

peculiar sharp sound. Instead of two or three bruits four may be heard; but *post-mortem* examination has not yet thrown much light upon the mode of production of this rhythmic modification. Finally, we sometimes find, particularly when patients are first submitted to examination, that the sounds of the heart are so tumultuous and irregular that they cannot possibly be analyzed. Repose often dispels this first result of emotion, and permits the physician to form a correct diagnosis in cases which at first seemed to defy discrimination.

The tone of the sounds of the heart may also be altered by disease. In general hypertrophy of that organ both sounds are more dull; in ventricular hypertrophy the first sound only, in auricular hypertrophy the second is thus modified. When the sounds, on the contrary, are more clear, it is generally the result of a condition opposite to hypertrophy, viz., dilatation. When the valves, particularly the bicuspid, are thickened and rigid from chronic endocarditis, a hard, dry, sharp sound is heard, which M. Bouilland calls "parchment sound" (*bruit parcheminé*). In acute endocarditis, the valves being rather soft and fungous, than hard and rigid, a softer, muffled sound is produced, which the same pathologist names "hoarse sound" (*bruit enroué*). Here we also place the study of the metallic sound of the heart. It can be readily imitated by applying the palm of one hand to the ear, and striking the back of that hand with the extremity of the index of the other. This experiment proves evidently that this sound may be the result of concussion, and it is heard in the heart whenever that organ beats with unusual violence. Fear and mental emotion produce palpitation, and may therefore occasion the metallic sound. Also in intense fever, when the subject is vigorous, it may be observed. It may also accidentally accompany organic disease of the heart. Laennec believed it to depend upon the presence of air in the pericardium—a supposition which has never been supported by facts. Dr. Dechambre observed it in one case in which the stomach was distended by an accumulation of fluids and of gas. We consider this to have been, in M. Dechambre's case, a mere coincidence. That most distinguished observer, Dr. Hope, also noticed it under peculiar circumstances. It seemed, in a case which he met with, to be produced by percussion of the apex of the heart against the margin of a rib which projected internally, and ceased when Dr. Hope, by pressing upon the intercostal space, and re-established a level surface, upon which the heart did not meet with any inequalities. This most interesting phenomenon Dr. Hope established as the basis of a general theory of the metallic sound—a theory which we do not adopt. We believe certainly, with Dr. Hope, that in the case observed the cause of the bruit was the catching of the heart against the rib, but cannot admit that it is so in all cases. We believe, with Bouilland, Barth and Roger, Beau, &c., that the metallic sound is produced by the violence of the percussion of the heart against the thoracic walls.

In our next lecture we will study the abnormal sounds produced in the heart by disease.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

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(Continued from page 212.)

In many instances, especially where the diarrhoea has been persistent, and much debility has been induced, and there are not teeth enough to be able to chew meat with advantage, strong beef gravy—not beef-tea, or, as it might be called, beef-water—should be poured into a glass, and allowed to stand a short time until the fatty matters collect at the top; these being removed, the child may have given it what remains at the bottom. This I constantly find of advantage. You will observe that, while in some children

certain articles of food produce diarrhoea and its consequences, in others these very articles may be employed to stop them. For instance, a child has been suckled but for a month; it is then brought up by hand, fed upon arrowroot and baked flour, mixed with but a small proportion of milk; the natural result will happen, that diarrhoea is set up, and marasmus supervenes. In this child the forbiddance of all vegetable material, and the feeding it alone on milk, or with the isinglass pap I spoke of, will soon stop the diarrhoea. Another child has been nursed upon breast milk alone; from some cause or other, difficult perhaps clearly to divine, it also has diarrhoea; diminishing the breast milk, and the substituting for it baked flour and boiled cow milk, stops the diarrhoea, or what is called "thick milk" will do the same. Underwood has some good observations upon this subject, to which I shall refer you. I shall give you here, however, his receipt for the baked flour. "To this end," says he, "the flour should be put into a small jar properly covered, and taken out of the oven several times and stirred up from the bottom and sides of the jar, that it may not run into hard lumps, but the whole be equally baked till it breaks into a soft, greyish-coloured powder; it should be afterwards mixed with boiled cow's milk, the scum being first taken off; the flour and milk should then be boiled a little time together, till the whole appears like a thin custard." Now and then, such is the state of debility induced in diarrhoea, you will find great benefit from the use of a small quantity of porter. I have over and over again, in the more chronic forms, advised half or a whole wineglassful, even in the case of very young children, to be given in the middle of the day. You know that stimulants of all kinds must be given to children very cautiously, and in relation to this circumstance we should be careful in not teaching them a new want, by introducing to them the knowledge of any alcoholic fluids. But, when necessary, of course they must be employed. Although I generally prefer good porter to anything else, some prefer wine. Underwood remarks that, "To patent sago properly boiled, adding to every half pint a large teaspoonful of red port wine, for the use of infants a week old, cautiously increasing the quantity of wine as they grow older. A large family of children, whose bowels had been continually disordered by various other food, has been brought up upon this; it may seem strange to advise it for infants in the month, but it will be recollected by some readers that the practice is very different in wine countries." I may remark that, in a late work by Henoch and Romberg, these writers state that they have given tokay wine with the best results in atrophied lactantium, and in marasmus from chronic diarrhoea.

Whatever diet is found to be most available, one thing is requisite, viz., that care be taken it is always administered fresh and void of acidity. This is more particularly necessary with respect to children being dry-nursed or infants fed upon spoon food, or who use the sucking-bottle. The generation of acidity in the aliment before it is given is very often the cause of a most obstinate diarrhoea. With respect to elder children, also, it should be remembered that the diet should always be as simple and as plain as possible: no high-tasted food, strong condiments, or rich sauces are to be employed.

GENTLEMEN,—I have to continue the subject of the treatment of diarrhoea, a subject which, when I last addressed you, I had considered, so far as relates to the more general hygienic and dietetic management of the disorder. I have now to speak to you of those methods of procedure more particularly advisable in special forms of this very frequent malady, and to indicate to you those more truly therapeutic measures which I think you should adopt in treating them.

In the slighter forms of *sympathetic diarrhoea* produced by the reception of improper food into the stomach, or by the surface of the body having become wet or chilled, if attention be paid to the

nature of the food afterwards given, and to properly protecting the body from further climatic changes and vicissitudes, nothing more need be done. But, should fears be entertained that the disorder may run into a catarrhal variety, then you must proceed further. Should the offending matters be supposed to have been all discharged as the diarrhoea has gone on, there is, of course, no necessity to give any purgative by which such evacuation of them might otherwise have been effected; and the best thing you can do is to produce a revulsion in the digestive apparatus by giving an emetic of the powder of ipecacuanha. Should, however, the belly be full, knotty, or hard, and suspicions be had that bad matters are still retained, give a full dose of castor oil. If the chilling, &c., of the surface has been the main cause of the disorder, give the emetic and a warm bath, the water having a little salt in it. These in general will suffice.

