stage. The pulse was full and not frequent, the tongue red and moist. They all complained of a sense of burning in the stomach. The bowels were regular, the urine red and scanty, the skin soft. The pupils in a state intermediate between contraction and dilatation. At the end of this period, the tipsy excitement ceased, the patient came to himself, but remained depressed and silent. The sense of burning in the stomach had become acute, and the thirst insatiable. The tongue was yel-

low on the edges, the stomach retained neither food nor drink; all was immediately rejected by vomiting. The most of the patients ate no more. The pulse was small, feeble, and unsteady. At the end of from two to four days more, this state gave way in its turn, and the patients recommenced eating and drinking. Some of them were again affected by drunkenness for six or eight days, and, when they regained their senses, they always retained an invincible repugnance for the aliments prepared with brandy. Six men maintained till the end of the treatment a slight delirium, which then subsided spontaneously. The duration of the treatment varied from six to twelve days, but some required twenty days, including the period of convalescence. This consisted in the new regimen which was substituted for the brandy system, from the time when it produced such a complete disgust that even the smell sickened the patients. At this time they were allowed pure water in small quantity, milk, soups, or gruel, and subsequently other aliments, but always in small quantities. The treatment was stopped in seven cases; twice from convulsions, three times for hæmatemesis, once for hæmoptysis, and once for a blow on the head, which the man got from one of his drunken fellow patients.

No other bad results followed; on the contrary, the patients appeared to be improved in health. One was affected by melancholy, which subsided under the use of laxatives. In one man the treatment was stopped on the fifth day for threatened cerebral congestion, with symptoms of abdominal irritation. It was cured by cold to the head, and purgation by castor oil. He had, however, completely lost his taste for brandy.

In the whole garrison, 139 men were treated by Schreiber's method. Of these, 128 were cured of their drunken habits, four relapsed into the vice, and in seven the treatment was interrupted. Most of the patients were from twenty to twenty-five years of age.

This treatment presents dangers and difficulties, and cannot be successfully or safely pursued, as the above cases show, without the constant surveillance of a medical man. Moreover, such successful results as the above must not always be expected. There may be relapses, and recurrence to old habits, after a more or less prolonged apparent duration of cure; nevertheless this method of treating so common and degrading a vice, merits the attention of physicians.

It is evident, moreover, that in this country [France], and under the laws which guarantee the liberty of the subject, this method cannot be pursued, except with the distinctly-expressed assent of the patient.—*L'Union Méd.*, Aug. 1, 1848.

[It is remarkable that in the above reports no notice is taken of the absence or presence of tremors. It seems to be a system of cure, on a kind of homœopathic principle, by inducing on purpose a state of delirium tremens. Apart from the hazards which the statements of Dr Retzius show to be neither few nor trifling, we desiderate some further account of these patients before we can judge of its efficacy. We should doubt the eventual permanency of the cure produced by such means. To reform the drunkard, the moral as well as physical man must be brought to feel a disgust for his brutalizing and enslaving habit. It may prove successful in young subjects, and, if so, would so far be a blessing; but would most probably fail, where it did not prove fatal, in the old confirmed dram drinker. Moreover, being founded on no higher principle than disgusting the patient with one form of stimulant, although it may have some success in Sweden, where the chief *pabulum ebrietatis* which soldiers can procure is spirit, it would fail in this country, where strong ale and porter are so accessible, and would only drive the debauchee from Glenlivet and "Old Tom," to Edinburgh ale or Meux and Co.'s entire.]

439.—*Inula Dysenterica in deficient Secretion of Milk.* By Dr Wolffsheim of Brunswick.—This plant is a frequent European native in moist localities, and is mentioned in some of the older continental works under the name of *herba conyzæ mediæ*. It should be gathered when in flower in August. Dr Wolffsheim has been in the habit of giving it to lying-in women in whom the secretion of milk is defective, and it has proved successful without effecting in any way the general health of the patient, the mammary secretion being strikingly increased in a few days. He gives it in the form of tea, to the extent of three to four cups daily. For a similar object, the freshly cut herb has been mixed with the fodder of cows which have too little milk.—*Casper's Wochenschrift in Schmidt's Jahrbücher*, No. 5, 1848.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

440.—*On the Acidity and Alkalinity of the Fluids of the Human Body in the state of Health and Disease.* By M. ANDRAL.—Contrary to the received opinion, M. Andral holds, as the result of numerous experiments, that the acid or alkaline reaction of the different fluids of the body never varies. The amount of the reaction in each case may vary, according as the fluid is diluted or concentrated; but an acid fluid never becomes alkaline, nor an alkaline fluid acid, even in disease. There are many apparent exceptions to this law; but M. Andral has found, as we shall see, only one real exception, and that a partial one.

Serum of the Blood.—This fluid is invariably the most alkaline in the economy; and M. Andral has never found the intensity of this alkaline reaction vary, even in disease, in any sensible degree. [This coincides with the testimony of all other authors, except Scherer, who found the serum neutral in a case of metro-peritonitis; and Mialhe, whose assertions as to the acidity of the blood in diabetes are contradicted by the experiments of Bouchardat—see the review on this subject in September Number, p. 182.] Generally speaking, also, all those pathological fluids which are characterised by the presence of albumen, are formed by the exudation of the serum of the blood, and partake in its alkalinity. Hence pus, the fluids of blisters, and of herpes, eczema, pemphigus, &c., are alkaline; and the fluids resulting from inflammations of mucous membranes are also alkaline, whatever be the normal reaction of the corresponding mucous secretions. In all these cases the unaltered serum, or blood-plasma, exudes from the vessels, and determines the character of the reaction.

Cutaneous Secretions.—The *sweat* is invariably acid, the *sebaceous matter* always alkaline. The aggregate secretion of the skin is therefore acid or alkaline, according to the predominance of the former or the latter. The contents of *sudamina* are acid, like the sweat.

Mucous Secretions.—The normal transparent secretion of mucous membranes is decidedly acid. This normal fluid contains for the most part no microscopic globules; when, however, it is exchanged for a pathological fluid containing globules, the latter is alkaline, for the reason above stated. The fluids of coryza and bronchitis are thus generally alkaline.

The secretions of the larger glands are for the most part alkaline, excepting the *urine*, which is acid. The only real exception to the acidity of the urine is, that under the influence of peculiar articles of diet it may become temporarily alkaline, but it acquires its natural acidity as soon as these are withdrawn. Its apparent alkalinity in disease is caused by its admixture with the pathological products of the mucous membranes over which it passes. M. Andral has never observed alkaline urine apart from disease of the mucous membrane of the bladder. The *bile* and *pancreatic fluid*, the *saliva*, and the *tears*, are all invariably alkaline.

The fluids of the mouth are found to vary according as the saliva is present or not. Examined in the morning, before food is taken, they are invariably acid; but when the flow of saliva has been excited they generally become alkaline, and remain so during the day. [This circumstance explains the apparent discrepancies in the results obtained by Donné and others as to the saliva.] The *secretions of the stomach are invariably acid*, whether the mucous membrane be stimulated or not. [In this particular, M. Andral differs from previous observers, who have maintained the gastric secretion to be only acid when the true gastric juice is present.] In the duodenum the reaction is commonly alkaline, from the presence of the bile and pancreatic fluid.—*Gazette Médicale*, No. 28, 1848.

441.—*Method of distinguishing Human Blood from that of the other Mammalia.* By M. Casanti.—M. Casanti recommends the use of phosphoric acid, of spec. grav. 1.18, which he has found to distinguish, first, the blood of mammalia from that of all other vertebrate animals; and, secondly, that of man from the rest of the mammalia. When the test is to be applied, the blood is first evaporated to dryness, and an excess of the acid added. The blood of a mammiferous animal is then seen to agglutinate into a brilliant homogeneous mass of greater or less tenacity, while no such appearance is seen in any other vertebrate animals. He finds further, that when six grains of human blood in fine powder are treated with nine of phosphoric acid, and well mixed with a glass rod, it swells up into a homogeneous, liver-coloured, tenacious mass, which is extremely coherent and plastic, yields to pressure, and shows no disposition to break into fragments. With the blood of the horse the appearances are quite different. The blood swells and softens, but, in place of uniting into a homogeneous mass, it forms several clots, which do not cohere, and are easily broken up by the rod. This character the author has found to belong to most of the common mammalia; the cat alone gives a homogeneous mass, but it possesses none of the tenacity which characterises human blood, and is easily broken up. The characteristic appearance of human blood is common to both sexes and all ages. Mensual blood, however, gives a homogeneous clot, which is easily broken up into fragments, which do not again unite. —*Gazette Méd.* Aug. 5, 1848, *from the Gazetta Toscana delle Scienze Medico Fisiche.*

442.—*Origin of the Right Subclavian Artery from the Arch of the Aorta (left side), with Absence of the Right Inferior Laryngeal Nerve.* By Dr Demarquay.—The author relates two cases in which the following abnormal conditions were found. The subclavian artery passed from left to right, and after having taken its origin from the left part of the arch of the aorta, passed between the œsophagus and the vertebral column, and thus reached the space between the scaleni. The recurrent nerve was absent; the pneumogastric occupied the normal position; from its internal part were given off a great number of nervous filaments, which were distributed to the larynx, to the inferior part of the pharynx, to the trachea, and to the œsophagus. All these nervous filaments, destined to replace the inferior laryngeal nerve, passed under the common carotid artery. Further, the pneumogastric afforded to the larynx a branch so voluminous, that it might be considered a veritable recurrent nerve; and which, at the inferior part of the larynx, was in every respect disposed of in the same way as the termination of the inferior laryngeal nerve. The cardiac nerves, furnished ordinarily by the recurrent, were given off by the pneumogastric.—*Gaz. Med.*, Sept. 9, 1848, and *Prov. Jour.*, Oct. 18, 1848.

443.—*On the Movements of the Brain in connexion with Respiration and Circulation.* By M. Flourens.—The pulsatory movement of the exposed brain, corresponding with the arterial pulse, is well known to physiologists. Haller, however, described the brain as the seat of two distinct movements: one of the kind described, the other a movement of expansion corresponding with the expiration. M. Flourens undertook a new series of experiments to determine the existence of this latter movement. He has ascertained that it may be quite well distinguished, as Haller has described it. It appears to be caused by a reflux pressure of the venous blood in the sinuses of the dura mater.—*Gazette Médicale*, July 22, 1848.

444.—*On the Absorption of Insoluble Bodies.* By M. Mialhe.—In our review of Mialhe's *Traité de l'Art de Formuler* (July Number, p. 37), we mentioned that the experiments of Oesterlen, in which he found that charcoal, administered by the mouth to fowls and rabbits, passed into the blood, in which fluid the carbonaceous particles might be detected by the microscope, were opposed to Mialhe's doctrine, that "every substance, capable of exerting a remote action on the animal economy, is soluble, or susceptible of becoming so in the fluids of the body, * * * such substances alone being capable of absorption."—(See also *Journal* for May 1847, p. 448.) M. Mialhe has since repeated the experiments of Professor Oesterlen, and asserts that charcoal, when thus administered, does not pass into the circulation.—*Gaz. Méd. de Paris*, August 19.

[We are disposed to think that Oesterlen may have been deceived in his observations; but we confess that we should like to see the experiments repeated by a less biassed observer than M. Mialhe. The question is important, and we hope that the committee of the Academy of Medicine, to which it has been referred, will give it a satisfactory examination. We shall take care to communicate the result to our readers.]

II.—MORBID ANATOMY, PATHOLOGY, & PATHOLOGICAL CHEMISTRY.

445.—*On the Healthy and Diseased Structure of Articular Cartilage.* By JOHN BIRKETT, F.L.S., F.R.C.S.—From the constant influence of attrition upon the articular cartilage, it is evident that it would be rapidly destroyed if it were not endowed with a high capacity of nutrition and reproduction. The increase of cartilage, both in thickness and superficial extent, with the growth of the body, also furnishes evidence of the existence of this power, which Mr Birkett believes to reside in the nucleated cells enclosed in its blastema. The author assents to the observations of most physiologists, in believing cartilage to be a strictly non-vascular tissue, and he is at some pains to point out its analogies with the epithelial structures, such as epidermis or horn. He considers articular cartilage to hold precisely the same relation to bone as the epidermis to the corion; the analogue of the latter being found in the very hard and peculiar layer of bone which lies immediately beneath the cartilage, between it and the cancelli. He observes, also, that the cancelli may be regarded as representing the subcutaneous cellular layer, having, like it, areolar spaces, which are occupied by a fatty substance, the marrow. The arrangement of the capillary vessels in the articulating ends of bones is in terminal loops, which pass into projections of the osseous tissue immediately in contact with the hard articular layer alluded to, and which the author regards as analogous to the papillæ of the corion.

The structure of this thin layer which intervenes between the vessels and the cartilage, differs from that of true bone; it is harder and denser; the lacunæ are very regularly disposed, but the canaliculi which characterize the ordinary osseous tissue are absent. Its articular surface is irregular, and is closely fitted by corresponding irregularities of the cartilage. The other surface is equally closely adapted to the papillæ of the osseous tissue, inclosing the looped capillaries, as before stated.

The articular cartilage presents a variation in structure towards the free surface. The cells which, throughout two-thirds of its substance, have no definite arrangement, become flattened out, their long axis assuming the direction of the articular surface. This the author regards as a modification similar to that of epithelium, the flattening of the cells being the effect of the pressure to which they are subjected. It is this flattened layer of cells which has been regarded by writers as a prolongation of the capsular epithelium upon the cartilaginous surface.

The destruction of cartilage in disease commonly proceeds by an infiltration of fatty granules, first into the cells, and ultimately into the hyaline intercellular substance. Thus disorganized and softened, the cartilage is removed by a gradual process of attrition, which the author considers as different from ulceration. [We do not see any good grounds for this distinction. The attrition, ulceration, or molecular disintegration of articular cartilage has been carefully described and figured by Goodsir, (Anat. and Path. Observations, p. 17, and Pl. I. Fig. 13.)]

Along with the process of destruction proceeds the formation of a tissue, containing newly formed fibres and blood-vessels, which arises whenever the cartilage is removed. These vessels are connected with, and spring from, those of the fibrous tissues adjoining the joint; they are also frequently connected with those of the subjacent bone; but, in order that this may be the case, it is necessary that the thin articular lamina of bone, as well as the cartilage, shall have been removed by attrition. It is only, therefore, when this layer has been entirely removed that complete *synostosis,* or vascular and organic union of the opposite ends of the bone, can take place through the medium of the newly-formed fibrous tissue and its vessels; and it is commonly observed that up to a late period in the process of anchylosis, portions of the articular layer remain, and prevent the bony union at the joints where they are present.—*Guy's Hospital Reports,* Oct. 1848, p. 36.

[We gladly accept this contribution to a subject very much neglected in pathology, and hope that Mr Birkett will sedulously continue the observations he has so well begun.]

446.—*On Cysts of the Testis, Epididymis, and Appendix of the Testis.* By M. GOSSELIN.—The author draws a broad line of distinction between the larger and the smaller cysts of the testicle and epididymis. The latter he considers as independent structures, while the former are formed at the expense of the normal structures, by partial obliteration of the tubes. The small cysts, according to M. Gosselin, are never found before the period of puberty, and are rare and small till after forty; but in advanced age they are exceedingly common, occurring in two-thirds of the testicles examined, whe-

ther healthy or diseased in other respects. They vary from the size of a millet-seed to that of a pea. They occur on the testicle between the tunica vaginalis and albuginea, sometimes sessile, and occasionally with a pedicle, and never contain seminal animalcules. The large cysts, on the contrary, which have been described by Brodie and Curling, constantly contain spermatozoa, even when the vesiculæ seminales and proper apparatus of the testicle have ceased to contain semen. These large cysts are frequently mistaken for hydrocele; and the author believes that all the cases of this disease, in which spermatozoa have been found in the fluid evacuated, have been either cysts of the kind alluded to, or ordinary hydroceles communicating with a cyst. M. Gosselin believes these cysts to be formed originally by the rupture of obstructed seminiferous tubes, and thinks that their communication with the proper secreting structure is early sealed up by contraction and obliteration of the normal canals.

M. Gosselin explains the production of the smaller cysts of the testicle, and likewise of many ovarian cysts, by supposing that these organs, at the period when their natural function ceases, exhibit the remains of the functional *nisus* in forming new structures. [We cannot say that this fanciful explanation appears to us at all satisfactory. If there still exist any any functional activity, what obstacle is there to its exercise in the production of the normal secretion? We have been accustomed, on the contrary, to consider the absence of the *nisus* as the cause of the cessation of the normal secretion.]

The appendix of the testicle is a small fibro-cellular mass (sometimes containing fat), seldom exceeding the size of a pea, which is attached to the tunica vaginalis, just below the head of the epididymis. This organ has been seldom described by anatomists. It is occasionally the seat of cysts, and has then been deseribed by pathological anatomists as an adventitious structure.—*Archives Générales de Médicine*, 1848, pp. 24, 42, and 163, 181; and *British and Foreign Med. Chir. Review*, Oct. 1848.

447.—*Influence of Physical Agents on Variola.* By M. Serres.—M. Serres inquires, why the skin is the seat of election of the variolous pustule, while the mucous membranes are comparatively seldom affected? This he considers to be owing to the influence of the air on the development of the pustules, which are most largely developed on the face and hands, where there is the greatest exposure; and most scanty on the hairy scalp, the axilla, and about the genitals, where the parts are protected from the contact of the atmosphere either by the presence of hairs or by position. The influence of the air upon the production of the variolous pustules is further shown, by the circumstance, that when the mucous membranes are attacked, it is invariably those which are exposed to the contact of the air. Thus, in fifty cases in which the pharynx, epiglottis, and larynx were attacked by the pustules, he has uniformly found that these stopped short at the glottis, the œsophagus remaining quite sound. In the majority of instances, likewise, the conjunctiva, vagina, and rectum, are exempt from the affection, being in the normal state secluded from the contact of the atmosphere; but if these membranes are everted, as in trichiasis, and in prolapsus of the uterus and rectum, they are readily attacked by the pustules.

M. Serres considers, that these views as to the development of the pustules of variola are borne out by experiments. Thus he finds, that, by covering the pustules with little cups of darkened glass, or enveloping them in honey, or in a layer of fatty matter, their progress is arrested; a result which he ascribes solely to the exclusion of the air.

The condition of the atmosphere (as might be expected from the above remarks) exercises a most important influence over the severity of small-pox. From an extended consideration of the epidemics of different countries, it is found that the disease reaches its maximum of intensity in a dry atmosphere; and that the dry heat of the south and dry cold of the north are equally unfavourable in relation to variola. This is particularly shown in the epidemics of Holland; and it was this circumstance which Sydenham had in view, when he said that a moderate temperature was especially favourable in variola.

In the Hospital of La Pitié, during the years 1817, 1818, and 1819, the variolous patients were treated in ill-ventilated, dark, and moist wards; there were few confluent cases. However, conceiving that these wards were insalubrious, M. Serres had the patients removed to wards in the fourth story, very dry, exposed to the south and north, warm in summer and very cold in winter. The result was unfavourable; the eruptions became more grave, and the mortality increased. Under these circumstances, the patients were again removed to the ground floor. Thus was illustrated, on the small scale, the same truth as springs from a considera-

tion of the extended epidemics before mentioned.

If it be thus proved that moisture exerts an influence on the development and intensity of variola, it is not unlikely, according to M. Serres, that the same cause tends to impede the development and efficacy of the vaccine pustule. It remains to be decided by statistics whether the vaccine virus is less active and less preservative in its influence in the moist climates of the south of Europe, than in the drier ones of the north.—*Memoir read to the Institute*, 25th September 1848; *Union Médicale*, 5th October 1848.