Suppose, however, a sympathetic form runs on to the catarrhal—say of the serous type—or that you have the latter at the onset to deal with, then, besides earnestly attending to all the dietetic and hygienic measures I have laid down, you must have more repeated recourse to therapeutic agents. The potency of, and frequency of recourse to, the latter must vary according to the urgency of the catarrhal irritation, as determined by the character of the stools, the existing degree of fever, the strength of the patient, and any epiphenomena. One thing you must do, however: stop the discharge as soon as possible.

In slight cases, if the stools are pale, clayey, frothy, or yeasty, the skin or conjunctiva of a dirty hue, or the tongue foulish, give a grain of the hyd. c. cret., with four grains of the pulv. cret. c., night and morning. If acidity of the breath, of the secretions of the mouth, and of the stools characterize the disorder, give instead two grains of rhubarb, one of ipecacuanha, with four of five of soda. This combination you will find often of great avail. You may also, at the onset of these cases, if there has not been already vomiting, cause such revulsion by the emetic I before alluded to. The diarrhoea may become more urgent, however. With the above you should give frequently a teaspoonful of the chalk mixture, which, when the surface is pale or cold, should contain aromatic confection, and in more obstinate cases the tincture of catechu. Of course the dose of the medicines must progressively increase according to the age of the patient; those which I have given you are for very young children.

You will sometimes have a child brought to you suffering catarrhal diarrhoea, which, under the treatment already adopted, does not give way, and which seems to be kept up by a habit, as it were, of the intestinal follicles continuing their increased exhalation. The child's appetite is good; there is no fever, and the tongue is clean; but still, if the discharge were to continue much longer, a very different train of phenomena would set in, and great constitutional disturbance follow. In such a case you will find the value of that "queen of all the medicines," as Hartman calls it—opium; give, therefore, at night half or a whole grain of the pulv. ipecac. comp., with two of rhubarb, and three or four of calcined magnesia: it may be necessary to give the opiate oftener, even though you also give the chalk mixture containing an astringent tincture. In some instances a starch injection, containing from two to five drops of the tincture of opium, may be given night and morning with great benefit. Of course you must be very careful of your dose of opium, but you need not be, as some are—like Dr. Beck, of America, for instance—so frightened as to make of it no use whatever. Opium is a most useful remedy in combating the diarrhoea of infants and children, and, with proper caution, may be employed as safely as any other drug of power. When given, however, its effects must be watched, and not too great a quantity allowed to be in the hands of the mother. The smallest dose on record which has been fatal is half a minim of the tincture; but this was not in a case of diarrhoea, but in some

affection of the lungs. The child, if I recollect right, was but a very few months old.

In the mucous varieties of catarrhal diarrhoea you will have to vary the treatment somewhat, inasmuch as we often have retained matters which must be first discharged ere we can hope to arrest the diarrhoea. When the latter is produced by worms, there is nothing so useful as the administration of equal parts of the oils of castor and turpentine; and this combination you may give to a child two years old, or, if you give it by the rectum, much earlier. A drachm of each will be the dose, which, of course, must be augmented as the patient is older. Whenever you give turpentine, always tell the mother what disagreeable feelings she possibly may find the child experience, as if you do not she will perhaps become much alarmed. This drug, now and then, acts strongly on the sensorium, making the child somewhat tipsy, or even quite prostrates it for an hour or two. You should always mention it to the mother that it may possibly be so affected, and that, should it be so, she must lay it down, and that these feelings will soon disappear, and that they are of no harm. In other cases it acts untowardly upon the urinary organs, causing dysuria, strangury, and other distressing symptoms; and, should this occur in private practice, it will not be very pleasant for the medical attendant, as he will be supposed to have done a great deal more harm than good. You will think these are great drawbacks to the use of this medicine. The latter result I have just mentioned is undoubtedly so; but it occurs so rarely that I do not let it influence me, for I find there is nothing half so efficient in killing and dislodging ascarides and their bed of mucus. Still, as with opium, I have thought it proper to caution you, so that you may use your discretion and be upon your guard. I feel bound to tell you even what only may happen. A short time back I had rather a severe example of the latter action of turpentine, and I had the utmost difficulty in assuring the mother that the child would undoubtedly soon get round again, and that, though the symptoms seemed serious and certainly were painful, yet that there was no real danger. In such a case you must foment or poultice the abdomen, or put a mustard poultice there or over the region of the kidneys, or in bad cases some leeches over the region of the bladder; give internally tincture of hyoscyamus, and liquor potassæ in a mucilaginous vehicle, and make the little patient drink plenty of barley-water. The bowels should be gently relieved by castor-oil. If you are afraid of turpentine in these cases, you may give instead, at bedtime, a purgative powder, composed of an equal number of grains of scammony, aloes, and sulphate of potash, or of calomel with jalap to older children, working it off the next morning by castor-oil. But to very delicate and for young children most of these agents are too drastic, and a grain of calomel with a grain or two of rhubarb, worked off by a teaspoonful or two of olive or castor oil, will be advisable. After the operation of a single dose of these drugs, an injection of lime-water may be given. Some recommend an infusion of wormwood and chamomile flowers.

In the mucous types of diarrhoea the belly is sometimes tense, hard, or knotty, and if such states exist together, with straining at stool, and the evacuation but of very slight motions, you must give gentle purgatives before having recourse to astringent or absorbent remedies. Castor-oil will be found as effectual as anything, and after this has effected its purpose, and the diarrhoea continues, as it often will, with mucous stools, you must have recourse to the remedies I before spoke of when treating of serous diarrhoea.

I have already told you how prone the digestive apparatus of children is to create acidity, and you will often find that by the administration of antacids alone you will put a stop to the diarrhoea. Some persons lay much stress upon the use of certain alkalis instead of others—upon certain out-of-the-way antacids instead of more common ones. Some assert there is nothing

like the carbonate of lime; others, that the right drug is the trisnitrate of bismuth. "Clinical observation," says M. Mialhe in the 'Union Médicale,' "has long shown that the various alkalis may replace each other in practice. This is the case with carbonate of lime and of magnesia, as also with the compounds of soda and potass. It has been erroneously stated that soda is more favourable to the animal constitution than potassa. Analysis of the animal fluids shows that the potassa compounds are equally prevalent with the soda, and, as regards the herbivora, far more so. But although we can in general, by the aid of any alkaline preparation, induce an identical medical result, we believe it is better to give the preference (as mere antacids) to those alkaline compounds which present the advantage of having always a uniform chemical composition, and of producing little or no therapeutic effect; and in these respects the hydrated calcined magnesia and the bicarbonate of soda seem to hold the first rank."—(See No. 94 "Medico-Chirurg. Rev.")

In the veno-autumnal diarrhoea, as a general rule, astringents and antacids, or absorbents, may be at once had recourse to, unless satisfactory evidence exist that much of the harder fruits, or softer ones in a state of acetous fermentation, have been largely taken shortly before. All remains of these must pass away before we can hope to check the diarrhoea. But in most cases this form of diarrhoea has no relation with the eating of fruit, as is frequently supposed. I may here remark, that nuts are a fruit that I believe are a constant source of the generation of worms, both in elder children and adults.

As yet I have said nothing special about interfering in the diarrhoea accompanying dentition. You must know that, both in this country and on the Continent, two very opposite views are held as to the treatment to be followed, at any rate in the less severe forms of the intestinal irritation: one party believing that the diarrhoea 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. Now, I think you will find 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 diarrhoea 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 diarrhoea 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 diarrhoea by giving astringents, and leave its cause still in operation, you will perhaps have vain or excitomotor symptoms happen to 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 I told you were proper for catarrhal diarrhoea. 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 everything, 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 child feverish, that 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.

The vomiting so often obstinate in diarrhoea you will find best met by giving the sesquicarbonate of soda and very small doses of hydrocyanic acid in the infusion of calumba or caraway-water, a mustard poultice being placed on the epigastrium. The fluids taken in such cases should be cold, not warm. When there exists stomatitis, or aphthoid exudations, you must give the chlorate of potassa in an aromatic water, or, what is best, if the child will take it, in infusion of gentian; give rhubarb and soda at bedtime, and order the bichlorate of soda in mucilage to be applied frequently to the cavity of the mouth and to the lips. You must not order sweet vehicles in these cases, and must forbid saccharine articles of food.

I have before alluded to the treatment of prolapus ani, and of erythema of the thighs and nates.

Lastly, in addition to the means I have hinted at, you will find that a turpentine embrocation, or other stimulating liniment, frequently rubbed over the belly, a mustard cataplasm, or warm fomentations, applied there, are often of great avail. Occasionally a warm bath, or putting the legs and thighs in warm salt water, are also of benefit. But to these and other matters I shall allude in speaking, in my next lecture, of the treatment of enterocolitis, and when I shall conclude the subject of diarrhoea.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

(Continued from page 173.)

PART XVIII.

VISION.

The function assigned respectively to the several organs of the senses is invariably composed of two very distinct parts, viz.:—

1. The external objects produce upon the sensorial nerves a certain *impression* of a distinct and specific character, for every one of the five senses respectively.

2. This *impression* is transmitted to the brain, where it is transformed into *perception* of the external object that has produced it.

It is with the sense of sight, the same as with that of hearing, as regards our relations with external objects. When the sun appears above the horizon, and, accordingly, becomes *visible* to us, there must necessarily be some sensible relation established between that luminary and our eyes; the sun must make an *impression* upon them through a certain physical agent, which we call *light*.

We shall have to examine, in this chapter, the course taken by the luminous rays which, emanating or starting from external objects, reach the retina, and excite its peculiar action. Compress or strike your eye in the dark, and you will experience a vivid, but indistinct, luminous sensation. If the compressing body be small, and cover only an inconsiderable part of the eye, the luminous sensation will be equally circumscribed, and you will, in that case, be conscious of the limits, or, in other terms, of the degree of pressure exercised upon the compressed point. If the surface of the retina were exposed bare to the luminous objects, *i.e.*, without the interposition of any other apparatus, it is obvious that every individual point of it would be excited at once by all the rays that might emanate in every direction from the luminous object, and, accordingly, if a thousand of these rays presented themselves simultaneously to the eye, with their divers colours, the whole of them would simultaneously create upon the retina the impression of their light, and this organ would accordingly never be able to catch a precise and accurately-defined impression of any one of the individual rays.

To endow the organ of sight with the power of distinct vision, it was indispensable, therefore, to place before the retina an apparatus adapted to direct the rays emanating respectively from the different parts of an object, to separate and distinct points of the retina, disposed in a definite order.

The camera-obscura is the most simple apparatus of this description. Let us suppose a membrane with a small aperture in the centre stretched before the retina: the rays emanating from one extremity of the object will, after traversing this aperture, excite a distinct and definite point of the retina; the same will be the case with the other parts of the object, and, accordingly, every individual part will excite a corresponding, distinct, and separate point of the retina, and this exactly in the same order in which the parts from which the exciting rays emanate, are disposed in the luminous object. The smaller the aperture the more distinct, but, necessarily, also, the less bright and intense, will be the image formed. It is probably for this reason (want of luminousness) that nature presents no instance of an organic visual apparatus analogous to the camera-obscura.

Müller, to whose admirable investigations on the structure of the eyes of insects we are chiefly indebted for our knowledge of these organs, gives the following description of the exceedingly curious arrangement presented by the visual organs of most insects:—An immense number of minute cones are implanted perpendicularly on the retina; these cones are filled with a transparent matter, and their lateral walls invested with a black and opaque pigment, which serves to absorb all those of the luminous rays that do not traverse the cone parallelly to its axis. A convex transparent membrane forms the external face (which is also the basis) of the cone. At the summit of the cone is fixed the extremity of the nervous filament, which, according to Wagner, rises in the interior of the cone and expands over its walls. We can readily conceive how distinct vision is obtained by this arrangement: of all the luminous rays which emanate from an object in all directions, and strike every point of the surface of the eye, only those can reach the retina—and this in a separate and distinct spot—which, emanating from any given point of the luminous object, happen to traverse one of the cones parallelly to its axis. The distinctness of the image will accordingly depend upon the number of cones implanted on the retina, whilst the brightness and intensity will be in inverse ratio to the number of these cones. It is also easy to conceive how, with this apparatus, the field of vision may be extended, by increasing the convexity of the spherical segment representing the eye.

Now, to produce a visual apparatus still more perfect than that which we have just now described, it was necessary to construct it in a manner to obtain perfect distinctness of the image without impairing its brightness; in one word, an apparatus adapted to make the rays, which fall with considerable obliquity upon the surface of the eye, converge upon the retina; and such is the eye of man and of the higher animals.

We will give here a brief description of this organ.