448.—*On Diseases of the Heart in Birds.* By M. Rayer.—M. Rayer, in a note recently read at the Académie des Sciences, states that he has long made the diseases of birds a subject of careful investigation; and in reference to what he has observed as regards disease of the heart, he is induced to ask this question: "Is there among birds, mammalia, and especially man, any relation between the activity of the generative function and the production of disease of the heart?" It is founded upon the facts.—1. That all the birds in which he has observed disease of the heart are of the male sex, although of every species he has examined a far greater number of females than males.—2. All these birds manifest uncommon generative ardour; such are the common cock, the cock pheasant, the domestic pigeon, and the musk duck.—*Gazette Médicale*, No. 25; and *Brit. and For. Med. Chir. Review*, Oct. 1848.

[The premises are fallacious; for it cannot be justly held that physiological peculiarities in the mode of accomplishment of the generative function imply greater "generative ardour" in one species than in another. According to this standard, the male of the frog presents a much more marked instance of generative ardour than any of the birds named. On the other hand, if mere amount of production be a test (and we should think it not a bad one) of "the activity of the generative function," then the *females* of fishes far excel in this respect any other animals possessing hearts. M. Rayer should have extended his inquiry to these. The idea that generative ardour, or activity of the generative function, is confined to the male sex, is likewise quite absurd. It is pity that any one so justly honoured in science as M. Rayer, should allow himself to be led into so loose a method of reasoning.

The conclusions which appear to spring from M. Rayer's inquiries, in so far as the data are published, are, that diseases of the heart in birds occur chiefly, 1st, in males; 2d, in domesticated and naturalised species. We are not aware, however, whether the number of instances be such as legitimately to establish these or any other results.]

449.—*On Photuria, or Luminous Urine.* By M. Fallot.—Cases, however rare, have been cited, in which the urine, as it passed from the urethra, had a luminous appearance. The phenomenon has not been explained.

A man, aged sixty, had for many years, at intervals, passed luminous urine; the luminous appearance was most distinct as the fluid dashed on the ground, but a few sparks were seen in the stream as it passed from the urethra. Examination discovered nothing particular in the fluid, which varied in its constituents according to circumstances.

M. Fallot thinks that these cases would be found to be more common if attention were directed to them, but that, as the affection is not accompanied by any notable derangement of health, it passes unobserved. In the case referred to, the patient had never alluded to the circumstance until he was questioned concerning it, in consequence of its being accidentally witnessed by M. Fallot.—*Rev. Med. Chirur., and Prov. Med. Journ.*, Oct. 4, 1848.

450.—*On a New Substance occurring in the Urine of a Patient with Mollities Ossium.* By Dr Bence Jones.—The urine in this case spontaneously solidified on cooling, but was reliquified by heat. The substance to which this property was due constituted as much as 67 parts per 1000 of urine. It was quite insoluble in alcohol, and was completely precipitated from the urine by the addition of that reagent. It slowly but entirely dissolved when thrown into cold water; but was much more readily dissolved by boiling water. After boiling for some little time, a gelatinous coagulation took place. The aqueous solution gave an immediate precipitate with nitric acid, which entirely and readily dissolved when heated. Boiling caused no precipitation; but on cooling the precipitate was again formed. Strong hydrochloric acid dissolved the substance, giving a splendid purple blue solution. It was soluble in caustic potass at 140°, or, after long standing, at the ordinary temperature. From this solution it might be precipitated by excess of acetic acid; but the precipitate was redissolved, as before, by heat. When the

alkaline solution was boiled, a deep inky blackness was produced by dropping acetate of lead into the solution. If the watery solution was acidulated with acetic acid, an immediate white precipitate fell on the addition of ferro-prussiate of potass.

These reactions announce the substance in question as completely *sui generis*. From ultimate analysis, its composition per cent is found to be C 52·10, H 6·70, N 15·17, O 26, with 1·03 per cent. of sulphur, and ·19 of phosphorus. The presence of the two latter ingredients proves that it is not an oxide of protein, notwithstanding its resemblance in behaviour with several reagents to Mulder's hydrated tritoxide of protein. Its reaction with nitric acid hinders all possibility of confounding it with albumen, which may be separated from it by adding nitric acid boiling, and filtering whilst hot. It is regarded by Dr Bence Jones as a hydrated deutoxide of albumen.

In the case in question there was as much of this peculiar albuminous substance in the urine as there is of ordinary albumen in healthy blood: so that as far as the albuminous constituent alone is concerned, the secretion of each ounce of urine was equivalent to the loss of an ounce of blood. The patient, as might be expected, rapidly sank; and on post-mortem examination it was found that the bony structure of the ribs might be cut with the greatest ease. The condition of the bones has been minutely described by Mr Dalrymple (*Dublin Journal*, August 1846.)

Dr Bence Jones remarks that this substance should again be looked for in acute cases of mollities ossium. The reddening of the urine on the addition of nitric acid might perhaps lead to the re-discovery of it. When found, the presence of chlorine in the urine, of which there was a suspicion in the above case, should be a special subject of investigation, as it may lead, not only to the explanation of the formation of this substance, but to the comprehension of the nature of the disease which affects the bones.—*Philos. Transactions*, Part I., 1848; and *Brit. and For. Med. Chir. Review*, Oct. 1848.

451.—*On the Acid or Alkaline Reaction of some of the Fluids in Cholera.* By M. Burguieres, sanitary officer at Smyrna.—The principal variations from the law laid down by M. Andral (see *Retrospect*, No. 440), were in relation to the cutaneous secretion and the discharges from the stomach. In the stage of collapse, the perspiration is clammy and viscous; in this state it loses its acid reaction, and becomes neutral. In the period of reaction it again becomes acid; this is in general a good sign. The first matters vomited were generally acid; after the patient vomited three or four times, and the evacuations had assumed the real choleric character, the reaction became alkaline. After death, it was found that the secretions of the whole intestinal canal, from the stomach downward, are distinctly alkaline.—*Union Médicale*, 5th October 1848.

III.—PRACTICE OF PHYSIC.

452.—*On the Epidemic Fever of* 1847-8. By Robert Paterson, M.D., F.R.C.P.E. —The author gives, in this communication, an elaborate account of the Edinburgh epidemic, as it appeared in the extra fever wards of the Royal Infirmary of Edinburgh. We shall endeavour shortly to analyse the principal facts and conclusions embodied in this memoir.

Character of the Epidemic.—Three types were observed by Dr Paterson:—the *short* or *relapsing fever*, which was in the largest proportion; *typhus*, next in order; and *synochus* or *continued fever*, which was in the smallest. The first of these was distinguished by its distinct crisis from the fifth to the seventh day, and the equally distinct relapse occurring from the fourteenth to the eighteenth, sometimes succeeded by a second or even a third relapse. This, from the regularity of the intermission, and relapse at the interval of a week, is considered by the author to constitute a new link in Cullen's division, approaching the intermittent on the one hand, and the synocha on the other. The synochus and typhus, while they are mentioned by Dr Paterson as distinct fevers, are not described by him at length; nor are any characters given upon which the distinction has been founded.

History.—It appears that a fever of small fatality, terminating in a critical sweat in the first week, and generally relapsing, is recorded as having occurred in Ireland in 1731, and also in 1741. The fevers of 1800–1, and 1817–18, had, according to Drs Barker and Cheyne, the same character. The fever of 1826–7, in Ireland (Report of the Fever Hospital of Dublin, by Dr O'Brien), presented two types—the old constitution, or ordinary

typhus, and the new constitution, which corresponded in character with the relapsing fever. [According to Dr Christison, a large proportion of the fever cases in Edinburgh in 1819, presented the same character.]

Typhus and synochus appear to be endemic in Britain, at least since the beginning of the present century. An importation of fever by prisoners of war, in 1779, is recorded by Dr Hamilton in his work on purgative medicines. In 1781, an importation occurred from Jamaica. From returns made by Dr Orr of Glasgow, it appears that fever occurs in an epidemic form in that city with considerable regularity once in ten years; and Dr Paterson asserts the same law to prevail in Edinburgh, and also in Ireland.

The present epidemic commenced in Edinburgh in March 1847. It was preceded by a winter of great scarcity, the effects of which were peculiarly severe in Ireland and the poorer parts of Scotland, owing to the failure of the potato crop in 1846. In Edinburgh, however, the wages of the working classes being high, the pressure of this scarcity was not so severely felt. An endemic scurvy had prevailed very extensively during the winter, but fever had not been unusually prevalent.

Almost every case admitted into the Edinburgh Infirmary at the beginning of the epidemic was from Ireland; and for three months they continued so. On the 10th of June there were 473 cases of fever in the house, of which 7 were English, 87 Scotch, and 379 Irish. On the 26th of July there were 608 in all, being 10 English, 186 Scotch, 410 Irish, and 2 foreigners. In Glasgow the Irish amounted to 60 per cent. of the whole epidemic; in Edinburgh to 73 per cent.

The extensive prevalence of fever in Ireland at this period, and the large immigration of Irish families into this country, owing to the abundance of employment here, and the scarcity of food or employment in their own country, lead irresistibly, in connexion with the above circumstances, to the conclusion, that the fever of 1847–8 was imported chiefly from Ireland. This conclusion is borne out by the circumstance, that Liverpool and Glasgow, the ports most accessible from Ireland, were attacked by epidemic fever a considerable time before Edinburgh, or any other populous cities.

Dr Paterson adduces numerous instances, tending to prove the connexion of fever and famine in Ireland. This subject has been often discussed.

The number of cases in the Infirmary increased regularly from March 1, 1847, when there were 73, up to July 12, when they attained the maximum of 628; they then began to decline with equal regularity. On January 1, 1848, there were in the house 444; on April 1, 333; on August 12, 116. In addition to these, a very large number were treated in special hospitals, and at their own homes. The total number of fever cases, and the total mortality, cannot be accurately stated; nevertheless it seems not improbable, from Dr Paterson's calculations, that nearly 20,000 cases occurred in Edinburgh, with a gross mortality of 2500.

Statistics of Mortality.—The extra accommodation provided in the Royal Infirmary consisted, as is well known to our Edinburgh readers, of two extra hospitals, four sheds, and five tents, which were placed in the open space behind the main building. Dr Paterson finds that the mortality was least in the tents, greater in the sheds, and greatest in the permanent buildings. The number of patients treated in the tents (which were only used in summer) was 312; the total mortality 17; being 5·36 per cent. The mortality in the three sheds, of which records were kept, was respectively 13·78, 9·95, and 9·33 per cent. The general register of the hospital, on the other hand, gives, from October 1846 to October 1847, a mortality in fever of 15·42 per cent. for males, and 10·03 for females. Dr Paterson argues that the small amount of mortality in the tents was owing to the free ventilation, and that the superiority of the sheds to the permanent buildings in this respect is to be attributed to the same cause.

Contagion.—The contagious nature of all the forms of fever in this epidemic, was proved by the records of cases of fever which occurred among the attendants.

Of nine physicians acting in the fever wards, three were seized with fever, two having typhus, the other relapsing fever. One died. [All those who were exempted had passed through fever in a former epidemic.]

Of twenty-two clerks successively occupied in some way or other with the fever wards, twelve had fever; eleven had typhus, one relapsing fever, and one [two] of the twelve had both typhus and relapsing fever. Of the twelve, three died. [Of seven clerks who remained exempt, three had passed through fever in former epidemics.]

Of the nurses and others whose duty it was to come near the fever wards, it may be affirmed that none escaped taking one or other form of the disease who had not

had it previously, while some had both the prevalent forms of it, viz. typhus and relapsing fever.

Eruptions and Complications. — The measly eruption was present in nearly every case of typhus. No prognostic character could be drawn from its early appearance, or from its dulness or vividness, as to the future severity of the disease. Its livid colour always marked a bad form of disease. It was occasionally seen also in the relapsing fever, but only in the first attack. The true petechiæ or ecchymoses were very common.

The complications were very varied. During the hot weather of June, the number of cases admitted with head affection was remarked, while the changeable temperature and damp weather of the latter end of July and August, brought an accession of cases with chest affections. Dothinenteritis prevailed to a considerable extent during the spring and summer months, after which the intestinal lesions became less common, until the autumn months ushered in a much more extensive series of cases of dysentery. This continued during the autumn and early winter months, passing away towards the spring of 1848.

Treatment.—Few of the typhus cases could bear general depletion, even for serious inflammatory complications. Stevens' saline powders were used as the common fever medicine, with the effect of brightening the eruption, and making less wine necessary. Wine was requisite in most cases at an early period; and sometimes carbonate of ammonia, camphor, whisky or brandy, were requisite as stimulants.

In the relapsing fever, blood-letting for complications was well borne. No advantage was observed to accrue from diaphoretics. Various methods were tried to avert the relapse; but confinement to bed, regulated diet, quinine, bebeerine, and arsenic, produced no effect.—*Edinburgh Med. and Surg. Journal,* October 1848.

[We have devoted a large space to the analysis of this memoir, because of the importance of many of its facts and deductions, and because it is the only extended history which has yet appeared of the recent Edinburgh epidemic. But we cannot conclude without entering our protest against some of the author's conclusions. It does not appear to us that he has even hinted at an argument for the separation of the synochus from the typhus, a distinction opposed, we believe, to the matured experience of the majority of medical men who have witnessed recent epidemics of fever in Edinburgh. Nor can we admit the analogy of the relapsing fever or synocha with the intermittents, especially when we consider the failure of all anti-periodic medicines in averting the relapse. The congestion of the spleen and liver, which he speaks of as common to this fever with intermittents, was also a most marked character of typhus.

But our chief objection to the conclusions of the author applies to the deductions which he makes from the smallness of the mortality in the tents. We are satisfied that this was owing, not to any peculiarly favourable conditions for cure in these temporary structures, but simply to the fact, that the cases sent to the tents *never approached in severity* those distributed to the permanent wards. Although this is contrary to the experience of the author, who was "not connected with the admission of patients," we have the authority of every officer of the house who *was* habitually employed in the waiting-room, for stating, that the uniform principle was to distribute the cases in proportion to their severity; first, to the houses, then to the sheds, and, lastly, to the tents. That this was the case in reference to the two last, Dr Paterson's own statistics show; thus in the sheds the proportion of relapsing fever to the whole number of cases is 1 to 2·65, or somewhat less than two-fifths, thus leaving *three-fifths* for the severer forms; while in the tents the proportion is 1 to 1·79, or about five-ninths, which gives only *four-ninths* of the whole for typhus, including continued fever. This is enough to show the principle of the distribution; and we have no doubt that the same calculation, applied to the statistics of the wards in the houses, would lead to a much more marked result.]

453.—*The present Epidemic of Cholera in Russia.* (By a medical correspondent of the *Union Médicale*).—The writer states that no cases were observed to be distinctly referrible to contagion. During the prevalence of the epidemic, the choleric influence appeared to be universally felt. All other diseases assumed more or less of the character of cholera, excepting other epidemic diseases, which appeared to be antagonistic to it. Even individuals unaffected by disease experienced some species of uneasiness; fatigue, prostration, epigastric oppression, accompanied by frequent gurgling in the intestines, were exceedingly common. Cattle were often unable for work, and lost appetite. The vegetable kingdom also was observed

to be less vigorous during the prevalence of the epidemic.

The prophylaxis, during the prevalence of cholera, is of the utmost consequence. A strict regimen should be universally followed, and all substances difficult of digestion, especially fats, raw fruits, green vegetables, and salt meat. During the actual attack, cold water is the only drink which satisfies the patient, or alleviates the constant thirst. The remedies most in favour with the people are—olive oil administered by the mouth in spoonfuls, mingled either with red wine or brandy; white of eggs in an infusion of mint; marine salt, half-an-ounce to a bottle of water; and warm milk, which appears to allay the vomiting. The author, in common with many other Russian practitioners, places considerable reliance on calomel, in doses of three to five grs. every half-hour till there is amendment, in combination either with ipecachuan or opium, and sometimes with an anthelmintic. In the last stage, muriate of ammonia, sulphate of quinine, and, when typhoid symptoms are present, muriatic acid, were used with advantage. The author also gives ice internally with good effect.—*Union Médicale*, 5th October 1848.

454.—*Treatment of Porrigo favosa.* By Dr Neligan.—Porrigo capitis is the most obstinate of the eruptive diseases of the scalp, and cases of it are recorded as having resisted the most varied treatment for years. Dr Neligan's experience, however, enables him to state, that though an obstinate disease, it may be cured in a much shorter space of time than is generally believed.

His treatment is both constitutional and local. Milk diet is strictly insisted upon. The constitutional remedy he uses, is the iodide of arsenic, a powerful alterative, and an active remedy, but one which may be given with the greatest safety to the youngest child, its effects being, of course, duly watched. The dose of this preparation is, for an adult, from one-tenth to one-fourth of a grain, very gradually increased; for a child six years old, one-fifteenth of a grain; and for a younger child, from one-eighteenth to one-twentieth of a grain. It is best given to adults in the form of a pill, made with dry manna, and a little mucilage; to a child it is best administered in the form of powder, its minute division being perfected by means of a little white sugar or aromatic powder. When the system is saturated with this medicine, it is usually found that some constitutional symptoms, such as acute headach, dryness of the throat, &c., are manifested; but in some cases Dr N. has given it in full doses for many weeks without any manifestation of its effects, further than those produced on the disease for which it was administered. When, however, it gives rise to the symptoms above mentioned, its use should be intermitted for some days, and an active purgative administered.

The local treatment for the first two or three days is the same as that directed for the other diseases of the scalp.—(*See Monthly Retrospect*, p. 191.) The carbonate of potash ointment is at the expiration of this time replaced by one containing the iodide of lead, in the proportion of half a drachm of the iodide to an ounce of prepared lard; the head is to be still washed every morning with the carbonate of potash lotion. The strength of this ointment should be increased after a fortnight; if the disease again appear, even to double that indicated. The ointment is spread on lint, and over it a closely-fitting oil-silk cap is placed. Several cases are recorded in which cures were effected by these remedies in from three weeks to several months.

"The rational principles," Dr Neligan observes, "on which I think this plan of treating porrigo capitis proves successful, and which first led me to its adoption, are:—That it is a vegetable production, which grows and is reproduced on the cuticular surface of individuals whose system is in a peculiar cachectic state, and, consequently, that it is a constitutional affection. The object, then, is, to destroy the vitality of the fungus, and, by altering the nature of the soil on which it flourishes, to prevent its reproduction. It is with the first view that I use the iodide of lead as a local application, and to fulfil the second indication that I administer internally the iodide of arsenic."—*Dublin Journal*, August 1848.

455.—*Clinical Lecture on Lupus.* By M. Devergie.—During a course of clinical instruction on diseases of the skin at the hospital Saint Louis, the author has devoted three lectures to the consideration of this affection. Lupus, he observes, is a disease known from antiquity—it was denominated by the Greek authors *Herpes esthiomenos;* by the Latin, *Herpes exedens.* Willan and Bateman have revived the old expression *Lupus*, to which M. Devergie adheres, solely because it is the term most generally employed in works. The author defines Lupus a disease originating in a

certain part of the body, accompanied by a chronic swelling, a sombre red colour, and a thickening of the skin and subjacent cellular tissue; this thickening being sometimes so considerable as to double or even treble the normal bulk of the skin. According to the stage of the disease is the augmented local heat and the pain which follows; the external appearance of the skin is changed—sometimes it is found smooth, at other times rugous. But these characters are peculiar to the different varieties of Lupus; it is the same with the ulceration, which is developed more slowly. All these characters are of great importance, but must nevertheless be considered as only secondary to the fundamental one, which is the chronic swelling. This swelling also exists at the bottom of the ulceration. Instead of the ordinary division of Lupus into the Lupus exedens, or Lupus with ulceration, and the Lupus non-exedens, or Lupus without ulceration, the author suggests, as a more practical subdivision, the following :— 1st, Tubercles with or without ulceration, Lupus exedens, Lupus non-exedens; 2d, Tubercles arranged in the form of raised circles (*bourrelet circulaire*), Lupus herpetiforme. In the Lupus exedens, or non-exedens, there exists a greater or less portion of diseased skin, and this is covered by a larger or smaller number of tubercles. The only difference exists in the ulceration, which does or does not succeed the formation of the tubercles. In the Lupus herpetiforme there exists a raised circle — it is the distinguishing mark of this affection, it is also its means of propagation : the disease makes progress by the extension of this circle. Lupus non-exedens presents a tubercular and a serpentine (*serpigineuse*) form. Lupus exedens offers four varieties :—1st, Tubercular ; 2d, Serpentine, or herpetiform ; 3d, Lupus exedens, boring or perforating ; 4th, Lupus vorax, devouring, so named from the rapidity of its progress —it is very rare.

All parts of the chest are liable to become affected with Lupus; but as a general rule its seat is the face, and thence the nose is the part most frequently attacked. More rarely the disease commences in one of the cheeks, then passes to the other, and continues advancing till the whole face is covered as with a mask : this degree of deformity results from the Lupus serpiginosus—this variety of the disease is consequently more to be dreaded than the tubercular. The author has observed the tubercular form most common on the trunk, and the serpentine form on the extremities ; and mentions the case of a man whose penis was affected with the latter variety, as increasing the importance of a knowledge of this fact, an error in diagnosis having been nearly committed in the case related.

The commencement of Lupus is generally attended by a slight lenticular swelling of the skin ; the tendency of this swelling is to increase, and to extend itself at the same time to both superficial and deep parts. The author conceives that Lupus never manifests itself for the first time in adult or old age. The disease he believes capable of curing itself, but for this purpose from twenty-seven to thirty years are required. The cause of Lupus he supposes to exist in the peculiar temperament or constitution of the person affected, and the one most prone to it is the lymphatic.

Nothing is more remarkable in the progress of Lupus than the extreme reduction of the affected parts at the termination of the disease, as compared with their augmentation in its commencement. In this respect the nose suffers most. The same tendency to reduction is not equally conspicuous in all the varieties of lupus. That form already noticed under the name of Lupus vorax is always accompanied with much destruction, and consequently when the disease is arrested ugly cicatrices result. On the other hand, the Lupus herpétiformis, though affecting a large surface, does not invade deeper parts ; it is therefore rarely followed by much deformity. In the words of M. Devergie, the general health of the patients affected with Lupus is good, and but few die in the hospital.

In the *diagnosis* of Lupus, it is of importance to remember that other diseases occurring in the same parts present nearly similar characters. The Impetigo rodens, when attacking the nose, in its progress closely resembles Lupus : one distinguishing feature of the latter, however, is absent in the former—the increase in volume and thickness of the parts affected. The syphilitic eruptions are those which the author has apparently found most liable to be mistaken for Lupus. In distinguishing doubtful cases, he seems to have attached most importance to the following particulars :—1st, The constitution of the person affected: as already stated, Lupus is generally found connected with the lymphatic habit. 2d, The age of the individual : the author believes that Lupus never commences in adolescence or old age. And 3d, The results observable from treatment. Cases are related in which anti-syphilitic remedies were employed, under the impression that the

eruption was of syphilitic origin, and, having failed, the ordinary treatment adopted by the author in Lupus has proved successful.

In the treatment of Lupus, M. Devergie speaks of internal remedies and external applications—under the former head, of iodine, the preparations of iron, and the cod liver oil. Iodine he has employed both internally and externally, both alone and combined; he considers it as indirect in its action, predisposing to a cure, but not directly effecting one. The preparations of iron he has found useful, more especially in females affected with Lupus, and at the same time with irregular or suppressed menstruation. The remedy which the author places most reliance on, and which in his hands has proved by far the most successful, is the cod liver oil; its efficacy, as compared with other internal remedies, he has established by incontestable proof. There are two varieties of this oil—the white and the brown; the latter is more disagreeable, possessing the fishy odour better pronounced, but it is the more active, and the one which the author has employed. The dose he administers is large—twelve or fourteen tablespoonfuls, morning and evening. In the majority of cases this remedy alone has been trusted to; sometimes the use of the sulphur bath has been at the same time prescribed; or, in cases with irregular menstruation, the preparations of iron, as formerly noticed. A tolerance of the oil has always been easily established; peppermint water, rum, and brandy, were the menstrua occasionally employed for its exhibition.

The external applications which the author has seen benefit result from are, the rubefacient and caustic iodine and *la pâte de cancoing* (chloride of zinc with flour), and *la pâte de Vienne*. The oil of juniper-wood (huile de cade), which was recommended by M. Serre, he has employed occasionally as an external application with success. In Lupus of long continuance, the author disapproves of the employment of antiphlogistic treatment; but when the disease is at its commencement, the use of such means may sometimes prove beneficial.—*Gazette des Hôpitaux*, 30th September 1848.

[Nevertheless, even in protracted cases we have seen the employment of repeated leeching and scarification, and also blisters, followed by the most beneficial results. The author makes no mention of arsenic; which is, however, a remedy of unquestionable power even in Lupus.]

456.—*Hysterical Attacks and Hallucinations from Strychnia.*—A girl, aged seventeen, having become partially paraplegic after a long illness, was treated by M. Vigla in the Hotel Dieu with strychnia, which she took to the extent of three centigrammes (nearly half a grain) without any more than ordinary effects. On changing the preparation, however, one centigramme (1-6th of a grain), twice a-day, sufficed to produce violent tetanic spasms, with great congestion of the face and hallucinations. At first the symptoms had a distinctly hysterical character, but this afterwards disappeared. The paraplegic symptoms became decidedly ameliorated. —*Gazette des Hôpitaux*, Oct. 7, 1848.

457.—*On a Diseased Condition of the Arch of the Aorta, which is liable to be mistaken for Valvular Disease.* By Dr O'Bryen Bellingham, Dublin.—This morbid condition, according to Dr Bellingham, consists essentially of a loss of tone and elasticity in the arterial coats, in consequence of which the vessel cannot increase or diminish in diameter with the increased or diminished amount of blood which it receives, but remains constantly of the same calibre; at the same time that it loses the smoothness and polish which its internal coat presents in the normal condition, and the interior of the artery becomes rough and uneven, the general dimensions of the vessel being usually somewhat increased.

The aorta, in its healthy state, possesses in a high degree the property of elasticity, due not only to its proper fibrous coat, but also to the subserous or sclerous coat. In virtue of this property, its calibre is accommodated to the amount of blood it contains, and thus it is always filled; with the loss of its elasticity, still co-exists the necessity for its being filled, and when the cardiac wave has passed on, regurgitation takes place from the distal vessels to supply what otherwise must be a vacuum, owing to the inability of the aorta to accommodate itself to the diminished quantity of blood. When the elasticity of the arch of the aorta is impaired, owing to the presence of abnormal deposit, and its calibre increased (though this is not a necessary condition), the patient presents several phenomena hitherto considered pathognomonic of the permanent patency of the semilunar valves, and a morbid condition conducive to that more formidable lesion.

The peculiar jerking pulse, the visible and locomotive pulsation of the carotids, radials, &c., depend on the same cause as when the aortic valves allow regurgitation, the regurgitation, however, in the

case under consideration, taking place into the aorta itself. From the rough and uneven condition of the internal coat, increased friction takes place between it and the particles of the blood transmitted by the left ventricle, and a murmur is developed synchronous with the ventricular systole; while the regurgitation of the blood, and its passage over a similar rough surface, during the ventricular diastole, will occasion a murmur synchronous with the second sound of the heart, both sounds bearing a proportion to the condition of the vessel. The character of the second murmur, however, is usually short, rough, and harsh; it is scarcely, if at all audible below the base of the heart. In simple patency of the semilunar valves, the murmur is single (?), synchronous with the second cardiac sound, and distinctly audible from base to apex of heart. In the more complicated case of permanent patency, where, from spicula or vegetation on the valves, or other causes, a murmur accompanies the first cardiac sound, the diagnosis would be more difficult, but might still be attempted from the possibility of hearing the second murmur towards the apex of the heart in case of patency.

The diseased condition of the aorta under consideration is usually followed by dilatation of the arch, which Dr Bellingham is inclined to attribute, not to "the existence of any impediment to the circulation through the vessel or its terminal branches," nor to "dilated or hypertrophied heart," nor to "the shock of the blood transmitted by the left ventricle," but to the regurgitation of the blood from the carotid and subclavian arteries, this last cause being perfectly adequate to the secondary production of patency of the aortic valves; a condition certainly not referrible to any of the other causes enumerated. Thus, as the result of the long continuance of this diseased condition of the aorta, the semilunar valves, which, at each time of their closure, are subjected to the shock of a column of regurgitating blood, at length yield in their weakest point, and allow regurgitation into the ventricle; while part of the force of the regurgitating blood being expended on that part of the artery nearest to the valves, it ultimately yields to such a degree laterally, that the valves cannot meet. In this combination of valvular and true *aortic* disease, the phenomena of the former predominate; the existence of the latter is to be judged from former observation, and the sequence of the phenomena.

From the principles here laid down, Dr Bellingham proposes to explain certain phenomena of thoracic and abdominal aneurism. Of the double sound heard in thoracic aneurisms, he attributes the second (so often confounded with the second sound of the heart, but which though audible over the aneurism, is often inaudible between this point and the heart), to the regurgitation into the aneurismal sac, owing to a condition of parts similar to the inelastic and rigid aorta above described; the second impulse of thoracic aneurisms, a phenomenon of no less importance, and not so often made the subject of observation, he attributes to the same cause. The absence of the second impulse and second sound in aneurisms of the abdominal aorta, and the vessels of the extremities, he explains on the principle that the blood cannot regurgitate against gravity.—*Dublin Med. Press*, April 21, 1847.

[The opinions of so experienced a stethoscopist as Dr Bellingham are worthy of all consideration, and we have therefore called the attention of our readers to his views, although we are convinced that in some respects they are erroneous. We have never observed any facts corroborative of the idea, that mere disease of the arch of the aorta could produce the murmur of regurgitation of valvular disease; and we find it difficult to conceive how the transmission of the wave from the heart, should have the effect of producing "a diminished quantity of blood" in the arch, and a consequent necessity for a supply by regurgitation. Moreover, the rigid aorta invariably produces a pulse differing from the pulse of diseased aortic valves; the latter being soft and large, while the former is hard and somewhat wiry. Another diagnostic sign, which we believe scarcely ever fails, but is not mentioned by Dr Bellingham, is, that in rigidity of the arteries, when the valves are sound, the pulse follows immediately after the cardiac impulse, the interval being, if not shorter, certainly not longer than in health; while in valvular disease this interval is almost always sensibly prolonged. We think it is impossible, if these signs were taken into consideration, that any difficulties could arise in distinguishing these two conditions.

As regards the stethoscopic phenomena, it must be recollected that the sounds connected with the aortic valves are generally heard most distinctly over the arch; and many murmurs *produced at the valves* are audible, as described by Dr Bellingham, at the base of the heart, but not heard below this point. We cannot help suspecting, that the murmurs heard by Dr Bellingham were really produced

at the valves; seeing that a very small incompetency will produce a considerable murmur; and we have more than once observed, in cases of dilated aorta, that the valves were incompetent without any deformity, but solely from want of due proportion to the opening. Dr Bellingham has this year published, in the *Dublin Medical Press*, a series of cases illustrative of his views on aneurism. We shall probably advert to these on some future occasion.]

IV.—PRACTICE OF SURGERY.

458.—*New Operation for Lipoma.* By M. Bonnet of Lyons.—The operation proposed by M. Bonnet consists in the subcutaneous incision of the tumour in various parts of its substance, subsequently squeezing out the fatty matter into the surrounding cellular texture; by which means the dissipation of the tumour is procured, after a longer or shorter time, by absorption. A small wound being made in the skin, a tenotome, blunt at the point, and corresponding in length to the diameter of the tumour, is passed into the opening and beneath the base of the tumour, through which it is then to be passed by cutting towards the integuments. After this the tumour is to be thoroughly broken up by numerous cuts, in every direction, through its substance. The tumour is then manipulated and kneaded, so as to evacuate the fatty matter. The operation may require repetition more than once; but it gives little or no pain, nor has it been followed by any unpleasant effects. In three cases in which he has performed this operation, the resolution of the tumour has taken place in from two to three months, there being only left a slight induration productive of no inconvenience. In one case it did not succeed; this was that of a lady, aged sixty-two years, in whom the tumour was the size of the palm, and never could be reduced to less than half the original size. M. Bonnet conceives this method to be invariably applicable to tumours which do not exceed the size of the fist. The patient is not obliged to keep his bed; and the complete absence from pain and subsequent inflammation, constitute a great recommendation of this operation as compared with extirpation.—*Bull. de Thérap.* and *Rev. Med. Chir.*, Sept. 1848.

459.—*Chloroform in Toothache.* By Mr Tomes.—Chloroform applied on a little cotton wool to the tooth will frequently remove the pain. The best form for application is made by dissolving a little gum mastic in the chloroform, whereby the fluid is thickened, and, when put into the tooth with cotton wool, will remain there a long time, and keep up its sedative influence; whereas, if the chloroform be used alone, it will be soon washed away by the saliva, and its effect lost.—*Lectures on Dental Physiology and Surgery.* 1848.

460.—*Pivoting a Tooth followed by Tetanus.* By Mr Tomes.— —— —— Esq., aged twenty-five years, tall and thin, but apparently in very good health. On his marriage trip he visited Paris, and there had the misfortune to break off a front tooth. Wishing to conceal the accident from his wife, he went immediately to a dentist. The tooth was pivoted, and the necessary concealment seemed insured. From the time of the operation, however, he had severe pain in the stump, which pain increased for four or five days, when he left Paris for Rouen. Upon arriving there the pain had become excessively severe; he consulted a medical man, but it was too late. Trismus came on within twenty-four hours, and was soon followed by tetanus and death.—*Ibid.*

461.—*Traumatic Tetanus treated by Frictions with the Tincture of Belladonna —Recovery.* By M. Bresse.—[The following case is fully and well recorded in the original. In a disease, where our most powerful therapeutic agents so often fail to ward off the fatal result, it will be well to keep in mind the mode of treatment which was, in this instance, crowned with success.]

A lady sustained a punctured wound of the right foot. The wound proceeded favourably until the twelfth day after the accident, when the foot became painful, and the puncture presented an irritable appearance; at the same time, symptoms of tetanus appeared; then gradually increased in intensity, and for sixteen days the patient suffered from the disease in its most severe form. An attempt was made to divide the nerve leading from the wound. Opium, camphor, musk, and finally quinine, were given in large doses, without permanent advantage. Death was imminent, when M. Bresse thought of trying the effect of belladonna frictions. The tincture was rubbed into the whole of the anterior surface of the body, and

also into the muscles of the back of the neck. *Quarter of an hour* afterwards, the respiration became easier, and the muscular contractions began to yield. Three ounces of the tincture were applied in this manner daily, for five days, when they were discontinued in consequence of the improved state of the patient. The rubing was practised chiefly over the contracted muscles. In three days the disease returned with nearly its former violence. The frictions were renewed, and in seven days more the patient was fairly convalescent.—*Essay on the Treatment of Tetanus, quoted in Gaz. Méd. de Paris*, September 30, 1848.

462.—*Application of Laudanum in Orchitis.* By M. Voillemier.—This surgeon envelopes the inflamed testicle in a compress dipped in pure laudanum, and covers it with oil silk; at the end of three or four hours, the organ is completely narcotized, the excruciating pains cease, and the inflammation is said to diminish rapidly.—*Gazette des Hôpitaux*, No. 77, Vol. X.

463.—*Reduction of a Dislocation forwards of the Inferior Surface of the Fifth Cervical Vertebra.* By M. Vrignouneau.—The patient fell from a tree, on his head, and lost consciousness, which, however, returned in half an hour; he then complained of violent pain at the vertex and back of the neck; the author diagnosed—how, he does not say—a dislocation forwards of the inferior surface of the fifth cervical vertebra. He bled the man, and ordered absolute rest, but without avail; and forty hours subsequently—speech having become difficult, the face injected, the respiration stertorous, and the pulse almost imperceptible—he determined to give him the chance of an attempt at reduction. For this purpose the man was seated, two assistants pressing firmly, one on each shoulder, while M. V. gently extended the neck. Partial extension rendered the speech stronger, and respiration freer, and emboldened the operator to proceed further. When he thought the extension sufficient, he carried the head and superior part of the neck backwards; this manipulation was followed by a snap, and from that moment the man recovered as by enchantment.—*Journal de Connaiss. Medico-Chir.*, and *L'Union Médicale*, tome IIme, No. 88.

464.—*Arthropathia of the Shoulder, with Atrophy and Paralysis.* By M. Velpeau.—The author gives this name to an affection of the shoulder-joint, commencing without appreciable cause, with violent pain and swelling of the brachial part of the shoulder, chiefly affecting the head of the humerus and its envelopes. This swelling increases for eight days, lasts for fifteen more, and afterwards diminishes; the shoulder then becomes atrophied and paralysed. It may remain in this state for many years, without other complication, and without compromising the general health; sometimes, however, anchylosis supervenes, and, more rarely, purulent caries of the articulation.

From the weight of the arm acting on the paralysed muscles, the head of the humerus is generally partially dislocated, but can be easily replaced. The cartilages of incrustation are absorbed, or transformed to bone; the muscles, and especially the deltoid, become ultimately membranous, with scarcely a trace of fibre; the glenoid cavity is diminished in depth, and in all its diameters; the head, and even the body of the humerus, is singularly lessened in size and length. The seat of this affection is almost exclusively the shoulder-joint; yet similar phenomena are occasionally observed in other joints, as the knee. Velpeau looks upon it as probably an affection of the circumflex nerve. He treats it, during the first period, or that of pain and swelling, by local blood-letting, repeated mercurial frictions, and emollient cataplasms; when the acute symptoms have subdued, blisters, the moxa, or the actual cautery, are more useful, conjoined with frequent baths, cold water douches to the shoulder, frictions, either dry or with some stimulating liniment, and, when all dread of inflammation is gone, gentle movements of the joint, once a-day. Two patients thus treated were cured in less than a month.—*L'Union Médicale*, tome IIme, No. 88.

465.—*Creosote in Erysipelas.* By Dr Fahnestock.—During a practice of many years, Dr Fahnestock of Pitsburgh has been in the habit of using creosote in erysipelas of the face, as well as of other parts of the body, in both its simple and phlegmonous forms, confining his local treatment to this article alone; and such has been the success of this treatment, that he states he has yet to witness a case which has not yielded to it.

He applies the purest creosote, with a camel's hair brush, over the whole of the affected surface, extending it some distance beyond the inflamed part, and, at the same time, administers a dose of calomel, followed by a sufficient portion of jalap to insure free catharsis. This, in the majority of cases, is all he finds necessary.

But when the mucous membrane of the mouth and fauces is also affected, he pencils those parts with a solution of the nitrate of silver, say from half a drachm to a drachm in an ounce of distilled water.

In the phlegmonous form, it will be found necessary to repeat the application more frequently than in the simple, with the addition of a bread and water poultice, applied nearly cold, and well sprinkled with water strongly impregnated with the creosote, or a cloth, kept constantly wet with the solution.

The creosote, when applied, should cause the parts to become white immediately; if this does not occur it is not pure. Thus success depends upon having the best quality of creosote. It is worthy of remark, that the skin does not become in the least marked by the application, no matter how often it is repeated.—*American Journ. of Med. Sciences*, July 1848.