The eye is enclosed in a cavity called the *orbit*. The shape of the eye, which is nearly spherical, is maintained by an envelope, consisting of a fibrous and solid membrane, opaque at its posterior part (*tunica sclerotica*, or *opaque cornea*) and transparent at its anterior portion, where its curve augments, and it receives the name of *transparent cornea*. A membrane called the *iris* is attached at the circle where the transparent cornea joins the sclerotica; the different colour of eyes depends upon this membrane. The iris is composed of muscular fibres, of which one portion is disposed circularly, the other vertically. It presents in its centre a circular aperture, termed the *pupil*, and of which the diameter varies according to the greater or less intensity of the light. Behind the iris is placed the *crystalline lens*, a solid, lenticular, transparent body, enclosed in its proper membrane. On the internal wall of the sclerotic coat we find a black-coloured membrane, termed the *choroid*, which is again lined by the *retina*, a semi-transparent, thin membrane, formed by the expansion of the me-

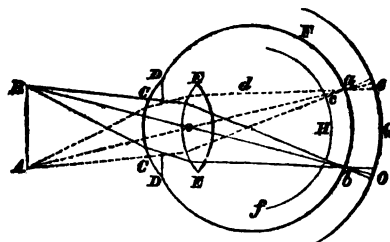
dullary part of the optic nerve. The eye is divided by the lens crystallina into two distinct cavities. The anterior cavity, in which the iris floats, is filled with a liquid greatly resembling water, and containing traces of salt; this liquid is called the *aqueous humour*; the posterior cavity contains a liquid of much greater density, and which is termed the *vitreous humour*. If we examine the crystalline lens attentively, we find that it is formed of several successive layers, the consistence and refracting power of which go on increasing from the circumference to the centre. Finally, we call *optical axis* of the eye the line corresponding to that in which the axis of the eye itself may happen to be directed respectively in every individual act of distinct vision. We will give here the mean dimensions of the several parts of the eye of man:—

	Millimètres.
Radius of the curve of the sclerotica ..	10 to 11
Ditto .. transparent cornea ..	7 „ 8
Diameter of the iris ..	11 „ 12
Ditto .. pupil ..	3 „ 7
Thickness of the transparent cornea ..	1
Distance of the pupil from the cornea ..	2
Anterior radius of the crystalline lens ..	7 „ 8
Posterior ditto ..	6 „ 6
Diameter of the crystalline lens ..	10
Thickness of ditto ..	5
Length of the optic axis ..	22 „ 24

In addition to these numbers, we will give here some figures indicating the refractive power of the media of the eye. The refractive power of the aqueous humour differs but little from that of water, being = 1.336 for the latter, and = 1.337 for the former. The number for the vitreous humor is 1.359; for the peripheral portion of the crystalline lens, 1.377; for the median portion of the same, 1.379; and for the central portion, 1.399.

The eyes of animals present some differences from that of man. The transparent cornea is highly convex in birds, and the crystalline lens is of nearly spherical form in some of the latter class of animals. In fishes, on the contrary, the cornea is almost level. The choroid also presents very different colours in the several classes of animals.

Having thus briefly described the eye and its constituent parts, we will now proceed to examine the course taken by the luminous rays through the several media of the eye; we shall here regard this organ as a compound system of convergent spherical lenses.



The rays of the luminous cones which emanate from the points A and B of the object traverse the transparent cornea CC, and penetrate into the aqueous humour, which occupies the interval between the cornea and the surface of the crystalline lens; they suffer thus a first refraction, and approach the rays that penetrate parallelly to the axis of the eye. It would be easy to calculate the convergence of these rays if we knew the exact degree of convexity of the cornea and the refractive power of the aqueous humour. These rays, upon reaching the crystalline lens (which is a true biconvex lens), are still further deflected towards the axis of the eye, and upon their exit from the lens they experience a third refraction in the same sense, at the moment of their entrance into the vitreous humour. The direction followed by the rays emanating from A and B is traced in the engraving: their focus is in *a* and *b*; and, assuming F to be the retina, *a* and *b* will be the points corresponding to A and B of the object. Assuming the retina placed at

H, the image of A and B will be diffused over a semicircular line at *e* and *f*; (a) or, assuming the retina placed at G, the image will be diffused in the same way at the points *c* and *e*. Vision, accordingly, is distinct when the retina is placed exactly at such a distance from the crystalline lens that the focus of the rays falls exactly upon it. But to attain this result it was necessary to intercept all the rays that fall near the edges of the crystalline lens, and the focus of which would certainly be formed at a different point from that of the focus of the rays which traverse the central part of the lens; the interception of these laterally-incident rays is the most important office of the iris and pupil, which perform here the part of a diaphragmatic membrane provided with a central opening of very variable diameter. It is with a view to the same object that the crystalline lens requires the more convex form, and the denser structure, the denser the medium in which the act of vision is to be effected.

Lastly, the internal parts of the eye, and more particularly the posterior face of the retina, are invested with a black pigment which absorbs all the rays which, were it not for this arrangement, would be reflected again inwards, and would thus impair the distinctness of the image. We imitate this arrangement in our optical instruments: the tubes of telescopes and microscopes are blackened inside.

A simple experiment will suffice to show that the formation of images is effected at the bottom of the eye—upon the retina. Hold the eye of an albino rabbit at a proper distance before the flame of a taper (in a darkened chamber), and, as the sclerotic in the eye of this animal happens to be semi-transparent, you will distinctly see on that membrane a reversed image of the flame. We find by calculation, with the aid of the formula of convergent lenses, and taking into account the respective dimensions and refractive powers of the several component parts of the eye, that when an object is placed at a distance of about thirty centimetres (about twelve inches English) from the eye, the rays proceeding from that object will fall upon the eye with the degree of divergence requisite to effect their convergence upon the retina.

The preceding data and observations lead us actually to the conclusion that vision, or, in other words, the sensation of a body sending luminous rays to our eyes, is owing to the modification produced on the retina by the luminous rays concentrated on all the points of that membrane where the image of the body from which these rays proceed is formed, and to the transmission of that modification to the mind through the agency of the optical nerve. In what way or manner soever the retina be excited, the effect will always be a sensation of light: the transmission of the electric spark, a blow upon the eye, or any compression of whatsoever nature exercised upon that organ, and consequently upon the retina, determine luminous sensations on the latter. We repeat it here, again, it is the characteristic property of the nerves of the several senses, that any excitation whatsoever to which they may be subjected produces invariably but the one specific and definite sensation peculiar to the excited sense. The retina, upon which the images of the luminous objects are formed, is affected more or less powerfully in different parts according to the different intensity of the light acting respectively upon these parts. If the images did not form upon the retina—if the visual apparatus consisted of this membrane alone, unaided by the lenticular apparatus—we should not possess the faculty of distinct vision, but simply that of distinguishing between day and night, light and darkness. But through the lenticular apparatus the action of the light is restricted to a certain part of the retina, which part represents in its form exactly the shape of the luminous body. It is, accordingly, an essential condition of vision that the images should

(a) There is a slight error in the engraving: the letter *f* should be placed at the point where the rays intersect H.

form upon the retina, and that the focus of the luminous rays should fall upon that membrane. It has also been demonstrated by a curious experiment of Mariotte's that vision is much less distinct when the image is formed upon different points of the retina. Place upon a black horizontal plane three white discs in a line, at a distance of about two inches from each other, and look at them vertically, taking up a position such that your eyes will be about five or six inches from them, and your nose in a right line with the central disc; close one eye, and look with the other at one of the lateral discs, and you will no longer perceive the disc under the open eye. This disc will become visible again upon altering the distance; and if, upon its reappearance, you close the eye previously open, and open the other, and keep it fixed upon the central disc, you will no longer see the disc which is in a right line with the open eye. That point of the retina on which the image of the disappearing disc is formed in these several dispositions is found to correspond to the base of the optic nerve.