466.—*New Instrument for Tracheotomy.* By Dr M. Hall.—Dr Marshall Hall has devised an instrument for the performance of this operation, of which the following is a description:—

The instrument consists, first, of a cylinder of steel, of a proper diameter, with its lower edge extremely sharp, as in a gun-punch; it may be either circular or oval. Within this cylinder a piston moves, which may be removed altogether; whilst another cylinder, of which one side overlaps the other (as in Charrière's speculum), admits of being compressed, and introduced in its place. This latter cylinder is pushed forward, so as to project beyond the cutting edge of the former, expands, and makes gentle pressure, so as to prevent hemorrhage; the steel cylinder is then removed. Finally, two-thirds of the inner cylinder allows of being removed, at a part to which a silver disc or shield is attached.

The instrument being placed over the trachea, a portion is detached, and forced into the cylinder as the piston is drawn upwards, and the operation is performed without loss of blood; the silver cylinder being then introduced, it is shortened, and the disc attached.—*Lancet*, Sept. 9, and *Prov. Journal*, Oct. 18, 1848.

467.—*Cure of Hydrocele by Compression.* By M. Rossi.—M. Rossi relates the case of a man labouring under hydrocele, who consulted him after he had been punctured several times. A perfect cure was obtained by compression of the tunica vaginalis, by means of a sheet of lead applied on each side of the scrotum, precaution being taken not to interfere with the cord or testicle.—*Annali Universali*, and *Prov. Journal*, October 18, 1848.

468.—*Blistering the Eyelids in Affections of the Cornea.* By M. Velpeau.—In affections of the cornea, attended either by interstitial deposition of lymph or the formation of pus threatening penetration, M. Velpeau has found blistering the eyelids extremely useful during the last eighteen years. In conjunctivitis or iritis the practice is of no great utility; but in keratitis, and inflammation of the anterior chamber, no means is so efficacious. It dissipates the sanguineous engorgement, prevents or arrests the plastic effusion, and favours its absorption if already deposited. It cleans the ulcers, and is very efficacious in preventing suppuration and softening of the organ. It is an error to suppose that it is mischievous when employed in the acute stage; but its use requires some precautions. The skin of the eyelids is to be first rubbed with vinegar, and they are to closed without being contracted. The blister is so applied as to secure contact in every part, a pledget of lint laid over it so as to fill up the orbital cavity, and the whole to be secured by a bandage. When the blister is removed next day, the eyelids are found more or less swollen, and it is not until this has subsided that we can judge of the effect. In this way it may be renewed three or four times.—*Gazette des Hôpitaux*, No. 80, and *Brit.* and *For. Med. Chir. Rev.*, Oct. 1848.

469.—*Fracture of the Neck of the Femur within the Capsule: Bony Union.* By Dr Condit.—Dr Condit reports a case of fracture of the neck of the femur, in a man aged eighty. The accident happened in May, and the patient died in November following. The following are the *post-mortem* appearances:—

"The muscles and other structures around the cervix femoris were more pale than usual; the capsular ligament was entire, giving no appearance of laceration. The ligamentum teres was vascular, the acetabulum normal in appearance. The neck of the femur was shortened, and the fracture was discovered to be wholly within it. The head of the bone had been broken across transversely, exactly where it joins the neck. The ridge, characteristic of the seat of fracture, had been thrown out, and the re-union was firm for more than three quarters of the circumference of the bone. The limb having been drawn up by the contraction of the muscles, a considerable angle was formed by the head and neck at their point of juncture, but they were as firmly united

by osseous formation as if they never had been separated. On the upper side, where the fractured edges were not in apposition, union was not yet complete, but ossification was going on upon all the broken surface, and had the patient lived a few months, would doubtless have been perfected. Could the state of the injured part have been by any means ascertained, and had not the condition of the ankle forbidden it, the patient, I think, might safely have walked; there was sufficient firmness at the fracture for the limb to have contributed its share of support to the trunk. From a fear lest some accident should befal the specimen in handling it, I left it with a mechanic to have the head protected by a covering wire. He placed it for safe keeping in a desk in his room, belonging to another man, who, removing the desk in his absence, threw out the bone, supposing it to be of no value; and, though diligent search was made, it was not recovered. I had the preparation in my possession for two or three years, and, during that time, it was shown to many members of the profession, who expressed but one opinion, that it was a case in which a *complete fracture entirely within the capsule was re-united by ossification.*"—*American Journal of Medical Science*, July 1848; *and Prov. Med. Journ.*, Oct. 1848.

V.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

470.—*Statistical Researches on Obstetric Auscultation.* By Professor HOHL.—Since 1833, when Professor Hohl published an interesting and important memoir upon this subject, he has continued his statistical researches, and has now again laid the results before the profession.

1. *The Position of the Sounds of the Fœtal Heart and of the Placenta.*—Up to 1833, our author's observations had been made upon 200 pregnant women, and from these he at that time laid down the following deductions:—The pulsations of the fœtal heart are generally heard on the left side of the mother. The utero-placental souffle is perceived more frequently on the right side than on the left; it is rarely heard low down, and never in front.

More recent researches upon 500 women have confirmed these original results. The pulsations of the fœtal heart were found 316 times on the left side in cephalic presentations, and 159 times on the right. The utero-placental souffle was found 256 times on the right, and 168 times on the left side; once it was heard in front, and 50 times it was found low down on either side, and among these 50 there were 13 cases of placenta-prævia.

2. *Relative Positions of the Fœtal Pulsations and of the Placental Sound to one another.*—Further, in the 316 cases where the pulsations of the fœtal heart were heard on the left side, the utero-placental souffle was heard in 256 of them on the opposite or right side. Again, in the 168 cases where the utero-placental souffle was on the left side, the pulsations of the fœtal heart were heard in 159 of them on the opposite or right side. The two different sounds were 102 times on the same side; and among these 102 cases, the umbilical cord was found twined around the child in 51 cases. The placental sound was found in 50 cases low down on either side. Of these 50 cases, 13 had the placenta attached over the cervix uteri, and the fœtal pulsations were heard higher up than usual. But the placental bruit was always stronger on one side than another, and its greatest intensity always corresponded to the side opposite that on which the fœtal heart pulsations were heard.

3. *Seat of the Utero-placental Souffle.*—M. Hohl is convinced that the seat of the utero-placental souffle is in that part of the uterus which corresponds to the insertion of the placenta. He founds this opinion upon the following reasons:—1. In 21 cases where he has been obliged to complete the delivery artificially, he has found the placenta adhering to the uterus at the exact point where he had originally heard the bruit. 2. In 15 cases where the placenta was inserted over the os uteri, the souffle was heard very low down, at a point where it is ordinarily less distinct than any where else. This indistinctness may possibly arise from the walls of the uterus becoming more attenuated inferiorly than elsewhere, or from the urinary bladder intervening between the substance of the uterus and the ear, or else because, when the placenta is inserted in this situation, there is generally some hemorrhage from it. 3. In 10 cases, M. Hohl has verified by *post-mortem* examination the diagnosis which he had formed during the patient's life, of the position of the placenta. The Cæsarean section was performed after death upon two of these women, and the eight other women died during pregnancy. 4. In 8 cases of version, the placenta was felt by the hand in the exact position as determined before delivery.

M. Hohl proposes to make use of this circumstance, in enabling the accoucheur to avoid prematurely separating the placenta in cases of turning. 5. In a case of extra-uterine pregnancy, where the fœtal heart's pulsations were heard on the right side and high up, and the placental bruit on the left side and low down, and where the mother died, the autopsy verified these positions made out during life. 6. In 12 cases of pregnancy with twins, one bruit de souffle only was heard when the placenta was single, and a double bruit when the placentæ were distinct. In one of the cases where the souffle was heard on both sides, and where the operation of turning was required, M. Hohl assured himself that the two placentæ were attached, one on each side of the uterus. 7. In a very great number of cases, the extent and intensity of the placental sound has been found to correspond with the size and thickness of the placental mass.

4. *Auscultation in the Diagnosis of Pregnancy.*—In the immense majority of cases the obstetrical sounds can be discovered by auscultation. Nevertheless, there are cases where no bruit is heard, and in which pregnancy may remain doubtful. The presence of the heart sounds is a certain sign that the infant is alive; but their absence, especially in early pregnancy and during labour, is no certain sign of the infant's death. The placental souffle may be heard long after the death of the fœtus.

5. *Auscultation in the Diagnosis of Plural Pregnancies.*—Our author thinks that in most cases it is quite possible to make out the presence of two fœtuses, unless one of them be dead, or the pulsations be isochronous to one another, or unless one infant lie in front of the other. Our author's observations have extended to 16 cases. In 12 of them he made out the pulsations of the two fœtal hearts; in 10 of these 12 cases, one heart was heard on the right, the other on the left side; in the other 2 cases, both were heard on the left side. In the 4 remaining cases the pulsations of only one heart were heard. Of these 4 cases, in 3 of them one of the infants was dead; in the 4th both were living.

In 7 cases the bruits de souffle were heard respectively at the right and left sides. In 9 cases it was heard at only one side; namely, 7 times on the left only, and 2 times on the right. In these last 9 cases the placenta was common to the twin fœtuses; but where the bruit was heard in two separate places, there were two placentæ. Thus, we may diagnose a double pregnancy when the bruit de souffle is heard in two places, although only one fœtal heart is heard; also, when two fœtal hearts are heard, although the bruit de souffle is heard in only one part. The extent of surface over which the placental bruit is heard, affords no certain sign of the placenta being either double or single.

6. *Auscultation in the Diagnosis of the Position of the Fœtus.*—In 290 cases of the first position of the fœtal head, or where the occiput looks towards the left foramen ovale, the pulsations of the fœtal heart were heard 281 times on the left side, 5 times on the right, and 4 times not at all. In the same 290 cases the utero-placental souffle was heard 251 times on the right, 30 times on the left, (among these 30 there were 29 cases where the cord was turned around the child), and 9 times low down on both sides, but more on the right than on the left side. In the 5 cases where the pulsations of the fœtal heart were heard on the right side, the bruit de souffle was in 1 case on the left and in 4 on the right side (in these 4 cases the cord was twined around the child).

In 148 cases of the third position of the fœtal head (the occiput pointing to the right sacro-iliac synchondrosis), the position of the fœtal heart was 132 times on the right, 10 times on the left side; in 6 cases it was not heard at all, the infants being dead. The bruit de souffle was heard 90 times on the left, 38 times on the right (in these 38 cases, the cord was twisted around the child in 22 of them), and 8 times low down on either side, but more towards the right than the left; in 42 cases it was not heard.

Hence it follows, that in the first or occipito-anterior position the fœtal heart is heard on the left, and in the third or occipito-posterior position, on the right side. The diagnosis of the position becomes more certain, if, at the same time, the bruit de souffle is heard on the opposite side. If the two sounds are heard, both on the same side, there is a strong probability that the cord is twined around the fœtus.

In 6 cases of the first position of the face (forehead to the left foramen ovale), the fœtal pulse was 3 times heard on the right and 3 times on the left side. In the first 3 the utero-placental souffle was 2 times on the right, in 1 case on the left side; in the second 3 it was 1 time on the left side and 2 times its position was not noted. In 2 cases of the third position of the face (forehead to right sacro-iliac synchondrosis,) the heart pulsations were

on the left, the souffle on the right side.

In the positions of the breech, the fœtal pulse was heard higher up in the uterus. In 6 cases, having the sacrum of the fœtus directed to the left foramen ovale, the pulsations of the fœtal heart were heard on the left side, and the souffle 5 times on the right and 1 time on the left side. In 3 cases, having the sacrum of the fœtus directed towards the right foramen ovale, the fœtal pulse was heard on the right side, and the souffle in 2 of the cases was on the left. In 2 cases having the sacrum of the fœtus directed to the left sacro-iliac synchondrosis, the fœtal pulse was on the left, and the souffle on the right side.

In 7 cases, where the right shoulder presented, the head of the fœtus lying on the left side and the back looking in front, the fœtal heart was heard immediately above the pubis; but in 5 cases a little to the left, and in 2 a little to the right. The utero-placental souffle was not heard but 5 times; of these, 4 times on the left side, and high up; in 1 case on the right In 3 cases where the left shoulder presented, the fœtal heart was heard on the left side; in one of these the head was towards the left side and the back in front. The fœtal heart was heard best in the mesial line in 2 cases where the head was towards the right and the back in front.—*Neue Zeitschrift für Geburtskunde*, T. xxii. 1847; and *Archives Générales de Medic.*, Aout 1848.

471.—*Use of the Stethoscope in Protracted Labour.* Professor Simpson and Drs Hardy and M'Clintock.—In accordance with the general principles and practice of the Dublin school, Drs Hardy and M'Clintock maintain; 1. That, in the vast majority of instances, the death of the fœtus during the progress of a tedious labour can be positively ascertained by the aid of the stethescope; 2. Before perforation for difficult labour, the death of the fœtus ought, as an almost invariable rule, to be waited for. An objection (say they) has been advanced against the use of the stethoscope in difficult labours; namely, that the evidence it affords of the child's vitality might induce the accoucheur to put off giving assistance too long, or till the woman's symptoms had assumed so formidable a character as to render the operation fruitless. Such cases (they allege) are of extreme infrequence. But many examples might be cited from the work of Drs Hardy and M'Clintock, and the older one of Dr Collins, to show that formidable symptoms do *not unfrequently* supervene during protracted labours and before the death of the child. And, even were it allowed and yielded that *during* labour formidable symptoms seldom occurred from this waiting for the child's death, still the baneful influence of that waiting produces its own certain and injurious results, *after labour*, upon the recovery. It was shown (*Retrospect* for August) that every hour added to the mere duration of labour, as certainly entailed danger to the mother, as the allowing of bad symptoms to spring up during labour. And the opinions and arguments of Dr Simpson (quoted below) appear to show, that this waiting for the child's death is as unnecessary as it is injurious to the mother; and also to demonstrate that, by other means than perforation, we can (to use Drs Hardy and M'Clintock's own words, p. 133), "by timely interposition, save the woman hours, perhaps, of fruitless suffering, and thereby greatly diminish her risk of danger." Our authors state, 3. That after the child has perished in the course of a laborious labour, bad symptoms ought not to be waited for to indicate instrumental interference, as nothing can thereby be gained, and the patient's life may be compromised by such culpable procrastination.

Such are the general rules in regard to interference with the crotchet and the use of the stethoscope in difficult labours, which regulate the practice of the Dublin school of midwifery. In his memoir on turning, Dr Simpson takes occasion to make some remarks on this subject, and maintains that "the mighty boon which auscultation offers us in protracted parturition is quite different, and far more important. For it is not by any means so valuable in often affording us evidence that the child is dead; it is not so much of real and practical use in showing us that we may now perform embryotomy upon a dead infant, as in showing us *when*, in protracted cases, we ought to extract the child by the forceps, turning, or other safe means, if we wish to *preserve* its life, as well as the life of the mother. In this way I have repeatedly found auscultation of incalculable benefit in protracted labours, and been, I believe, enabled by its evidence alone to save several times the life of the child by the timely application of the long and short forceps. And though the principle upon which I have thus acted in the management of tedious labours is not acknowledged by Dr Collins under that subject, yet, certainly, the very same principle of using instrumental delivery for the sake of the safety of the child is acknowledged by him under another head, and in dependence upon an-

other form of evidence of the danger of the infant." In speaking of the treatment of cases of prolapsus of the umbilical cord he observes :—"The forceps I consider highly desirable when the child is so situated that the head can be reached with safety; but as the funis generally descends at the commencement of labour, it is very seldom that this instrument is applicable till fœtal life is extinct. We should not fail, however, to apply them when practicable, should any delay occur in the delivery likely to endanger the life of the child, or if we find *the pulsation in the cord becoming gradually slower and more feeble*." Now, exactly on the same principle when in tedious labours (in which there is no contra-indication), we have evidence by hearing, that the life of the child is becoming endangered; when by the stethoscope we learn that the pulsations in the fœtal heart are becoming gradually slower and more feeble, it is our bounden and solemn duty to interfere, in order to attain the preservation of the infant's life. For neither in principle nor in practice does it make any difference whether with this view we ascertain the imminent danger of the child, and the fact that the pulsations of its heart are becoming slower and more feeble, by *feeling* the pulsations of the cord, or by *listening* to the pulsations of the heart itself. The sense of hearing affords us precisely the same evidence in the one case as the sense of touch affords us in the other, and it indicates also precisely the same line of treatment. —*M'Clintock and Hardy on Midwifery and Puerperal Diseases*, 1848 ; *and Provincial Medical and Surgical Journal*, February 23, 1848.

472.—*On the Use of the Vectis.* By Drs Hardy, M'Clintock, and Coley.—In the Dublin hospital the vectis has been very frequently substituted for the forceps. Sometimes it happens that the vectis will fail in accomplishing delivery, even though used by skilful and experienced hands, and where the case seems well adapted for it ; under these circumstances it has to be withdrawn, and the forceps applied. This is a great objection to the instrument, but one which may be entirely obviated by using, as a vectis, one blade of the forceps, the advantage of which is, that if delivery by this means be found impracticable, it is only necessary to pass up the second or sacral blade, and, having adjusted it, to fix the lock, which being done, the operator may proceed as in an ordinary forceps case. This was the practice usually followed in the Dublin hospital, and in nearly all the vectis cases it was a blade of the forceps which was employed. For the effective use of the vectis, it is generally found needful that some uterine action be present; but it matters not though this be small in amount, for the introduction of the instrument seldom fails to increase the strength and frequency of the pains. The vectis was never used in the hospital, except in cases that would have equally justified the use of the forceps.

"By means," says Dr Coley, "of the vectis which I have been in the habit of employing with invariable success during more than forty years, I have usually effected delivery under the ordinary circumstances requiring instrumental assistance; but I have uniformly completed the operation with safety to the mother, and almost invariably to the child, even when delivery has been considered in consultation quite impossible, except by embryotomy. Hence I have never had occasion, under any circumstances, except extreme distortion of the pelvis, to open the head of the child ; and I am much pleased to find that barbarous operation condemned of late by some of our best obstetric practitioners as morally unjustifiable, and a proof of the want of experience and manual skill in the operator. When the practitioner in attendance cannot command the assistance of a skilful obstetrician in these cases, it would be always more safe and becoming for him to turn and deliver by the feet, than to sacrifice the life of the child under the pretence that embryulcia, because easily performed, is the only expedient practicable. The numerous instances in which I have by means of the vectis delivered women of living children, after it has been considered in consultations that the latter were dead, and that delivery was impossible without the destruction and laceration of the child, convince me that great and unnecesary destruction of fœtal life and lamentable inexperience prevail in the practice of midwifery."—*On Midwifery and Puerperal Diseases*, 1848 ; *British Record of Obstetric Medic.* Oct. 1, 1848.

473.—*Black Vomit during Labour.* By Drs Hardy and M'Clintock.—The occurrence of vomiting during the second stage of labour is always considered a grave symptom. When a symptom of rupture of the uterus, it comes on suddenly, and is accompanied by other indications of that accident. Our authors have seen three cases of coffee-ground vomit during the second stage of labour, and without the presence of any circumstance adequate to account for so formid-

able a symptom. In all the three cases, the women had been for a long time previously subject to dyspepsia. They all recovered. They have also seen one case where the dark vomiting came on before the os uteri had begun to dilate. It was so severe, that it was deemed necessary to stop the uterine action altogether by means of opium. After some refreshing sleep, labour recommenced, and the patient did well.

In one case, where the matter vomited was examined, it was found to consist of a transparent yellowish fluid with dark flocculi, consisting of blood and epithelium. — *On Midwifery and Puerperal Diseases*, 1848.

474.—*Statistics of Labour.* Professor Casper.—1. The greatest number of labours is completed between nine o'clock in the evening and six in the morning; the smallest number, on the contrary, takes place from nine o'clock in the morning till six in the evening. 2. The pains of labour commence most frequently between midnight and three o'clock in the morning, and seldomest from six to nine o'clock in the morning. 3. The influence of the night is greater at the commencement than at the end of labour. 4. The labour commences oftenest during the day, when the infant is male; oftenest during the night, when it is female. 5. The duration of labour is increased when the pains commence during the night. 6. A greater number of children is still-born during the night than during the day.—*Abeille Médic.* and *Gazette des Hôpitaux*, Sept. 16, 1848.

475.—*Rupture of an Unimpregnated Uterus, from a Collection of Pus in its Cavity.* By Dr Guzzo of Naples.—A woman, æt. thirty-four, liable from puberty to uterine pains and irregularities, married, but childless, came under Dr Guzzo's care in June 1837, when he found the uterus as enlarged as at the fifth month of pregnancy, and in a twelvemonth after it nearly had reached the umbilicus, occasional colourless discharges being observed. She continued to live until 1841, the tumefaction still increasing, when, after the use of a purgative, peritonitis was induced, and in a few hours she died. A large quantity of pus was found in the abdomen, and the uterus adhered to its parietes from the pubis to the umbilicus, filling up the iliac and hypochondriac regions, and was covered by the omentum. The cavity of the womb contained an enormous quantity of inodorous white pus, various irregular hypertrophic formations being developed on its inner surface. Its walls were thickened, and contained in their substance tubercular masses, varying in size from an olive to a walnut, some being crude, and others suppurating. Some of these tubercular abscesses were just on the point of opening into the cavity of the uterus, and a rupture had taken place at the posterior surface of the organ.—*Archives Générales*, XVII. 104, and *Brit. and For. Med. Chir. Review*, Oct. 1848.

476.—*On Milky Tumours of the Female Breast.* — Mammary tumours, resulting from a collection of milk, are found in one of two distinct conditions. They are either liquid or solid. Dupuytren and Sir Astley Cooper relate cases of the fluid milky tumour; and Scarpa has recorded an extraordinary instance, where the swelling was more than thirty inches in circumference. The different modes of termination of these collections have been particularly discussed by M. Forget, in an interesting memoir—(*Bullet. de Thérapeut.* Vol. XXVII., p. 355). "It rarely happens," says he, "that the milk remains in a fluid state, unless the secretion is constantly kept renewed by continued lactation or a succession of pregnancies. Most commonly its physical and chemical properties are changed, and that, in a manner varying, according as one or other of the constituents of the milk is absorbed."

"If the caseous matter is resorbed, the serum is left alone, and to the lactocele proper succeeds a cyst, filled with a troubled humour containing flocculi." These cysts are, in all likelihood, formed by the dilatation of lactiferous ducts, as is well shown by the observations of Sir Benjamin Brodie, who has seen several cases where pressure on the tumour made the serum escape, or even squirt from the nipple.

Sometimes, but rarely, inflammation attacks the cyst, giving rise to the formation of an abscess. In these cases the inflammation is probably the result of extravasation of the milk, either from rupture or perforative ulceration of the cyst.

Lastly, and most frequently, the fluid elements of the milk are resorbed, and that which remains may assume different degrees of consistence. Hence arise the cheesy, butyraceous, and stony tumours of the mamma. Lately a case of this kind presented itself at the clinique of M. Velpeau. A tumour of the size of an egg was found in the mamma, immediately below the nipple, not painful or tender, and accompanied by no discoloration of the skin. It was extirpated, and the dissection afforded the following

very interesting results:—The tumour was composed entirely of the proper mammary tissue. Around the chief cyst there were several smaller, of the size of a pea, and pointed in front towards the nipple; the point ending in a lactiferous duct. Each of the smaller cysts was filled with a substance having all the characters of butter; and the principal cyst with matter exactly resembling cream cheese. On a minute examination, no epithelial scales or cholesterine were discovered; elements which are always found in meliceratous and atheromatous tumours. Sometimes, but rarely, the milk loses all its fluid constituents, and seems to change into a true calculus, similar in many respects to those observed in the salivary ducts.

Contrary to the opinion of our author, we believe that such tumours seldom demand the operation of excision.—*L'Union Médicale*, Sept. 26, 1848.

VI.—MATERIA MEDICA AND THERAPEUTICS.

477.—*On Digitaline.* By Dr Hervieux.—MM. Homolle and Quevenne, the discoverers of the active principle of *digitalis purpurea*, have pursued a patient course of investigation into its properties, and MM. Bouchardat and Sandras have since made numerous experiments upon these; but although they have fully exhibited the pharmaceutical and physiological properties of the substance, clinical observations are yet wanting, and it is to supply some of these that the author in the present paper details the results of its employment in several instances by M. Rayer.

These observations show that in doses of from 1 to 2, or even 3 milligrammes, the medicine does not produce repugnance by its bitterness, or cause any ill effects, as vertigo, headache, &c. In every case it lessened the *rapidity of the pulse;* the mean difference oscillating between 22 and 36, the maximum being 48, the minimum 12. No immediate effect, was, however, produced on the pulse, the greatest change occurring generally five or six hours after. After a while it recovered itself again, and it required a week or two's use of the drug, to make a permanent impression on it. Its effect on the *urine* was constantly observed, this fluid in most cases being augmented one half, in a less number a third or a fifth; and yet in a less number still, quadrupled or quintupled.

The medicine is indicated in disease of the heart and in dropsy; it allays the dyspnœa of phthisis, calms the cough, and procures repose. It is useful in nervous palpitation, and in all accidents resulting from too violent an impulse given to the course of the blood. This preparation is said to be preferable to all others, in the certainty of dose which can be attained. Comparative experiments made by MM. Homolle and Quevenne, show that digitaline is one hundred times more active than the powder of digitalis.—*Archives Générales*, tome xvii. 164-84; *and Brit. and For. Med. Chir. Review*, Oct. 1848.

478.—*Removal of Nitrate of Silver Stains.* By Mr Parsons.—Two methods are proposed by Mr Parsons. Both consist in the conversion of the silver stain into the chloride of silver, and then washing out the chloride with a solution of the hydrochlorate of ammonia, in which it is very soluble.

The first method consists in applying to the stain a solution of the chloride of lime, and then washing the chloride of silver out with a strong solution of the hydrochlorate of ammonia; but this method, from the application of the chloride of lime, cannot be used when the stain is upon coloured articles.

From the poisonous nature of the materials used in the following method, it ought not to be employed when the former is available; it, however, has the long sought for desideratum of removing silver stains without destroying the colour of the article stained. This process is simply that of washing the stain with bichloride of mercury dissolved in a solution of hydrochlorate of ammonia. In this process the bichloride of mercury is decomposed, and the chloride of silver so formed is at the same time removed by the hydrochlorate of ammonia. By one application the so-called "Indelible Ink" is instantly effaced.

The reduction to a single process by this method, and its not injuring colours, are desiderata not possessed by any other process; and in addition to these advantages may be mentioned the cheapness and ease with which the articles used can be procured.—*Lancet*, Sept. 9, 1848.

479.—*Therapeutic Properties of the Oil of Juniperus Oxycedrus.* By M. Dieu.—By the combustion of this juniper a sort of liquid tar is obtained, known in France

by the name of *huile de cade*. This appellation, however, has been indiscriminately applied to all the liquid tars obtained by the combustion of coniferous woods, and by some, on the other hand, it is restricted to the volatile liquid procured by distilling the *huile de cade*. This oil has a blackish colour, bitter taste, and a strong odour resembling that of tar.

In veterinary medicine it is used in the treatment of cutaneous affections of the horse, and in the south of France it has been long famous as a popular remedy in these diseases in the human subject.

M. Serre was the first to draw the attention of the profession to its value as a local application in the treatment of itch, eczema, lichen, and other affections of the skin; but it was more especially in that most obstinate of diseases, scrofulous ophthalmia, that its employment had been accompanied by success. M. Devergie, physician of the Hôpital St Louis, has been enabled, by extensive trials, to confirm the results obtained by M. Serre.—*Traité de Matière Médicale et de Thérapeutique, par S. Dieu*, Paris 1848.

480.—*Test for Cod-Liver Oil.* By Mr Hockin.—Mixing together on a porcelain slab four parts of genuine cod-liver oil, and one part of strong sulphuric acid, and stirring with a glass rod, a beautiful and rich violet colour, similar to that of the fumes of iodine, is produced, which in a few instants passes gradually into a dirty brown; the altered portion of the oil separating in regularly shaped patches from that out of reach of the acid. This characteristic is not possessed by either olive, almond, seal, whale, or fine sperm oil; nor, Mr Hockin believes, by any other fat oil. The reaction varies in appearance from a delicate fawn to dark caramel.—*Medical Times*, Sept. 23.

481.—*Carbonate of Ammonia in Squamous Affections of the Skin.* By M. Cazenave.—In psoriasis, and other scaly diseases of the skin, M. Cazenave has obtained considerable benefit from the internal employment of this remedy. He gives it in the form of syrup, in doses of from 6 to 30 grains daily. The physiological effects are, complete anorexia, general debility, rapid emaciation, occasional diarrhœa, and some febrile excitement of the pulse; the countenance becomes paler. Some patients were obliged to discontinue the use of the drug, on account of the severity of these symptoms.—*Gaz. des Hôp.*, Sept. 14.

VIII.—DIETETICS, HYGIENE, AND MEDICAL POLICE.

482.—*Diseases of the Mercury Miners at Almaden in Spain.*—Jussieu has remarked that the miners, who were inhabitants of the district of Almaden—who worked voluntarily on the mines, and changed their linen and clothes—preserved their health and lived like other men; whilst the convicts and slaves who worked by compulsion, took their meals in the mines, and did not attend to cleanliness, were subject to swelling of the parotids, aphthæ, salivation, and pustular eruptions over the body. At present there are neither convicts nor slaves in the mines, and the condition in which these formerly were, is observed only in the workmen who come to the mines from a distance. There is a great difference in respect of their hygiene between the miners, natives of Almaden or its vicinity, and those who come from other quarters. The natives enter young into the mines; become gradually habituated to them; they learn from their parents what are the dangers to be avoided; and, having their houses and families, they enjoy greater comforts than the strangers. Thus it is only among them that are found the instances, and these but rarely, of persons in good health after thirty or forty years' work in the mines. "As soon as a little boy of the country," wrote Lopez de Arebado, "is able to carry a load of twelve pounds, he enters the mine, and begins to help the workmen. His labour increases with his years, and changes in its nature by degrees; but there he spends his life, which ordinarily is not more than sixty years. During the twenty-three years that I have been physician of the town, I do not remember a dozen persons who have lived to the age of seventy." One or two native miners have attained the age of fifty-five or sixty, with but slight mercurial affection, and otherwise with good health; but such examples are not met with among the strangers. They are mostly wretched creatures without any other resources, whom necessity has driven to the mines of Almaden from La Mancha, Estremadura, and especially Gallicia and Portugal. They take no care of their persons, either because they do not know, or do not care for the consequences of their carelessness. Instead of rinsing their mouths and washing their

bodies with tepid water, on coming out of the mine, changing their linen and clothes, and taking healthful exercise before eating or sleeping, they take their meals with dirty hands in the subterranean excavations; and, as few of them possess a change of raiment, they are seen coming from the mines without any of these precautions, and going away sweating, with their skin, hair, and clothes impregnated with mercurial particles, to indulge the tendency to sleep which oppresses them, or to seek enjoyment in amusements, spirituous liquors, and all manner of debaucheries. Consequently the deleterious influence of the work in the mines produces the most disastrous effects on these unhappy people.

The characters and violence of these effects vary according to other circumstances. Lopez de Arebado affirmed that some of the workmen never had any affection but tremors, others only the mercurial salivation. He had remarked that intemperate and thin subjects were more liable to the trembling, whilst unhealthy cachectic individuals were more commonly affected in the mouth. These remarks are conformable to what is observed at present. The different powers of resistance to the action of the mercury manifested by different workmen, can be explained only by differences of temperament and idiosyncrasy. Thus, as a general rule, sanguine corpulent men, succumb to it more rapidly, than those who are thin and of nervous temperament. It is certain, also, that those who have entered the mines young, and become habituated, never suffer those sudden and violent attacks by which new-comers are so frequently rendered incapable of working.

Some parts of the mines are more insalubrious than others. They seem to be chiefly those deeper galleries where the ore is richest in mercury, and the ventilation most imperfect.

The most dangerous occupations in the mines are the digging the ore, and working the pumps. Those who are employed at the latter labour, and are constantly exposed to wet, suffer, besides the proper effects of the mercury, articular pains and thoracic inflammations. Of the workmen employed outside the mines, all are liable to suffer more or less from the mercury; but the most hazardous employment is that of those who superintend the distilling furnaces, and who live in an atmosphere in which mercury is continually in vapour, as is shown by the myriads of globules of the metal, which can be seen to occupy all the crevices on the outside of the furnaces.

The inhabitants of the town of Almaden do not suffer from the effects of the mercury, although the smoke of the furnaces is often carried by the wind over the town. This is probably owing to the condensation of the mercurial particles before they reach that distance. In the enclosure called Brutrones, where the furnaces are situated, the animals which are allowed to graze there are liable to mercurial tremors. The mules, especially eight which move the machinery for the extraction of the cinnabar, are generally healthy; but an officer of the mines affirms, that several times when they have been killed mercury has been found in their bones (!)—*Correspondent of L'Union Medicale*, No. 116.—(*To be continued*).

483.—*Health of Workmen in White Lead Factories.* M. Versepuy, *pharmacien* at Riom Maele, on 17th April read a communication to the Academy of Sciences relative to the manufacture of white lead. He considers the process known as the Dutch method, as well as that of Liebig, as being an organized system of manslaughter in the manufactory, but he does not consider it possible to replace, as has been proposed, white lead by white oxide of zinc, in its various uses in the arts. He has therefore been led to adopt, after twelve years' experimental trials, a modification of the processes in common use, which deprives them, as far as possible, of their dangerous characters. In his method the white lead is prepared in close vessels. It is removed from these mixed with water, so that the powder does not diffuse itself through the air of the manufactory. The workmen do not touch it or inhale it; their only contact with it is, under certain precautions, putting it in the drying stove and removing it. The exemplification of the method is most complete, and the process is so accelerated, that twenty-four hours suffice for that which on other methods requires forty days at least. The system has begun to show itself in its good effects on the workmen.—*Gazette Médicale.*

[We presume M. Versepuy's process is some modification of the method now followed in this country, as well as on the continent, of transmitting carbonic acid gas through a moist mixture of litharge and acetate of lead.]

484.—*On the Hygienic Influence of Cutting the Hair.* By M. Fredericque.—Medical men are occasionally asked whether it is proper to cut the patient's hair; whether, in fact, this operation has any influence upon the health. M. Fred-

ericque resolves the question by giving the following illustration :—

A little girl, aged three, of good health in general, had her hair grow excessively long during the course of a few months. She was a beautiful child, but had latterly wasted without any apparent cause, becoming dull and apathetic, losing her appetite and strength without any organic lesion being discernible. There was an anæmic bruit in the carotids. She was placed upon a tonic regimen, with chalybeates, but without deriving material benefit, until her hair was cut short at the suggestion of a friend, from which time she rapidly gained strength.

It would appear from this case that the economy had suffered a loss in the expenditure of blood necessary for the secretion of the abundant crop of hair. M. Fredericque considers that it is the formation of the colouring matter which chiefly exhausts the blood, as this is formed at the expense of the hæmatosine.—*Annales de Societé d'Emulation ; Revue Médico-Chirurgicale.*

485.—*Prophylaxis against Poisoning by Salts of Lead.*—A report by M. Richeteau on some points relative to the pathology and treatment of saturnine affections, has led to the appointment, by the Academy of Medicine of Paris, of a committee to inquire into the whole questions relative to the poisonous action of lead salts, and especially as to the means of preventing them. Among the more important points of inquiry will be the question, as to whether the lead salts, to prove injurious, must be soluble or not, as to the effect curative and hygienic of chemical neutralizing exerts, and as to the modifications of manipulation which will render the preparation of lead compounds less injurious.—*Gazette Médicale de Paris*, June 14, 1848.

[We would point to this proceeding on the part of the Academy, as an example of the way in which accurate information may be obtained regarding important hygienic questions like this, about which much has been written, but comparatively little accurately ascertained.]

486.—*Lamps without Smoke.*—As it is notorious that the gases resulting from the combustion of lamp oil are prejudicial to health, we are induced, in a hygienic point of view, to extract from the *Journal de Chimie Médicale*, the following account of a process by which the inventor asserts that the smoke is avoided. Make a saturated solution of common salt, dip your wick into it, and allow it to dry thoroughly. Mix afterwards the saline solution with oil, taking equal parts of each —agitate briskly for some time ; let the mixture rest until all the oil has risen to the surface, and decant the latter, which is then fit to be used with the wick prepared in the manner above mentioned. The author states that the flame is more brilliant, and that it lasts longer than that produced from common oil, besides giving no smoke.—*Lancet*, 17th June 1848.

487.—*Influence of Hygienic Circumstances in the Development of Cholera.* By Dr Korefe.—Of about 700 individuals, male and female, employed in a cotton factory in St Petersburg, the larger half was lodged within the precincts of the factory, fed at a common table, and lived under strict superintendence. The rest, above 300 in number, lived in the town with their families. In the former, or larger half, there were, from 14th June to 10th August, eighty-three seizures, and of these five died ; while of the latter smaller portion 120 were taken ill, and of these forty-four died. It is worthy of note, that those who lived in the factory, and whose mortality was smaller, were all of the *serf* class ; while the others were all free citizens.—*Gazette des Hôpitaux*, Sept. 12, 1848.

488.—*Cholera in Lower Egypt; unusual Mode of Development.* By M. Willemin. —M. Willemin, officer of health at Cairo, states a remarkable fact in reference to the present epidemic of cholera in Lower Egypt. At Boulac the disease raged principally in the northern half of the town, which is entirely composed of large and well-aired houses, the abodes of the rich. The southern part, on the contrary, which contains the filthy and ill-ventilated dwellings of the poor, and more especially the bazar, ordinarily the abode of pestilence, was spared. At Cairo, a similar circumstance was observed: the north-west division, rich in plantations, was ravaged; while the Jews' quarter, which is extremely dirty, had few victims.—*Acad. de Méd.* Oct. 17, in *Union Médicale*, Oct. 19, 1848.

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I.—ANATOMY, PHYSIOLOGY, AND PHYSIOLOGICAL CHEMISTRY.

489.—*On the Intestinal Mucous Membrane.* By Dr HANDFIELD JONES.—The author directs attention to a layer of granular matter, enveloping nuclei, which lies immediately beneath the mucous membrane of the intestines, and in contact with the basement membrane. This granular layer or "*substratum*" of the mucous tissue, which is well seen in the colon, forms, together with the nuclei above mentioned, a great part of each villus, filling up the whole space between the limitary membrane, and the lacteal and capillary vessels. This substratum is the seat of the black discoloration, which is not uncommon in the intestinal mucous membrane; and is also the part principally affected in dysentery, in which it is often left bare by the disappearance of the mucous membrane, and is infiltrated by a plasma passing into imperfect cellular forms.