Thus it is clearly demonstrated that, to render vision perfectly distinct, the eye must be so placed that the image is formed upon the sensitive points of the retina in the smallest possible dimensions, and with sufficient intensity. But how is it possible to fulfil those conditions of distinct vision constantly, considering that the distance at which we are able to see objects varies exceedingly? We perceive a star as distinctly as an object placed within a few inches from our eye. To see the most distant objects distinctly, it suffices that their size, and, consequently, the intensity of their light, be proportional to the distance at which they are placed from us. The image of a luminous body recedes from or approaches a lens, according as the body recedes from or approaches the opposite part of this lens. It is accordingly evident that we may, by an act of volition, impart certain modifications to the eye to effect vision at different distances; if you fix your eye upon a black spot on a pane of glass (or upon any other distinct and separate body), varying the distance at which the glass is placed from the eye, you will have a confused impression of the objects at a greater or less distance from the spot, whereas you will see the latter most distinctly, no matter what its position, nor at what distance you place it from the eye (of course, always within the limits of visual power). It is equally true that, whilst vision at a distance of about twelve inches is performed by a sound eye without effort or fatigue, vision at much greater or less distances than this, tires and weakens the eye and impairs its visual powers; thus, after looking for several hours at objects brought very near to the eye, the distinctness of vision is found impaired. To account for the power of vision at all distances we must resort to one of two hypotheses: either we must assume that the retina communicates to the brain the distinct perception of a luminous object, not only when the rays of the latter converge on a separate and distinct point of it—as is the case when they happen to emanate from an object placed at about twelve inches from the eye—but also when they concentrate on a limited circular space of the retina; or we must suppose that the transparent cornea and the crystalline lens may vary in convexity, according to the different distances at which the visual power is to be carried, or that the crystalline lens possesses the power of elongation and contraction.

Obers has calculated that to admit of equally distinct vision at exceedingly different distances, varying from four inches to many yards, the crystalline lens should be able to alter its distance from the retina to the extent of one-tenth of an inch at the least, the convexity of the cornea and crystalline lens remaining constant, or, *vice versa*, that the power of varying the degree of convexity to the same extent should be lodged in the two latter bodies, the distance of the crystalline lens from the retina remaining constant. Obers has calculated, also, that vision would remain distinct within the above given limit, if the radius of the cornea

might vary to the extent of about three-tenths of an inch.

The following experiment, made first by Scheiner, will show that, in certain cases, the image of an object will appear at one time double, at another single, to the same eye. Take a piece of paper and make in it, with a needle, two small holes at less distance from one another than the diameter of the pupils embraces; look through these holes with one eye, and you will find that at a certain definite distance the object looked at will appear single, whilst, at a greater or less distance than this, it will appear double; on closing one of the holes, one of the images will disappear. It is evident here that, in the former case, the two luminous fasciculi meet on the retina, whilst in the latter cases, the retina is at greater or less distance from the point of their intersection. Now, as the image is distinct at all distances, if the eye is brought to bear upon the object *directly*, i. e., without the interposition of the perforated paper, it is evident that, to attain this end, the eye must undergo a certain modification.

(To be concluded in our next.)

ORIGINAL CONTRIBUTIONS.

CLINICAL REMARKS ON CASES OCCURRING IN OBSTETRIC PRACTICE.

By CHARLES WALLER, M.D.

Physician-Accoucheur to St. Thomas's Hospital.

ON PLACENTA PRÆVIA.

I have not been an unconcerned spectator of the controversy which has of late been carried on regarding the mode to be adopted in the treatment of placenta prævia, but have preferred delaying an opinion until I was enabled to form one from facts which had occurred under my own especial notice. Considering the subject to be one of paramount importance, and never having published the results of my own experience, I hesitate not to send the following cases and observations, as the first of a series of communications to your valuable journal, intending, as time and opportunity permit, to forward others for insertion, of an equally practical nature.

There is no position in which the accoucheur can be placed requiring more promptitude of decision, or more energy in executing what is necessary for the safety of his patient, than when superintending cases of uterine hemorrhage; and hence the necessity for fixed principles upon which he may safely rely in the hour of need. The popular term, "flooding," emphatically expresses the fearful rapidity with which the vital fluid sometimes escapes during the period of parturition; it conveys the idea that blood is gushing forth not only in alarming but in such dangerous quantities that the female cannot long survive, unless the flow be speedily arrested.

The causes of hemorrhage during the pregnant state, whether it take place in the early or latter months, before or after the birth of the child, are the same, and they are twofold:—

1. A separation of the ovum, partial or more complete, from its attachment to the uterus; and
2. A want of due contraction in the muscular fibres of that organ.

If the connection be perfect, the integrity of the circulation is preserved, and no blood can make its escape; but if there be any detachment, whether accidental or unavoidable, and the second condition above referred to be present, then the open mouths of vessels are exposed both on the uterine and placental surface, and blood must necessarily escape unless such orifices be closed again; and every practitioner knows that this much-to-be-desired effect can only with certainty be produced by the excitation of regular, persistent, and universal contraction of the uterine fibres surrounding these vessels, which, when in due action, form a very perfect tourniquet. After a very early period of pregnancy the placenta forms the only connecting medium

between mother and child; and, therefore, we may say, that in all dangerous hemorrhages during this state, there is a separation of this organ to a greater or less extent, and thus the connection naturally subsisting between the two parts is broken off.