In the period of inactivity, the villi are semi-transparent; when absorption is going on, however, they are opaque from the presence of oily matter in the form of globules and granules of different sizes. The larger of these Dr Jones believes to correspond with the absorbing cells described by Professor Goodsir, as formed during the process of absorption, and which are very inconstant in their number and size, being sometimes entirely absent in villi which are manifestly in a state of activity. The opacity caused by the absorption of the chyle may be also observed frequently to pervade the whole length of the villus, thus indicating that this function is carried on in every part, although probably more active, as described by Mr Goodsir, at the summit. The active agents of absorption are believed by the author to be the nuclei distributed among the granular matter of the villus, and which, though obscured during the process by the presence of milky chyle, are constantly visible in the inactive and semi-transparent villus. "It is well known now, that the formation of perfect cells is by no means to be regarded as essential to the exercise of the energy of nuclei, those fundamental and efficient parts of almost all cell formations. It is also known that the formation of perfect cells indicates a certain degree of permanence in the structure so formed, and that their contents are destined to be retained for a period, to undergo some elaborating change, not to be immediately yielded up; while, on the other hand, the non-completion of cells indicates that the process is of a rapid character, and not intended to produce any considerable change in the material acted on. Remembering these facts (of the general truth of which there cannot be much doubt), it will be admitted, perhaps, as highly probable, that the nuclear corpuscles of the granular basis of the villi exert an attraction on the chyme by which they are surrounded, and draw it continually into the substance of the villus, from whence it is rapidly conveyed away by the efferent lacteal."

The author agrees with Professor Weber, that the shedding of their epithelium is not *necessary* to enable the villi to perform their functions. He has seen the villi clad with their epithelium when the lacteals were filled with chyle; nevertheless it is certainly common to find them divested of this covering when absorption is most actively present. Dr Jones corroborates the observation of M. Lacauchie, that the villi are subject to retraction and thickening, under the influence of circumstances which are not well understood, as they do not appear to be possessed of any contractile tissue as an element of their structure, and "the distension of their capillary plexus with blood would rather have a contrary effect." [We think, on the contrary, that this shortening and thickening of the villi is a very probable effect of vascular or any other distension.]

Dr Jones has examined with great care the solitary and aggregated glands of the intestine in the human subject, as well as in the rabbit and dog. The patches he considers, like most other anatomists, to be merely aggregations of solitary glands. The depressions in the aggregated glands do not correspond to any distinct open mouths of follicles, but seem to be produced by the absence of villi from those parts of the mucous surface. The structure of the solitary and aggregated glands is very similar; they are situated in the substratum, below the basement membrane, and covered by a plexus of capillary vessels. On making a vertical section of one of the solitary glands of the human intestine, it is seen by the microscope to consist of masses of nuclear granules, "which, for the most part, are solid, not including a distinct cavity, and not contained in any definite follicular envelope; they lie at various depths; the larger are in contact with the surface, the mucous membrane, with its rows of vertical follicles, having disappeared above them; the smaller lie unquestionably beneath the mucous surface, and, I feel quite assured, have no orifice of communication by which their contents might escape into the intestinal cavity; even pretty strong pressure does not evacuate the contents of the smaller masses, while it sometimes produces this effect on the larger, which more closely adjoin the surface. The form of these masses varies a good deal; often they are considerably flattened, usually, however, more or less globular—their upper portion being always convex, and tending to approach the surface; when it reaches this, the mass appears to become more or less completely evacuated, and a shallow depression may then result; this, however, is but rarely seen. In the cæcum of the dog, the solitary glands are more or less prominent on the surface, and exhibit a very distinct appearance of a central orifice. When macerated in acetic acid, they appear as circular spots about the size of a large pin's head, rather flattened, and with perfectly defined margins. In vertical sections through the central orifice the mucous membrane is seen to dip down, and become gradually thinner; sometimes it appears to be perforated at the bottom of the depression; at others is continued plainly across. The gland itself consists of a solid mass of nuclear corpuscles, with a little granular matter. It is contained in a kind of capsule, which seems to belong to the submucous tissue; at the bottom of the depression, the mass comes in contact with the thin mucous membrane, if it exists, or with the orifice, if it be absent; but can rarely be made to escape even by strong pressure. It does not appear that these glands can be regarded as true follicles; their capsule is not continuous with the basement membrane; their contents are not epithelial particles lining the wall, but a solid mass of nuclei; and, lastly, the existence of an orifice in them does not seem constant, whether evidence of it be sought for by minute examination, or by observing the effect of pressure upon their mass. In the rabbit the long and wide appendix cæci has its mucous lining greatly thickened by a layer of masses consisting of nuclear granules; these are of elongated conical form; their apices reach to the surface, and lie in fossulæ formed by septal folds of mucous membrane; over their surface a capillary plexus is spread, supplied by the long vessels which run up from below; they appear to be quite solid, and their apex is certainly not perforated, but in some instances appears to be invested by a distinct homogeneous membrane. In all these cases, it is worthy of remark that the masses of nuclear granules are effected in a peculiar manner by acetic acid; instead of rendering them transparent, it makes them much more opaque, so that their outlines become extremely distinct even to the naked eye. This circumstance, as well as the marked difference between their contents, and the epithelium of any glands or follicles, is very characteristic of them, and tends to prove that they are not mere follicular involutions of the mucous surface, but superadded structures designed for some special but unknown function."

The aggregated and solitary glands would thus appear to be, according to Dr Jones' observations, an increased development in particular localities, of the nuclei and granular matter which he described as forming the general substratum of the mucous membrane. In the small intestine, where, he says, there are in health few or no *solitary* glands, such as exist in the colon, the bodies which in the diseased state are described as such are apparently adventitious structures, and are composed of nuclei and granules similar to those of the gland, but not inclosed in any capsule. The author believes these to be analogous to pimples of the skin, and, like them, capable of disappearing by absorption.—*Medical Gazette*, November 17, 1848.

490.—*Lymphatics of the Lungs.*—Dr Jarjavay describes these very minutely, dividing them into plexuses and vessels,

which are superficial and deep-seated. Some of the vessels have swellings in different parts which he calls varicose; and in other parts are simple, these he calls capillaries. The peculiar structure and distributions of these are very accurately described. It is worthy of remark, he says, that the black matter of the lungs has its seat in the track of the vessels of the varicose plexuses, and thus the pattern of these is mapped out by the black substance. His injections have failed to show how the lymphatics of the lungs come into connexion with those of the heart, and finally with the thoracic duct. He finds that, for the most part, ganglions seated about the root of the lungs receive the vessels, although he has noticed branches go directly to the thoracic duct, and in other cases join the diaphragmatic, œsophageal, &c. The ganglions about the left bronchus also receive the lymphatics of the part which reach them after following the curve of the aorta.—*Archives Gén de Méd.*, Jan. et Fev. 1847, *and Amer. Med. Assoc.*, 1848.

491.—*On the Independent Contractility of Muscular Fibre.* By Dr E. Harless. A new set of experiments performed on this subject, upon animals rendered completely insensible by ethereal inhalation, confirms the opinion that the irritability of muscle is a property inherent in the tissue itself, and not in any way derived from the nervous system. Dr Harless found that even when the nervous system had been rendered, by the action of ether, utterly incapable of conveying a galvanic stimulus, applied either to the nervous centres or the nerve-trunks, the same stimulus, applied directly to the muscles, would immediately throw them into powerful contraction.—*Brit. and For. Med.-Chir. Review*, July, 1848, from *Müller's Archiv*, 1847, No. 2.

492.—*On the Capillary Circulation.* By M. Bourgery.—In addition to the capillary or intermediary system of vessels at present admitted by anatomists, and which M. Bourgery considers as constituting a mere anastomosis between the arterial and venous radicles, unconnected with the vital changes going on in the tissues, the author describes a circulation of *capilliculi*, forming a diverticulum of the general circulation, and pervading more minutely than the capillaries the ultimate elements of every organ. These he looks upon as the proper and *special organic* circulation, by which in different organs the functional changes of secretion, nutrition, &c., are carried on. The *general* circulation in itself does not produce any functional changes, but merely preserves unbroken, and independent of the activity of the special circulation, the progressive movement of the blood, which at all times passes over in part from the arterial to the venous system, through the capillaries; while the *capilliculi* receive a part of it for elaboration in the special tissues to which they are destined. These capilliculi (the size is not stated) are impervious to all particles which are not in solution; the blood-corpuscles do not pass through them; nevertheless they may always be traced, varying in disposition according to the organ or tissue in which they are situated. For the most part they are tolerably uniform in size; but they may be observed, on the one hand, to pass into vessels still more minute (not equal to the half, third, or fourth part of the diameter of a blood-corpuscle); and, on the other, into the ultimate lymphatic vessels, which again communicate by innumerable minute passages with the venous system.

M. Bourgery conceives that this scheme of the circulation completes, without abrogating, that of Harvey and the majority of physiologists. On the one hand, it admits a general circulatlon of the kind described by Harvey, which is permanent and complete in the circle which it describes; in the other, it asserts an extension of this by an infinite number of partial or functional circulations, isolated from each other, but connected by means of the general circulation, and in their united capacity very much exceeding the latter. These partial circulations are special and heterogeneous in their function and distribution, and are only periodically active; the only exception to this being in the lung, where the special may be considered as subserving a mechanico-chemical function; and, being properly a function or complement of the general circulation, is, like it, permanent and complete.—*Comptes Rendus*, Sept. 4, 1848.

[We have endeavoured to express what appears to be the author's meaning, although the involved and inexact style in which the conclusions are given, renders it in some instances not a little difficult to be assured of having done so correctly. MM. Magendie, Flourens, Serres, and Milne-Edwards, have been appointed to examine into the author's facts. Should they find any reason to suppose these correct, we would suggest the question, how the change in the *colouring matter* of the blood, which apparently does not pass through this new system of vessels, is effected; and also, what are the forces which

determine the passage of the fluids through these vessels; as it can scarcely be supposed that the force of the heart, which is constantly exerted to maintain the general circulation through the very free *anastomosis* of the capillaries, should be the active agent of propulsion through this partial and occasionally active system of vessels.]

II.—PRACTICE OF PHYSIC.

493.—*Indian Treatment of Cholera.* By SAMUEL ROGERS.—The author insists on the importance of dividing the treatment into two stages: 1st, before the collapse; and, 2d, during the collapse.

1*st Stage.*—*Venesection* has been advocated by many, and very generally practised in this stage of the disease; but to be of service it should be performed early, before the heat of the body is much diminished, and the skin has become clammy. The blood at first flows with difficulty, is of a dark colour and thick, but in many cases, after a small quantity is drawn, it loses these characters, and becomes florid, the pulse rising in frequency; this I have repeatedly witnessed. Can this change be simply the effect of the abstraction of a few ounces, when the whole circulating fluid is dark alike? Is it not rather produced by the healthy organization of the blood being in some measure restored by the operation, the heart itself, relieved of its congestion, being enabled to act with greater vigour? The heart thus freed, by a portion of the vitiated blood being removed, receives a fresh impetus, and if stimulants are given at this time, they are enabled to produce their wonted effects, and the circulation becomes re-established. Bleeding should always be performed in the recumbent posture, as syncope is readily induced by the abstraction of a few ounces of blood in the upright position. The following description of its effects is given by a patient, himself a medical man. "There was a sensation which I am at a loss to describe, as if my heart was ceasing to beat, and a dread of suffocation; this sensation was instantly relieved by bleeding, and I recovered immediately."

Emetics are constantly given in the earlier stages, but their use appears to be based principally on theoretical grounds.

Calomel, in large doses, was long a favourite medicine with the older practitioners in India, from an idea that in such doses, in addition to its other effects, it possessed peculiar sedative powers; the usual routine having been to administer calomel ℈i, opii gr. ij immediately, on the patient being seen, and to repeat the dose every hour or two, according to the judgment of the prescriber. It is allowed by every one, that calomel possesses no specific power over the disease, and is useful when combined with opium, in restraining the violent action of the intestines, and allaying emesis; when the violence of the disease subsides, it then exerts its peculiar power in restoring diseased or suspended secretions. The experience of late years, however, has taught us, that the same effects may be produced when this medicine is given in much smaller quantities, whilst large doses are thought by many to hasten death in bad cases; and in those which recover, the salivation, which it often occasions, retards convalescence. Calomel in small doses is used by most practitioners, and the following formulæ are highly recommended:—calomel, pulv. capsici āā grs. iv, opii gr. iss or gr. ij, assafætidæ gr. ij, ol. menth. pip. m. i, to be repeated at intervals whilst purging continues, until 8 or 10 grs. of opium have been taken. Dr Lorimer remarks, "I cannot forbear recording my testimony to a combination of medicines, which in warding off and checking an attack of cholera, in numerous instances, both in Europeans and natives, has been followed with the happiest results. The remedy consists of quinine, calomel, and opium, in the quantities of six, four, and two grains respectively, followed by a wine-glass of brandy diluted with a little warm water; this, given within the first hour or two of seizure, will be found in a large proportion of cases to check the disease, (in my own experience it has never failed.)"

The combination of nitro-muriatic acid and opium has been very extensively tried, and with the best results, the doses being, acid. nitric. m. ij, acid. hydrochlor. m. i, tinct. opii. m. x, water ℥ j, to be repeated every hour or hour and a half; the effects are sedative, stimulant, and astringent.

Sugar of lead and opium are acknowledged by most practitioners to be one of the best combinations which we possess, in arresting purging, in the premonitory stages of cholera, given in doses of grs. ij of the former, and opium gr. i, repeated according to circumstances.

Opium, in some shape or other, enters

into most prescriptions, and is of essential benefit in restraining the alvine discharges and stopping emesis; but from the tendency to coma and stupor, in this disease, great caution is necessary in its administration; 8 grs. of solid opium, is the largest quantity which I should consider it safe to use during an attack of cholera.

Stimulants are of great use in the incipient stages of cholera. Of these the spirit. ammon. aromat., the spiritus ætheris sulphurici, and sp. æth. nitrici. are the best, and the carbonate of ammonia and camphor, when we wish to administer stimulants in the solid form, for fear of inducing vomiting; quinine, from its influence over the nervous system, appears to possess a certain power in counteracting the effects of the poison, when given in the early stages. The Indian hemp has also been advantageously used for this purpose, with the effect of almost immediately raising the temperature of the skin.

2nd Stage.—If the means pointed out fail to arrest the disease in the first stage, little success can be expected from internal remedies when the collapse is fully developed. In the absence of any known antidote against the effects of the poison, our objects must be to endeavour to remove congestion, to arouse the sluggish circulation, and to support the strength until the state of collapse has passed away; to relieve the cramps; and to allay as far as possible the urgent thirst. As before remarked, when the powers of absorption are lost, it is worse than useless to pour quantities of medicine into the stomach. Cold diluent drinks, such as lemonade, effervescing draughts of carbonate of soda, and ammonia, and citric or tartaric acid, and soda water or weak nitric acid drink mixed with thin arrow-root, to which may be added a little brandy, are always most grateful to the patient in assuaging thirst; bitter beer and champagne are also very much relished, and are often retained when the stomach rejects every thing else. During the existence of complete collapse stimulants are worse than useless, external applications and enemata being the chief remedies which are beneficial at this period.

To relieve cramps.—Frictions with various stimulating embrocations have been recommended, but the annoyance which they cause to the patient is quite sufficient to counterbalance the good produced by them. The application of flannel bandages has been found more efficacious for this end, than any other mode of treatment. The following method has also been used:—"When spasms are severe in the extremities, the nitric acid applied gently with a feather acts like a charm, and very seldom requires two applications; it should be applied with a very gentle and steady hand, from back to front of the leg. The only objection I have to it is, that when not gently or properly applied, it is liable to cause sloughing and deep ulcerations, which take a long time to heal; but after all it is a satisfaction to possess a remedy capable of relieving the excruciating pain of spasms." Bags of warm sand applied to the feet, are of service in preserving the heat of the body; frictions of flour or hot ashes over the extremities are also favourite remedies with the natives of India, and are certainly useful in absorbing perspiration and preventing evaporation.

Cold Baths.—The cold *douche* as a remedial agent is highly recommended, not only in the invasive period, but also in the last stages of disease. I have known the most marked benefit obtained from dashing cold water on the face and head, when the patients were sinking into collapse, and when, except the head, the body was all over cold, and the pulse almost imperceptible; the patients in these cases often expressed themselves revived, and called for its repetition.

The use of hot baths is now relinquished by universal consent, having been found from experience to be injurious in various ways, but chiefly, from the fatigue and upright posture, inducing fatal syncope.

Saline injections into the veins.—The immediate, or primary effect, of this remedy was to restore the enfeebled circulation; the action of the heart and arteries being invigorated, and the pulse (which may have previously been imperceptible at the wrist) becoming strong and full. The temperature of the skin also, from being cold and clammy, became warm, and the patient aroused from a state of almost inanimate collapse, sat up, talked, and expressed himself relieved. This improvement was, however, found to be transitory; symptoms of collapse soon began to return again, the patient became covered with profuse cold sweat, and after relapsing into a state of extreme prostration, the vital powers could not be again stimulated to action.

Oxygen gas.—Oxygen gas has been used in the low stages of cholera, with the effect of immediately restoring the heat of the skin and raising the pulse; the inhalation being continued for four or five hours at intervals, whenever the pulse began to flag.

In favourable cases, when the skin has regained its natural heat, and the pulse has improved in strength, if the bowels are not naturally moved, the administra-

tion of aperient medicine becomes requisite; small doses of castor oil and laudanum, or aloes and calomel, āā gr. ij, to be repeated every three hours, are excellent medicines, producing feculent motions without purging. But great caution is necessary in prescribing purgatives, for frequently, after partial reaction has taken place, bile has reappeared in the stools, and the pulse has become perceptible at the wrist, the action of a dose of pulv. jalap com., or of colocynth, has been known to produce sudden and fatal relapse. In secondary fever, the treatment must be regulated on general principles, bleeding either local or general, blisters to the nucha, cold lotions to the head, purgatives and mercury, being occasionally requisite to subdue congestion occurring in important organs.—*Reports on Cholera*, Madras, 1848.

494.—*Clinical Observations upon Anæsthesia.* By Dr BEAU.—The object of this paper is to exhibit the fact, that in certain forms of disease a condition of anæsthesia is present, which has hitherto for the most part escaped attention.

1. *Saturnine Intoxication.* Writers treating upon the deleterious influence exerted by lead upon the system, have noted anæsthesia as an occasional and rare occurrence in individuals who have been long exposed to its operation; and M. Tanquerel states that of 2160 persons suffering under various effects of lead disease, only eleven offered symptoms of deficiency of general sensibility. Nevertheless, anæsthesia is an habitual, if not an essential symptom of impregnation of the system by this metal. M. Beau's attention was at first accidentally directed to the subject, on observing an insensibility to feeling and to pain in the thigh of a painter, and an insensibility to pain in other parts of his body. Trying the experiments upon other individuals similarly circumstanced, he found the same result,—pricking, pinching, &c., the surface exciting no sense of pain; and he has now investigated the fact in thirty cases, some being very slight examples of colic, &c., and others of very short duration.

In these cases there are, however, *two varieties* of anæsthesia, viz. insensibility to touch, and insensibility to pain, better termed *analgesia*. The first of these is by far the least common, having been met with in only four of the cases. It is, too, usually partial, extending only over a small portion of the surface; but it announces a far more serious lesion than analgesia. This last is *constantly* found in persons suffering from lead poisoning in any of its degrees. We must, however, not content ourselves with asking the patient whether he feels, but confine our question to the sensation of *pain*. Parts which are thus insensible to pain are so also to *tickling*. This form of anæsthesia may affect the entire surface, being, however, most remarkable in the extremities, and especially the upper ones. It may extend even to the mucous membranes, and especially those which are normally endowed with great sensibility—as the uvula, isthmus faucium, nares, or conjunctiva—any of which parts may be tickled without the usual consequences, the patient being still quite conscious of the mere contact. The anæsthesia disappears as the cachectic colour is removed, and the appetite restored; with a slowness proportionate to the age of the patient, or to the severity of his disease. It has disappeared as soon as the sixth day after treatment, and at other times not until the twelfth or fifteenth. With this anæsthesia to excited pain, violent pain of a spontaneous character, as colics, &c., may exist.

2. *Hysteria.* M. Gendrin, in 1846, first stated anæsthesia to be a constant symptom in this disease; but he did not distinguish between insensibility to pain and insensibility to touch, the latter being very rare, and only observed in very bad cases.