Under certain circumstances (as in accidental hemorrhage, when the fetus is still in utero) it may be impossible to produce perfect contraction of the womb, and yet it is well known that a certain degree of action can be induced, whereby the bleeding, although not always completely stopped, yet is sufficiently checked to remove the apprehension of the attendant, and to justify him in trusting to Nature's unaided efforts. Coagula sometimes form around and probably within the exposed vessels, and then the arrest is perfect. The intention of every method of treatment in cases of the nature we are now considering must necessarily be to secure to the patient that condition upon which alone her safety depends; and to effect this one object all our efforts should be directed in the management of the several forms of pregnant or parturient hemorrhage: for, although the means must be varied, in order that they may be adapted to the varying circumstances of individual cases, yet in all the same principle is to be kept in view, and the same indication is to be fulfilled. Let us apply these principles in the treatment of placenta prævia, and consider how far the plan proposed by Professor Simpson will enable us to carry them into execution; and here it is but fair to state that I entered upon the inquiry with a strong prejudice against the new method, it being contrary to what I had been taught, and equally opposed to what I had been long teaching others, to suppose that it would be a safe practice to effect a complete separation of the placenta from the walls of the uterus whilst the fetus was still contained within its cavity. I was also a little surprised at the published statistics of the learned professor, showing the maternal mortality in cases of this kind: the accuracy of his tables has been called in question, and some errors discovered, but these are by no means numerous enough to invalidate the general opinion of the high degree of mortality consequent upon such labours. In the fierce war of statistics which has been since waged and carried on with no little acrimony and personal ill-will (I had almost said abuse), it appears to me that the really practical bearing of the question has been lost sight of. The cause of truth has never yet been advanced by harsh expressions and ungenerous insinuations, and it is much to be regretted that any place should be found for them when prosecuting a scientific inquiry. Professor Simpson believes that in cases of uterine hemorrhage, resulting from placenta prævia, the blood which is issuing forth does not proceed from the open orifices of the uterine sinuses, but from the detached surface of the placenta; and hence, naturally enough, concluded that by a complete separation of the after-birth, the circulation (maternal) through it would be arrested, and the bleeding of necessity cease. He made the trial in a great number of cases, and the result, as stated by him, was most satisfactory,—the bleeding *did* cease. Two questions presented themselves to my mind in the prosecution of the inquiry:—

1. Will the bleeding be arrested by the complete removal of the placenta from its connection with the uterus? and
2. Is Professor Simpson's explanation of this fact (if it be one) satisfactory?

I put the practical question first, because, if it be not answered in the affirmative, there is an end to the affair altogether; if, however, its truth be established, then is the second question of comparatively minor importance, inasmuch as I am not justified in rejecting the fact because I may not accord with certain views brought forward in explanation. Again, this point may be easily determined, as opportunities are perpetually occurring in which the efficiency of the proposed plan may be tested; and thus by the united experience of the profession an accurate judgment might soon be formed. I have care-

fully examined my records of cases of placental presentations, and find that the mortality has been greater than I had anticipated. In order to render my subject complete, I shall shortly describe them with the results, so far, at least, as the mother is concerned.

CASE 1.—A case of partial placental presentation. Hemorrhage had been going on for several days without much pain. When sent for, I found my patient in a very exhausted condition, but, as the bleeding was increasing, turning was effected and a dead child delivered. Much blood was lost during the operation. Mother died three hours afterwards, never having rallied. Egg, with brandy and ammonia, was liberally given, but without effect.

CASE 2.—A case of so partial a nature that the placenta could not be felt until the labour had made considerable progress. Turning was effected, but the child was dead. Mother recovered.

CASE 3.—A case of partial presentation. This female had been flooding for several hours, and had been much neglected by her attendant, he having been summoned two hours previously, but had not arrived when I entered the house. She was then lying in one of those deathlike faintings which are so truly alarming, from which she was recovered by the exhibition of stimuli. There were no labour pains; the os uteri very dilatable, though not much dilated; there had been three successive attacks of convulsions; the hemorrhage had abated. Turning was decided on. On the introduction of my hand, the uterus acted smartly; the os uteri contracted around the head, rendering its extrication difficult. Mother recovered, child dead.

CASE 4.—With the particulars of this case I am unacquainted. I was sent for about one hour and a half after the delivery, just in time to see the patient expire. I was told it had been a placental presentation, and turning was performed. Mother and child died. Flooding had taken place at intervals during several preceding days, but at the last had alarmingly increased.

CASE 5.—Nearly complete placental presentation occurring between the sixth and seventh month of pregnancy. The labour proceeded slowly, and after the discharge of the liquor amnii, the practitioner was alarmed at a sudden and rather profuse gush of blood, and, therefore, requested me to meet him in consultation. On examination, I found the placenta attached nearly to the whole circumference of the os uteri, the hemorrhage trifling, the uterus firmly contracted around the body of the child, and the female in good condition. There was here no necessity for manual interference; in a short time the pains strengthened, the placenta was expelled, and soon followed by the fetus, which was extruded in a doubled position, it having been a presentation of the back. There was no hemorrhage. Mother recovered.

CASE 6.—In this case also the placenta was born one hour and a half before the child. The fetus had been long dead; there was, therefore, no circulation through the placenta, and, consequently, no hemorrhage. Mother recovered.

CASE 7.—This case was under the care of Mr. Gravenor, who had been engaged to attend a lady of very delicate habit, now pregnant for the first time, although she had been married about six years. Flooding had occurred at intervals during the last month, but now became greatly increased. On examination, the os was found hanging loosely into the vagina, and, although thin and soft, but little dilated. The position of the uterus was so high up that the finger reached it with difficulty. The thick fleshy substance of the placenta could, however, be easily recognised through its opening mouth. Although much blood had been lost, the patient was, comparatively, comfortable, there was no faintness, and the pulse, though hurried, beat with considerable power. Some nourishment was given, and we waited patiently by the bedside, hoping that there would soon be more dilatation of the maternal soft parts. After waiting a couple of hours, restlessness and faintness supervened; the pulse was more feeble, although the hemorrhage

had not increased. Delivery was then decided upon. Some difficulty was experienced in passing the hand into the vagina, and when the os uteri was reached it was felt to be dilatable, but not dilated to any great extent. On passing the hand into the uterus the breech was felt presenting; a leg was therefore easily secured, and brought through the os externum, when the hemorrhage appeared to cease; there were regular pains, and everything justified the expectation of a favourable termination. In a few minutes there was a renewal of the bleeding, and the patient became very faint, but the child was easily extracted (dead), after which the uterus contracted well. In less than ten minutes flooding again commenced, and the patient sank into an alarming state of exhaustion. The placenta not coming away, I introduced my hand, and succeeded in removing it, though with great difficulty, as there were very firm adhesions to the uterine surface. 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. As the second person bled freely, I threw in two or three ounces of blood into my breathless patient, but of course without benefit. It was remarkable that in this case the first attack of syncope was fatal; the body was so warm, even after death, that the bystanders could scarcely believe that life was extinct.—*Post-mortem* examination: A small knuckle of placenta still remained attached to the lower part of the uterus, bound down by an almost cartilaginous adhesion; every part pale and bloodless; the heart flabby, and contained a large coagulum in the right side. The husband informed me that there had been a remarkable deficiency of sexual desire in his late wife; that coition was never productive of pleasure, but, on the contrary, of great annoyance, with but a solitary exception, during the six years of her married life, and from that single period he dated her pregnancy. In consequence of this information, the sexual organs were examined with great care, when the ovaries were seen to be very scantily developed, and the clitoris so small as to be scarcely distinguishable.

(To be continued.)

ROYAL BERKSHIRE HOSPITAL.

SURGICAL REPORTS AND OBSERVATIONS,

By F. A. BULLEY, Esq., F.R.C.S., Surgeon to the Hospital.

Laceration and contusion of the hand, fracture of most of the carpal and metacarpal bones, caused by machinery; amputation of the forearm. Remarkable effects of the operation.

James D., aged forty-seven, a stout muscular man of temperate habits, admitted June 1, 1847. States that, while he was occupied in drawing out some sheaves of straw from a thrashing-machine, his foot slipped, and, falling forwards, his hand and the lower part of his arm were taken into the machinery and crushed by a blow from the spoke of a fly-wheel in rapid motion. It appeared as if one of the spokes of the wheel had forced the hand against a flat wooden portion of the framework of the machine, and thus caused the fracture of the bones, and the other injuries. He had not lost any considerable quantity of

blood from the accident, but appeared rather faint and depressed by the shock. The bones of the forearm were not broken, but the skin, for some little distance from the wrist upwards, was separated and irregularly torn from the fascia underneath, which was covered by a layer of coagulated blood from the small ruptured vessels of the lacerated subcutaneous cellular membrane.

As, in consequence of almost all the bones of the carpus and metacarpus being broken, and the soft parts much torn and contused, there appeared to be no possibility of saving any useful portion of the injured hand, amputation was performed, with as little delay as possible, by the circular method at the middle of the forearm, thus cutting clear of the injured skin, and the bruised muscles nearer to the joint. He lost scarcely any blood from the operation, and, apparently, suffered but little shock from its performance. Being put to bed, he shortly recovered himself, and in the evening expressed himself, with the exception of a little pain in the stump, as quite comfortable, but indisposed to sleep, notwithstanding an anodyne draught had been given him to produce rest.

2. Had a little sleep the early part of this morning. Complains of a pain in his chest, with a slight sensation of constriction or tightness in his breathing; no particular thirst or fever; pulse regular, and quiet; the stump, in which he has had no unusual pain, looks clean and healthy. The anodyne to be repeated in the evening.

3. Has passed a very restless, uncomfortable night. This morning, having just previously complained of a pain in the right side, and of a feeling of constriction in the chest almost insupportable, he was suddenly seized with most violent vomiting, bringing up great quantities of dark-green bilious fluid, together with excessively uncontrollable purging. He was so much affected by repeated attacks of the vomiting and purging that he shortly sunk into a state which led those who saw him at this time to believe that he was dying; becoming quite insensible, the heart's action and pulse at the wrist being scarcely perceptible. Eyes fixed, and livid lips; deep and laborious respiration, with frothy mucus escaping from the mouth. At one time he appeared to be so near his end that one or two of my colleagues, happening to see him, thought there was no chance of his recovering from the extraordinary collapse into which he had fallen. Mustard plasters were immediately applied to the pit of the stomach, and a blister to the neck, brandy in considerable quantities being poured down his throat; but, notwithstanding these means were assiduously employed, he remained in a state of almost complete insensibility for more than an hour, when he gradually, but slowly, recovered; still, however, complaining of the sense of constriction in his chest. As soon as he was able to take medicine of his own accord, he was ordered the following mixture:—

R. Spirit. ammoniæ aromat., 3jss.; magnes. sulphat., 3iv.; confect. aromat., 3j.; misturæ cretæ comp., 3vj. M. ft. mist. cap. 4ta partem 4ta quaq. hora.

He appeared to be considerably relieved by the medicine. To have four ounces of port wine during the day.

4. Feels extremely languid this morning. On auscultation, the action of the heart is apparently normal, but I can detect a slight tremulous purring when the stethoscope is placed over the upper part of the sternum, such as is said to be heard when there is dilatation of the arch or ascending portion of the aorta; the "frémissement cataire" described by Laennec. The lungs, although he has been subject to occasional severe fits of coughing which he has thought to be asthmatic, are apparently in a healthy state. His wife now informed me that he had been for several years past subject, at times, to most severe and suddenly-occurring paroxysms of coughing, accompanied by great tightness in his breath, and palpitating sensations in his chest, which had occasionally been so distressing as to

oblige him to rush to the open window for relief, like a patient with spasmodic asthma; these attacks had latterly become more frequent and harassing.

5. Still feels nervous and languid, but the sensation of constriction and fullness is diminished, and the circulation is beginning to recover its wonted strength. To continue the mixture and wine, and to be kept perfectly undisturbed and quiet.

24. Has been gradually improving since last report. He has now scarcely any feeling of tightness at the chest, but there is still the same slight tremulous purring noise, before noticed, perceptible on auscultation. At the end of six weeks from the period of his admission, the stump wound had become completely healed; and he left the hospital much improved in his feelings and appearance, having lately only occasionally experienced the sensation of constriction—a freedom probably due to the quiet and careful discipline of hospital treatment.

OBSERVATIONS.—I have related this case principally as an example of the presumable effect of a capital operation, in bringing into sudden action alarming symptoms of thoracic disease, even where, as in the present instance, there was scarcely a suspicion of its existence. It would show, also, the expediency of making inquiries into the previous history of the patient's health prior to undertaking an operation, especially in any curtailment of the body by amputation, whereby a portion of the blood, which would otherwise be circulating through the amputated limb, is made to travel through a smaller space, overloading the heart and vascular system, and thus producing those almost unaccountable disturbances of organic health, which sometimes follow operations of this kind in persons who are the subjects of, or disposed to, organic disease, especially where but little blood has been lost in the operation. Something of the same kind occasionally happens after operations in which the circulation has been only temporarily interrupted, as by the ligation of arteries at the root of the neck, an instance of which I have myself witnessed, where I had little doubt that the operation stood in the relation of cause and effect to a sudden and severe attack of bronchitis, which destroyed the patient. These circumstances, gravely considered, would indicate the adoption of measures calculated to obviate similar untoward results, such as the abstraction of a small quantity of blood after the operation, repeated if necessary, together with other anti-plethoric means carefully carried out, until the vascular system had become habituated to the unavoidable contraction of its circuit. The quantity of blood lost before or at the time of the operation would, of course, modify or obviate the necessity for these precautions.