3. *Hypochondriasis.* Anæsthesia is to be observed also in this disease when well marked and of long standing. Besides the diseases mentioned, it will probably be found in *scorbutus* and *pellagra* (both of which not infrequently terminate in paralysis), and in various other forms of colic besides that from lead. The *nervous delirium* of Dupuytren following traumatic affections is attended with this anæsthesia, and the insensibility to surgical operations manifested by some of the insane may be similarly explained; and these views throw some light upon the ease with which religious fanatics have at different periods apparently borne the most horrible sufferings.

The above pathological considerations lead to the physiological separation of the sense of touch and of pain; and this is susceptible of proof by experiment, for after a blow, cut, &c., the pain is distinctly posterior to the perception of the injuring body. "The sense of pain may, so to speak, be considered as annexed to that of touch, and thus is the first to disappear when the innervation does not possess its normal intensity. If the innervation is subjected to still further diminution, then the sense of touch disappears in its turn, and the insensibility is complete. The object of the sensation of touch is to in-

form us of the presence of bodies in general, while that of pain has the no less important office of advertising us of the contact of disorganizing bodies." We may then say that there is a paralysis of the sense of pain, just as of the sense of touch, of the special senses, or of the motor powers.—*Archives Générales*, tom. xvi. pp. 5-24.

Since publishing the above communication, M. Beau has found that *typhoid fever* may be added to the diseases accompanied with anæsthesia, which persists even during convalescence.

He has also remarked that *analgesia* in the various cases is more observable in the erect than in the recumbent posture, after exertion, *e. g.* mounting stairs, and indeed after any action, whether physical or moral, which produces a temporary diminution of strength.—*Gaz. des Hôp.* 1848, No. 26; *and British and Foreign Medical-Chirurgical Review*, Oct. 1848.

495.—*A New Diagnostic Sign of Intermittent Fever.*—This sign, pointed out by M. R. Vanoya, consists in a peculiar condition of the mucous lining of the lower lid. In a healthy subject this surface presents a more or less vivid red colour; but when intermittent fever has lasted some time in any subject, another appearance is observed, constituted by a pale crescentic line, the extremities of which correspond to the canthi of the eye, and its concave edge embracing the sclerotica: it is visible on lowering the lid and directing the subject to look upwards. This appearance is dispelled by the internal administration of febrifuge medicines, and persists so long as the patient is exposed to a relapse.—*Annals de la Société Med. de la Flandre occ.*

III.—PRACTICE OF SURGERY.

496.—*Treatment of Aneurism by Compression in America.* Five cases of Aneurism have been treated in this way, in the practice of Drs Buck, Rodgers, and Watson, of New York, Knight of New Haven, and Mutter of Philadelphia.

The first case was one of femoral aneurism, in which pressure was fairly tried and did not succeed, and it became necessary at last to resort to the operation by ligature.

The instance which occurred to Dr Rodgers was that of a negro seaman, aged 47, who, two months before, observed a swelling in the popliteal region, which arose after a fall. The tumour was of the size of a duck's egg, and the symptoms of aneurism were well marked. He entered the New York Hospital, and on the 15th of January 1847, pressure was made upon the artery near the groin by means of an arterial compressor. This was continued till the 12th of February, but it being found impossible to effect the desired object with it, Dr Rodgers substituted another, consisting essentially of a metallic plate placed upon the inner side of the thigh over the vessel, having three holes at short intervals through which screws passed, each having at one of their extremities a firm pad, and at the other a projection to which a key was adapted, by means of which pressure could be made upon the femoral artery at the different points. This metallic plate was secured over the artery by means of broad straps attached to a sliding plate of steel, secured in a metallic bar, applied longitudinally to the back of the limb.

Soon after the adjustment of this instrument, it was ascertained that the patient loosened the screw in the absence of his attendant. He was now watched night and day for three days, by the end of which time all pulsation in the tumour was entirely arrested. The swelling gradually subsided to half its original size. The only inconvenience experienced by the patient was a numbness of the limb, upon the first removal of the instrument, but this soon left him, and he was discharged cured on the 13th of April.

The case of Dr Watson was one of femoral aneurism, treated also at the New York Hospital. The subject of it was an intemperate Irish woman, aged 38. The tumour, which was hard and painful to the touch, had existed for a month, and extended from the upper and inner third of the thigh to within a finger's breadth of the internal condyle of the femur, and at the point of its greatest circumference, reached from the inner border of the rectus muscle to the middle of the outer side of the thigh.

At mid-day, on the 23d of September 1847, pressure was made by means of two pads secured to circular straps over the artery, with counter-compresses on the outer side of the thigh, the pressure produced being regulated by a screw which acted directly upon the pads over the vessel. The first compress was fastened over the artery just as it emerges from

beneath Poupart's ligament, the second, a short distance below it, and both were so arranged as partially to control the circulation in the tumour, the pressure being regulated by alternately tightening one compress and slackening the other, in order to prevent abrasion of the integument. On the 24th the patient was restless; on the 25th she complained greatly of cramp and pain in the leg, which was much swollen, to relieve which a roller was applied and the limb elevated on a pillow.

By the 26th all pulsation had left the tumour. The upper compress was now removed—sixty-eight hours having elapsed from its first application, and very slight pressure was kept up by means of the lower one. No return of pulsation followed the removal of the compress, and in an hour afterwards the lower pad was also taken away. The skin beneath the upper compress had become somewhat abraded by the pressure, which required the application of a poultice, and subsequently simple dressings for a few days.

On the 28th no pulsation could be detected in the tumour, or in the femoral artery below the point, upon which the upper pad had rested.

By the 28th of October the tumour had much diminished in size, and become softer.

On the 12th of November, nearly two months subsequent to the commencement of the treatment, she left the hospital well, the tumour still gradually becoming smaller. There was no pulsation to be detected in the anterior or posterior tibial arteries, or at any point below the giving off of the profunda, and the femoral artery itself below that point was felt like a solid cord beneath the integument.

The case furnished by Dr Mutter, was that of a book-keeper, aged 41, whose general health was feeble, and who, six weeks previous to the 24th of September 1847, had been seized with stiffness in the right ham, which was soon followed by a pulsating tumour of the size of a turkey's egg. After a few days' rest in the horizontal position, his treatment was commenced by applying a roller to the limb in order to prevent swelling, and the application of one of Charrière's compressors, with a small oval pad over the femoral vessel where it passes down to become popliteal, and another similar compressor with a larger pad over the artery at the upper third of the thigh. The limb was then placed upon an inclined plane. After remaining in this position for twelve hours, the lower compressor was tightened until all pulsation ceased in the tumour. The pain produced by this procedure was severe, and could only be borne at first for half an hour. When it became insupportable, the upper compressor was screwed down, and the pressure from the lower one removed. The patient supported the pressure above for two hours without much difficulty; it then became annoying, and, in order to relieve the suffering, the lower compressor was again tightened.

By thus alternating the points to which it was applied, the necessary amount of pressure was kept up without excoriation, or any other injurious consequence resulting, and from the peculiar construction of the instruments, and the previous application of the roller, the swelling of the limb was trifling. During the treatment, the diet of the patient was restricted, and digitalis was administered to him.

By the 12th day the tumour was reduced to about half its original size; had become solid, and was free from pulsation. Notwithstanding these circumstances, Dr Mutter did not consider it safe to allow his patient to move about, or even to relax the treatment, but continued to pursue the same course, with slight modifications, for six weeks longer. At the expiration of this period, the tumour had nearly disappeared, the collateral circulation was fully established, and the disease radically cured.

Dr Knight's case, which is peculiarly interesting, from the novel manner in which the pressure was made, and quickly effected a cure, was that of a mulatto man, aged forty-eight, in whom a politeal aneurism had existed for several months. The aneurismal tumour, which was well marked, filled up the whole popliteal space. The leg was very painful and œdematous. After the œdema was removed by rest, and other appropriate treatment, pressure on the artery, by means of the hoop tourniquet, the calliper-shaped instrument, the common tourniquet, guarding the limb against pressure of the strap by encasing it with thick sole-leather, and by a variety of other mechanical contrivances, was fairly tried. By whatever instrument, however, the pressure was made, and however carefully it was guarded, whether continued on one point only, or shifted from one part of the artery to another, the pain became in a short time so severe that it could not be endured. The pain complained of was not in the part pressed upon by the instruments, but was felt equally in the thigh and below the knee, and occurred whether the limb was left uncovered or was enveloped in a roller. It usually began in twenty-five or thirty minutes after the pressure was made, and

became intolerable in fifteen or twenty minutes longer, and could be continued in no instance beyond one hour. These efforts were persisted in for eight or ten days, and as nothing had been gained at the end of that time, were abandoned. Before resorting, says Dr Knight, to the ligature of the artery, I concluded, with the concurrence of his physician, Dr Tyler, to try manual pressure upon the vessel. "To accomplish this, a sufficient number of assistants were procured from the members of the medical class, who cheerfully offered their services. They were divided into relays, two keeping up the pressure for five or six hours, relieving each other every hour or half hour, and these succeeded by two others. Sufficient pressure to arrest the pulsation in the tumour was found to be most easily made with the thumb or fingers, without a compress, upon the artery as it passes over the os pubis, and the direction given to the assistants was to keep up this amount of pressure as nearly continuously as possible." This treatment was commenced at three o'clock p. m. No pain of consequence was produced by it for five or six hours, and then it was not severe, and was quieted by the eighth of a grain of morphia once or twice repeated. About eight hours after the pressure was applied, the temperature of the limb was diminished, and it appeared shrunken in size. Upon removing the pressure from the artery at eleven o'clock of the following day—twenty hours from the commencement of the treatment, the tumour was found to have diminished very little, if at all, and pulsated as strongly as before; but the tibial arteries could not be felt. The treatment was continued. Upon examining the parts the next morning, forty hours after the treatment was begun, the tumour was found to be nearly one-third less in size, firm and unyielding on pressure, and entirely without pulsation. All treatment was then discontinued. The femoral artery pulsated with its usual strength in the groin, and distinctly as far as its passage through the tendon of the adductor muscles. Between this point and the tumour it could not be felt. Several of the anastomosing arteries, especially one upon the inside of the limb, could be distinctly traced passing over the knee, pulsating strongly, and enlarged in size. From that time to the present—a period of more than four months—no change has taken place in the limb, except that the tumour has gradually diminished, so as now to be scarcely discoverable, and that the leg, which was at first cold and weak, has nearly regained its natural temperature and strength.—*Transactions of American Med. Assoc.*, 1848.

In addition to these cases, the following remarkable case is reported in the New York Journal of Medicine for July 1848. The subject of the case was a coloured man aged between fifty and sixty, in whom Dr Hosack tied the femoral artery at the lower part of the upper third of the thigh for popliteal aneurism, about the size of a small goose-egg. Upon securing the artery in the ligature, all pulsation in the tumour ceased; the wound being dressed in the ordinary way, healed kindly in the usual time, casting off the ligature on the 26th day; after which the swelling continuing gradually to decline, left the patient to all appearance perfectly well, with the exception of a slight halt in his gait, which entirely disappeared after a few weeks. About the middle of the following August he returned to Dr H. with the tumour of nearly the size it was at the time of the operation, but it had not the same elasticity, and was more solid to the feel. Pulsation was distinctly to be perceived in the tumour, and could be detected in the femoral artery quite up to the point at which the ligature had been applied, as well as in the tibial branches, but with diminished force. Under these circumstances, Dr H. determined to make trial of compression. Preparatory to the application of the instrument the patient was directed to remain quietly in bed for three or four days, which being complied with, the instrument was adjusted, and pressure exerted upon the femoral artery, so as to arrest completely all pulsation in the tumour; after an hour or more, it became necessary, in consequence of pain produced by pressure, to shift the pad an inch or more from the point just compressed, and so changed from time to time, as circumstances required; but having one plate or pad instead of three, (the other two being an addition of Dr Rodgers, which certainly is an improvement.) Dr H. was compelled to make compression upon the artery as it passes over the pubis, while changing the position of the pad. The instrument was thus continued until after the fifth day, when finding no pulsation in the tumour, it was removed. After a lapse of a fortnight or more, a slight thrill was to be detected in the aneurismal sac, when the instrument was re-applied for thirty-six hours longer, varying the pressure on the artery as circumstances required. Pulsation or thrill being no longer discoverable in the tu-

mour, which had now become more solid, compression was taken off; since which time the patient has been able to take exercise, and attend to his usual occupation, being perfectly restored to health.—*American Journal of Medicine*, October 1848.

497.—*Removal of a Carious Portion of a Rib.* By Dr AUDOARDO LINOLI.—Towards the end of 1845, a girl, three years of age, was attacked by pleurisy of the left side. After several weeks a tumour appeared beneath the left breast, and in proportion as it increased in size, there was an improvement in the respiration. An opening having been made into the tumour, a large quantity of sero-purulent matter was discharged; after two weeks, this opening was permitted to close up, when another tumour appeared, and required to be treated in the same manner. Some time afterwards the cicatrix of the first wound opened, and continued to discharge purulent matter. Various attempts to cure it by means of caustic, &c., were made, but without success; when the patient having been brought to Dr Linoli, he discovered numerous fistulous openings penetrating into the thoracic cavity, arising from caries of the sixth rib. In these circumstances, Dr Linoli proposed the removal of the diseased bone. The operation was accordingly performed, and the edges of the wound having been carefully brought together, in five days were found to be united in almost their entire extent. In six weeks the cure was quite completed, and the child's health re-established.—*Annali Universali di Medicina*, March 1848.

498.—*Description of a Truss to be worn in Cases of Congenital Hernia.* By WILLIAM COATES, M.R.C.S.—Mr Coates has been led to make use of the following simple contrivance, from having experienced the usual difficulties in the management of hernia in very young children from the want of tact in nurses—the impatience of restraint—the necessity of removing the truss during washing and dressing, when the infant usually cries, and from the expense of a constant supply of new trusses.

It consists of a skein of lamb's wool, for infants Berlin wool is preferable. This encircles the pelvis; one end is passed through the other at a point corresponding with the inguinal ring; the free end is carried between the thighs, and is fastened behind to that portion which forms the cincture. Being worn during the morning and evening ablutions, and then changed for a dry one, no attention is required on the part of the nurse, except at the moment of changing.

Mr Coates states that he has given this truss extensive trials, and that the result has uniformly been the radical cure of the disease. With ordinary care in drying, and the occasional application of magnesia, or other nursery powders, he has never found the skin injured.—*Medical Gazette*, September 1848.

499.—*Case of Hæmatocele of the Scrotum and Cord produced by a slight Exertion.* By M. GOUGEON.—D., aged fifty-four, was admitted into the Hôpital Saint-Louis, under M. Malgaigne, 11th May 1848. Seven years before admission, a few days after a fall upon his back, he perceived a tumour on the right side of the scrotum, about the size of a nut, which continued to increase for four years, having then attained the size of a goose's egg. May 10th, while in the act of stooping, he experienced the sensation of something giving way at the part, after which the penis and scrotum became much swollen, and of a dark red colour. On admission, the scrotum on its right side presented a large soft tumour of a bluish colour, streaked with veins much dilated, and it was only at the base, and to the inner side, that pressure caused a pain similar to that occasioned by pressure of the testicle. The patient being kept in bed, the parts were supported, and emollient poultices applied. On the 16th, the tumour was diminished in size, and of a firmer consistence. M. Malgaigne, being of opinion that there was a collection of fluid in the tunica vaginalis, introduced a trocar, and removed some dark sanguineous fluid. The tunica vaginalis being thus emptied, another tumour higher up was discovered. The poultices were reapplied, but in a few days the inferior tumour had regained its former size. Lotions containing iodine were now used, but without effect, after which compression, by means of adhesive straps, was employed, and produced a very considerable diminution of the tumour, but on the 23d June the patient left the hospital before the cure had been completed. — *Révue Médico-Chirurgicale de Paris*, Septembre 1848.

IV.—MIDWIFERY AND DISEASES PECULIAR TO WOMEN.

500.—*Progress of Anæsthetic Midwifery in America.*—[We have much pleasure in laying before our readers the following abstract of the report of the committee on Obstetrics of the American Medical Association. Coming from the country where the great and original discovery of the practice of anæsthesia was made, it carries with it no ordinary interest; and we shall find that our transatlantic brethren have not been slow to undertake the extension of anæsthetic practice to the art of midwifery, notwithstanding the opposition of some of the most eminent members of the obstetric department of the profession in America.

Before noticing the report, we would wish to make a single observation; namely, that the honour of originating the idea of rendering labour painless, and of the bold introduction of anæsthesia into the actual practice of midwifery, belongs entirely and undeniably to Scotland; and we make this remark, because the opening paragraph of the report seems to imply, that "the merit, whatever it be, of the discovery and introduction into (obstetric) practice of this potent remedial agent, belongs exclusively and undeniably" to America, as does that of originating the practice of anæsthetic surgery.]

"In discussing" says the committee, "the propriety of the administration of anæsthetic agents in the practice of midwifery, we are met at the very threshold by the objection, that labour is a physiological, a natural process—that it is a law of nature, a part of the primeval curse, that pain should be endured in completing this process, and that, *therefore*, we are precluded from interfering in ordinary cases by any attempts to alleviate the sufferings of parturition. Your committee attach so little importance to this objection—they think it is founded on so narrow a view of the duties of our profession, that they should have passed it by as not meriting consideration or reply if it had not been seriously urged, as they understand by physicians in this country, whose opinions they are bound to respect. But it seems to us that a moment's consideration is sufficient to demonstrate its utter absurdity and futility: for the same line of argument, if carried out to its legitimate results, would preclude the use of ANY artificial assistance whatever, in cases of natural labour. We could not bleed a patient, or give a grain of tartar emetic, or use the extract of belladonna, to promote relaxation. We could not, upon this principle, even prescribe a dose of ergot or of borax, to increase the expulsive power of the uterus. No! our duties, in affording relief to the sufferings and trials of humanity, are not to be bounded by such contracted and unfounded notions as these. Wherever there is pain to be endured, or distress to be encountered, there should we be to administer the remedy, if it can be found, and can be administered safely."

"*Safety*, as applied to remedial agents, is a relative term. Very few articles in our materia medica are absolutely safe, if prescribed for all patients and in any quantities; while many of them are safe only when given with the utmost caution, and in the most minute doses. Strychnine, morphine, Prussic acid, aconitine, are familiar examples of this truth. But this extreme minuteness of dose, and the care with which the remedy must be adapted to the case, are not considered as valid objections to the use of these articles, and they are accordingly prescribed daily, by our most cautious and judicious practitioners. If, therefore, the quantity in which chloroform can be given with safety, and at the same time with efficiency, can be ascertained, and if we can also point out the peculiarities of condition or constitution, if any, which forbid its employment, we shall then have brought it within the rule which regulates the use of all the more potent articles of the materia medica, with this additional advantage and safeguard, that from its mode of administration, there is not as much danger of its being given in over-doses, and it can, of course, never be given by *mistake*, an accident which has so often happened with fatal results with other articles."

"The anæsthetic agents, ether and chloroform, have now been used in perhaps 2000 cases of midwifery, and so far as the committee have been able to learn, without a single fatal, and very few, if any, untoward results. If reliance, therefore, is ever to be placed on human testimony, it would seem that enough had been adduced in their favour to render it proper for the profession to give them further trial, and by careful examination and faithful report of their effects, endeavour gradually and cautiously to establish general principles by which their administration may hereafter be directed. The committee, in a pretty extensive correspondence with physicians in various parts of the country, have found an entire unanimity of opinion among those who HAVE TRIED these agents, as to their favourable effects, both in ad-

vancing the progress of the labour, and in relieving the sufferings of the patient."

"In the majority, perhaps a very large majority of cases of natural labour, where every thing is advancing with regularity and reasonable rapidity to a favourable termination, and where the individual is not undergoing a great amount of suffering, the committee would recommend that etherization be not employed. With a great many females after the first labour, the sufferings of childbirth are not very severe, and, being also of short duration, it is obviously unnecessary to interfere by any artificial means—and if chloroform or ether be used at all on such occasions, they should be confined to the last stage, the exit of the child's head over the perineum."

"Etherization would seem to be peculiarly adapted to those tedious cases of labour, where the patient's sufferings, on account of their severity and great duration, become almost intolerable; where there is great nervous irritability, and where there may be great ultimate danger of exhaustion and even death, from the long-continued irritation. In these and similar cases, it is believed that chloroform may be administered in pretty full or very minute doses, at the option of the practitioner, with very great relief and entire safety to the patient. Many such cases have occurred in the hands of members of the committee and other accoucheurs, where six or eight (and even more) drachms of chloroform have been given, and etherization kept up for several hours, with no other than beneficial results in every respect. The parturient pains have not been diminished, either in force or frequency; relaxation has been promoted; pain and suffering lessened or entirely annulled; the placenta readily thrown off, and all the circumstances following the birth of the most favourable character."

"It has been objected, and with some reason, that etherization should not be resorted to in instrumental delivery, because, it is urged, the sense of feeling on the part of the woman is an important guide to the operator in the application and use of his instruments; that as he cannot, like the general surgeon, *see* how and where he is operating, there would be great danger of his doing irreparable mischief unless guided and restrained by the cries of his patient, when pain was unnecessarily inflicted. We are of opinion, that where the forceps or other instruments are intended to be used, etherization should be employed only to a partial extent, or with the utmost caution, unless (which is the better way) the instruments be adjusted *before* the ether be inhaled at all. This latter precaution is generally practicable, and as it is the *use*, not the *adjustment* of the forceps, which causes pain, it will generally accomplish all we desire. Many cases, however, are on record, where instruments have been used during a profound sleep, and yet without injury, and it is probable that a skilful and cautious accoucheur could generally effect his purpose with entire safety. In performing the operation of turning, etherization is of doubtful benefit. Further observations are necessary to enable us to decide whether the freedom from pain be not more than counterbalanced by the increased tonic contraction of the uterus, supposing this (a point perhaps not definitely settled) to be one of the ordinary effects of chloroform."

[The members of committee were Drs Harvey Lindsly, George C. M. Roberts, Joshua Riley, C. R. Gilman.]—*Transactions of the American Medical Association.* Vol. i. 1848, p. 225, &c.

501.—*Statistics of the Induction of Premature Labour.* Dr HOFFMAN.—Our author observes that, favourable as he is to this operation in appropriate cases, his present statistical investigations convince him that it is resorted to with unnecessary frequency. Thus, in the kingdom of Saxony, with only a million and a half inhabitants, it was resorted to 64 times in the year 1839 alone; and Dr Ramsbotham has employed it 72 times, which he thinks far too often for any single accoucheur to require its aid. He should bear in mind, however, that Dr Ramsbotham has one of the largest consultation practices in London. Dr Hoffman has collected 524 cases, and, as the references to all these are supplied, his paper is one of considerable bibliographical utility. Of these cases, 271 were due to German, 192 to English, and 17 to French practitioners; but when we find he only assigns 3 cases to Americans, we see how defective his researches in that quarter must have been.

The *age* of the mother is recorded in but 146 cases, the youngest being 17, and the eldest 44; in more than one half of the entire number she had reached or passed her 30th year. Of 258 cases, in only 49 was the operation resorted to in a *first pregnancy*. Although the *repetition* of the operation in the same woman must have been no infrequent occurrence, the author finds records of this only in 34 cases, in some of which it was performed three, four, or more times. The *stature* of the women is recorded to have been oftener small than large, as would be ex-

pected, from the greater frequency of small and rickety pelves in conjunction with the former. In comparatively few cases has the author found the *indications* for the operation furnished, but justly concludes that, in the bulk of cases, it has been instituted on account of narrow pelves. In only 68 cases does he find that *preparatory treament*—such as baths, tepid injections of the vagina, friction of the abdomen, &c.—have been put into force; an omission, he considers, much to be regretted.

In nearly two thirds of the cases, the *mode of operation* is given. Of the more generally admitted of these, the use of *secale cornutum* is recorded in 45 cases, almost entirely by English practitioners. In these, 23 children were born alive, 15 dead; and, of the whole 38 noted, 12 others died within 36 hours after birth. The *Hamiltonian* plan of detaching the membranes, modified by several Germans, is exceedingly tedious. The introduction of *prepared sponge* is a favourite mode with the Germans, and was employed in 70 cases. In 56 cases in which the condition of the child was noted, 42 were born living. *Puncturing the membranes* is the oldest mode, and has been resorted to in 180 cases, and, indeed, doubtless in many of the others not specified. It is beyond all others the easiest, quickest, and most certain means of inducing premature labour, but has been received with much more favour in England than in Germany. By it, however, a far less proportion of children are saved than by the use of the sponge. The fates of 178 are specified, of which 103 were born alive, 12 still-born, and 63 born dead.

As to the *presentation of the child*, it is specified in only 120 cases; and of these 45 were cephalic, 75 non-cephalic presentations. This proportion is, however, delusive; as it is nearly certain that all the cases not specified were natural presentations. Even allowing this, we still find every seventh case a preternatural one. In the 75 cases, the great number of 19 cross-births are noted. In 84 cases the completion of the labour required assistance; in 36 by the forceps, 18 by turning, and 11 by perforation.

The fate of the *child* is recorded in 373 cases, in which 250 were born living, or recovered from asphyxia, and 123 dead. But in 77 of these cases, the child died from circumstances which could have no reference to the operation, as faulty position, perforation, &c. Of 192 of the children born living, further reports state that 127 continued to live, and 65 had died—28 in the course of six hours, 6 in twenty-four hours, and the rest at periods varying from a day to a year or more.—*Neue Zeitschrift für Geburtskunde*, vol. xxiii. pp. 161-222, and 371-436, and *Brit. and For. Med.-Chir. Review*, Oct. 1848.

502.—*Case of Retention of a Fœtus in the Uterus for Eleven Years.* By Dr Vondorfer.—This woman was forty-nine years of age, and had already borne two children. She was busily threshing corn, when she was seized with violent pains in the back, resembling those of labour. After they had continued for two hours the waters broke, and were discharged. For fourteen days she lay almost entirely upon her knees and elbows. At the end of this time the pains had almost ceased, but still in lying on her back she kept the knees well drawn up. Three weeks afterwards she was seized with a flooding, which was easily stopped. After this, there was a constant fetid discharge from the vagina, which continued more or less for eleven years, and occasionally some fœtal bones were discharged with great pain. During most of this time the woman was able for her work, and in good health. At the end of eleven years she was again forced to betake herself to bed, and she died, after some time, with the symptoms of purulent infection. On dissection, the uterus was found adhering to the anterior wall of the abdomen, and it contained the remains of the putrefied fœtus, along with its numerous bones.—*Schmidt's Jahrbuecher*, Nov. 9, 1848.

503.—*Cauterization of Cancerous Degeneration of the Os Uteri by the Red-hot Iron.*—By M. Malgaigne and M. Jobert.—Several cases have been observed in M. Jobert's clinique where this practice, in cases where the cancerous disease had not far advanced, was attended with the most beneficial results. The progress of the disease has been stopped, and the painful feelings of the patient have been dispelled for a time. Other cases of a similar description, and with similar results, have been lately observed among the patients of M. Malgaigne.—*Gazette des Hôpitaux*, Oct. 1848.

504.—*Arthritis in connexion with Uterine Disease.* By M. Malgaigne.—Although it is extremely difficult, or altogether impossible, to explain theoretically the connexion between inflammation of the male urethra and inflammation in remote joints, yet nothing is better proved by observations than the fact of this connexion. So also arthritis, most frequently seated in

the knee, is a consequence or concomitant of disease of the uterus. Most authors have looked upon the occurrence of such disease, along with disease of the uterus, as a mere casualty, but M. Malgaigne believes otherwise. At the Hôpital St Louis he has observed two cases of this description, both of which recovered, after the ordinary treatment for rheumatic arthritis.—*Gaz. des Hôpitaux*, Octobre 14, 1848.

V.—MATERIA MEDICA AND THERAPEUTICS.

505.—*Local Application of Chloroform in Lumbago.* By M. MOREAU.—Three cases of this disease are detailed in which immediate and permanent relief was obtained by the application to the loins of a piece of lint on which some chloroform had been poured. Oil silk ought to be laid above the lint, to prevent the evaporation of the chloroform. In a few minutes the patient complains of a burning heat in the part, which becomes red, and occasionally vesicles are formed; at the same time the rheumatic pain disappears. The author thinks that the cure cannot be attributed solely to the counter-irritation, as in one of the cases recorded sinapisms had been previously employed, without success. He supposes the chloroform to reach by imbibition the cutaneous and superficial muscular nerves, on which it exerts its anæsthetic power.—*L'Union Méd.*, Oct. 21, 1848.

In a case of pelvic tumour, where the patient suffered from severe pains of the inferior extremities, probably in consequence of the nerves being compressed in traversing the pelvis, the usual means of affording relief having failed of success, M. Legroux determined to try the local application of chloroform. A sponge containing chloroform was placed in the foot of a large boot of wax-cloth, constructed for the purpose, so that the vapour only came into contact with the skin. A feeling of warmth, prickling, and numbness, was soon experienced. The application was continued for several hours; when complete, anæsthesia was established, and the neuralgic pains had entirely ceased. The absence of pain continued several days, and the same treatment was equally successful on its return.—*Ibid.*, Oct. 31, 1848.

506.—*Local Anæsthesia.* By. M. JULES ROUX.—M. Roux recommends the application of liquid chloroform to the surface of a wound left after an operation, while the patient is still in a state of general anæsthesia, with the view of benumbing the cut extremities of the nerves. The local insensibility is maintained, according to M. Roux, for forty-eight hours (?) and the patient is thus exempted from pain, both during and after the operation.

A case of hydrocele is described, in which M. Roux injected four drachms of chloroform into the sac. Two drachms were allowed to remain. The case ran the ordinary course, a cure being obtained in 14 days.—*Gaz. des Hôp.*, Nov. 7, 1848.

[A few days ago we applied liquid chloroform to an ulcer on the leg of a female, which required cauterisation with the nitrate of silver. She appeared to suffer little pain from the chloroform, and certainly very much less than usual from the caustic. She refused to inhale the drug.]

507.—*Indian Hemp in Cholera.* By M. WILLEMIN.—Reasoning from its stimulant action on the nervous system, M. Moreau had already some months ago recommended a trial of Indian hemp in Asiatic cholera. The officer of health at Cairo, M. Willemin, administered it in ten cases. In four of these the patients were moribund. They all died; but in one individual the pulse, which had been for some time imperceptible, returned to the wrist after the exhibition of the drug. It was then given to three less severe cases: they all recovered. Lastly, it was again exhibited to three individuals whose state had become desperate, but in much larger doses than before. All recovered; and it is deserving of notice that one of the three was M. Willemin himself, whose life had been despaired of. —*L'Union Méd*, Oct. 19, 1848.

[The above evidence, although inadequate to establish the efficacy of Indian hemp in cholera, is sufficient to suggest its further trial. As a stimulant of the *nervous system* we may presume its utility; and, combined with the stimulants of the *vascular system* in ordinary use, it is worthy of experiment. In his work on plague, M. Aubert Roche expresses his firm belief of the value of the Cannabis Indica in that disease. Seven cures were obtained in eleven cases where the remedy was employed.—*De la Peste ou Typhus d'Orient*, 1840.]

508.—*Action of Calomel on the Liver.* By M. Michea.—When calomel is administered in purgative doses, the stools become more liquid, and at the same time acquire a characteristic green colour. This green colour is usually, at least by English practitioners, held to indicate the presence of bile, and the experiments of our author tend to show that the opinion is well founded. Calomel stools have been analysed by Golding Bird (*Med. Gaz.*, Sept. 1845), who found only slight traces of bile; and by Siebert of Erlangen, who failed to obtain any indication of that secretion. Dr Bird concluded from his experiments, that the green colour is due to an altered condition of the colouring matter of the blood.

M. Michéa has examined the fæces under four different conditions :—

1. Fæces passed by a healthy individual, no drug having been administered.—In six specimens no bile was found.

2. Green stools rendered by individuals suffering from gastro-intestinal irritation, no drug having been administered.—The presence of bile was indicated in one only of three cases examined.

3. Calomel stools.—This drug was exhibited to eight individuals, and the alvine dejections presented a green colour in four. In these the presence of bile was readily demonstrated. These stools showed also the presence of a large quantity of albumen, which the author supposes to be derived from the bile.

4. Stools obtained by the exhibition of saline and other non-mercurial purgatives. —These never or very rarely present the green colour or the viscosity peculiar to calomel stools. Five specimens were examined ; neither biliverdin nor albumen was found.

The author prefers the nitric acid as a test for bile. Added to an animal liquid containing this secretion, a characteristic reaction ensues : the fluid becomes first green, then bluish-violet, and finally assumes a red colour. These changes occur within the space of a few seconds.

From these experiments it may be concluded that calomel stools contain an excess of bile, as nitric acid reveals in them the existence of two principles of that secretion, biliverdin and albumen. — *L'Union Médicale*, Oct. 21 and 23, 1848.

509.—*Belladonna in the Nocturnal Incontinence of Urine in Children.* By M. Trousseau.—The author narrates the case of a girl, five years old, who, since her third year had been the victim of this obstinate complaint. No effort was neglected on the part of the parents to remove the habit ; but all the means adopted—some of them sufficiently severe—were without effect. A pill, containing one centigramme of the powder and half a centigramme of the extract of belladonna, was ordered to be taken every night at bed-time. During the first week two nights were passed without accidents ; and from that time, with two or three exceptions, the complaint entirely disappeared. The treatment was resumed from time to time for nearly a year. This is only one of several cases occurring, as well in his own practice as in that of M. Bretonneau, in which Professor Trousseau has observed marked benefit from the use of this drug.—*L'Union Méd.*, Oct. 14, 1848.

In a more recent number (Oct. 21) of the same journal, Dr Blache, physician to the Hôpital des Enfans, records two very obtinate cases of nocturnal incontinence of urine occurring in individuals, one fifteen and the other eighteen years of age, where mercurial and sulphurous baths, refrigerant and astringent applications, tonic and ferruginous medicines, tannin, ergot of rye, nux vomica, and all other means had failed. Ultimately belladonna was exhibited with complete success.

510.—*Application of Caustic Ammonia to the Velum Palati in obstinate Singultus.* By M. Rayer.—The marked success obtained by this application in the treatment of spasmodic asthma (see *Retrospect*, p. 20), led the author to its employment in two cases of very obstinate hiccough. The cure was immediate and permanent.—*Annales de Thérapeutique*, September 1848.

[We beg the reader who may be disposed to essay this remedy, to observe, that the ammonia is applied to the soft palate, and not to the back part of the throat. In either case considerable caution is requisite; but in the latter the danger of suffocation, from the action of the volatile alkali on the glottis, is decidedly greater.]

511.—*Ergot of Rye in Mydriasis.* By J. F. M'Evers, M.D.—In the London Medical Gazette of September 8, a correspondent notices the peculiar action of ergot of rye upon the iris, discovered by M. Comperat ; he says that in excessive dilatation from the use of belladonna, powdered ergot of rye, taken like snuff, has the property of contracting the pupil. Dr M'Evers tried its effects on several persons, whose irides were strongly under the influence of belladonna, and in no case did the ergot cause any change when employed on the same day with the belladona, but in every

case, on the subsequent morning, whilst the pupils were still largely dilated, the ergot had a marked effect after a few minutes. Thinking with Comperat, that our knowledge of this property of the ergot may be taken advantage of when the pupil is preternaturally dilated from other causes, he tested its efficacy in the following case of mydriasis.

A man aged 50, had spent the greater part of his life in tropical climates, but returned home with a good constitution. On getting out of bed three weeks ago, he observed excessive lachrymation of the right eye, which has continued since, together with impaired vision. The eye is free from vascularity or pain of any kind, and looks healthy in all its parts, except the iris, which presents the appearance of a narrow ring, so largely is the pupil dilated; the iris is perfectly immoveable.

A few pinches of ergot contracted the pupil considerably in a few minutes, whilst a few additional pinches, taken on the following morning, reduced the pupil to its normal standard, the iris assuming the lively motions of healthy action; thus, in a day, completing, as far as the pupil is concerned, the cure of a disease which Demours, and other writers on ophthalmic surgery, tell us cannot be accomplished by a six months' treatment.—*Dub. Quart. Jour.* November, 1848.

512.—*Sulphate of Phyllerine.* By M. JACHELLI, of Ferrara.—This alkaloid has lately been added to the list of febrifuges: it is obtained from the well-known evergreen shrub *Phyllerea latifolia.* It was known, before the researches of Dr Jachelli, as a cooling astringent, but it is now found to possess the same active anti-periodic properties as others of its class, the ash, the olive, &c.

An extensive series of experiments have been made, since the year 1825, on the action of this alkaloid in agues, by Dr Jachelli. He has compared its operation with that of—1st, a powder of the young leaves and twigs, in doses of 30 grains during the intermission; 2ndly, a simple decoction of the plant, made by boiling one part of the plant to 60 of water, down to one-third, and given in large doses also during the intervals; 3rd, with a compound decoction formed by adding 30 minims of dilute sulphuric acid to the preceding. The sulphate, in doses of from 12 to 15 grains during the apyrexia, has evinced its superior activity over other preparations of the phyllerea. Thus of 20 patients treated with the sulphate, all were cured; of 13 to whom the powder was administered, 11 were cured; of 20 to whom the compound decoction was given, 14 were cured; of 16 who took the simple decoction, 7 were cured.—*Bullet. Gén. de Thér.* July 18, 1848; *and Med. Gaz.*

513.—*On Spongio-piline.* By W. T. KAY, surgeon, Royal Navy.—The spongio-piline is a fabric composed of sponge and wool felted together in three layers, and coated on one of its surfaces with caoutchouc, which renders it impermeable. It is of the greatest service as a cataplasm, fomentation, vehicle for lotions, and other topical applications, as liniments, &c.; or it forms a substitute for a blister or sinapism.

As a Cataplasm.—The required form and size being given, the edges are pared or bevelled off with a pair of scissors, so that the caoutchouc may come in contact with the surrounding skin, in order to prevent evaporation of the fluid employed; for, as it only forms the vehicle, we are enabled to employ the various cataplasms hitherto in use with much less expenditure of time and money, and increased cleanliness. Thus we may still use the

Cataplasma Aceti, by moistening the fabric with distilled vinegar.

Cataplasma Aluminis, by employing a strong or saturated solution of the salt, &c. &c.

As a Fomentation, by preparing it as recommended for a cataplasm: soaking it in hot water; then pressing out the superfluous fluid, and applying it as hot as possible to the affected part; taking care to replace the one in use, as soon as it becomes dry, by another hot one.

As a Vehicle for Lotions.—On account of the large quantity of fluid that it is capable of retaining without any fear of its escape, it is admirably adapted for the employment of lotions of zinc, alum, &c.

As a Vehicle for stimulating Liniments.—In every instance where I have tried this material, it has exceeded my most sanguine expectations, especially as a substitute for sinapisms, by employing the compound camphor liniment, hartshorn, or liquor of ammonia.

As a Blister.—Moistened with liquor of ammonia it will raise a blister in four minutes, being more efficacious than any preparation now in use; its stimulating action is immediate, and it exerts no injurious effect on the urinary organs, nor is it likely to cover more surface than designed by the medical man.—*Med. Times,* Nov. 4, 1848.

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