Scrofulous disease of the knee-joint; abscess, followed by destruction of the joint; amputation.

William G., aged twenty-three, admitted April 20, 1841. He stated that he had suffered from a weakness of the knee-joint in walking, for four or five months prior to admission, which had been gradually increasing until last week, when the joint had become considerably swelled, and he found himself unable to put the limb to the ground without great pain. His general health had suffered in proportion, having become emaciated, with night sweats and other signs of commencing hectic fever. He had previously enjoyed tolerable health, never having been affected with scrofulous disease of any of the other joints or tissues, and had led a very temperate life. He did not recollect having bruised or struck the knee in any way.

On examination, the joint presented the following appearances of disease:—It had the peculiar rounded appearance of scrofulous enlargement. It was not greatly swelled, but was extremely tender to the touch, and to the feel it was evident there was an unusual quantity of synovia or purulent secretion in the joint, which distended the capsular ligament, more especially on either side of the ligamentum patellæ, where the fluctuation was very distinct. The muscles

of the thigh and leg were wasted from want of use, making the joint appear to be larger than it really was. He had very little rest at night. Apply ten leeches to the knee, to be followed by a cataplasm of vinegar, water, and bran.

R. Potassæ hydriod., gr. xxiv.; decoct. cinchonæ comp., ʒij. M. cap. cochl. iij. larg. ter die.

22. No better. Ten more leeches to be applied.

May 8. A visible improvement in his appearance and general health. The acute symptoms have subsided, but the joint continues distended, and is still tender to the touch. He has considerable pain at night, with great restlessness.

R. Ferri carb., gr. x.; pulv. Doveri, gr. v. ft. pulv. bis die sumend.

14. Not so much tenderness about the joint; enlargement, however, continues. Apply a blister.

22. The blister has not produced any diminution of the fluid in the joint. Decoction of bark, with dilute nitric acid, twice a day.

28. Three blisters have been applied without producing any absorption of the fluid. The joint was now encased in mercurial plasters, after the manner of Mr. Scott.

R. Morphine acetat., gr. ij. ft. pilul. iv. Take one every night.

June 10. The strapping has had the effect of removing the fluctuating swelling of the joint, and he is able to walk about the ward without much pain. His general health had become in some measure improved, but during the last week he had been troubled with a diarrhoea, which had thrown him back, and he was again obliged to take to his bed. Symptoms of inflammation, external to the joint, which had again become greatly enlarged, had also occurred, which made it painful for him to move the joint.

It would not be worth while to follow this case through its more minute details; it is sufficient to say that an extensive abscess, at first apparently unconnected with the joint, formed around it, and was ultimately opened at that point where it was most prominent, viz., on the inner side of the ligament. patellæ. The incision gave vent to about a pint and a half of matter, mixed with blood. At this time his health had become greatly impaired. Shortly afterwards hemorrhage took place from the cyst, which weakened him very much. Subsequently he was seized with a fit of shivering in the night, and complained of great pain in the upper part of the calf of the leg, the integument of which gave way, and about a pint of dark-coloured grumous blood was discharged. Afterwards, frequent hemorrhage took place on the slightest motion.

As I had reason to believe that the knee-joint was extensively implicated in the disease, I minutely examined it, and finding that on moving it in different directions the peculiar looseness and roughness indicative of the destroyed function of a joint were observable, and as I thought the patient might die from frequently recurring hemorrhage, I determined, in consultation with my colleagues, to remove it.

July 23. Having ascertained that the patient was free from visceral disease, I amputated the limb by the circular incision. He lost but a very small quantity of blood from the operation.

DISSECTION OF THE AMPUTATED LIMB.

The knee-joint was uniformly enlarged, and had a hardened feel externally, owing to the thickened state of the ligamentous tissues. On the forepart of the head of the tibia, just on one side of the insertion of the ligament. patellæ, was a ragged opening in the integument, filled up with spongy fungous granulations, the spot where the matter had been evacuated by incision. From this there was no immediate communication with the cavity of the joint, but a probe passed some way downwards, through the broken-down and almost putrid cellular tissue, towards the inner side of the leg, where there were two other openings, the same which had been caused, by the spontaneous bursting of the abscess, when the hemorrhage occurred. On

dissecting off the integuments, the cellular membrane underneath was in different states of disorganization, being simply reddened in some parts, while in others it had completely sloughed. Portions of coagulated blood were found in its substance, especially in the neighbourhood of the last-mentioned openings; there was also a large clot lying immediately in contact with the periosteum of the upper and inner part of the tibia, escaped from the rupture of a rather large vein, the opening of which was clearly distinguishable. On the inner side of the ligament. patellæ was a valvular opening, through the alar and capsular ligaments, into the joint; and it was this valvular fold in the ligaments which impeded the entrance of the probe into the joint. The appearance of the ulcerated opening led me to think that the disease had commenced in the joint, and that the pus had made its way outward, and diffused itself into the surrounding cellular tissue.

On removing the muscular and cellular tissue from the ham, a considerable quantity of greenish-coloured fecid matter was found, which seemed to have escaped from the cavity of the joint through a ragged ulcerated opening in the posterior ligament of Winalow.

The joint was partially filled with pus, similar to that found in the popliteal space.

The capsular ligament was thickened, and (especially on the inside of the joint) converted into a tough and semi-cartilaginous substance. The ligament. patellæ and alar ligaments participated in some measure in this change of structure. The synovial membrane reflected over these parts was in a pulpy, softened state, and of a reddish colour, but was not distinctly ulcerated in any part, except in the situation of the openings before described, and on the inner surface of the patella, where there were slight ulcerated fissures in the cartilage.

The cartilage covering the outer condyle of the femur, and on the opposing portion of the head of the tibia, was not perceptibly thinned, and the semilunar cartilage on that side was entire; but the cartilage on the inner condyle seemed quite worn away, as it were by attrition, leaving a surface of smooth but reddened bone uncovered by synovial membrane. The internal semilunar cartilage had entirely disappeared, and the inner articulatory surface of the head of the tibia had lost its cartilage, exposing, like the corresponding portion of the femur, a surface of smooth bone. The crucial ligaments were entire, but of a reddish colour and covered with flocculent lymph. The ends of the bones composing the joint, although somewhat larger, were not much softer than natural.

Sept. 15. The patient's health has been gradually improving since the operation, and the stump is now almost healed. There has been some tenderness and enlargement of the remaining portion of the bone, with a considerable discharge of pus from the face of the stump; but these symptoms of what would seem to be a tendency to a return of the disease have now entirely disappeared, and he was shortly afterwards discharged from the hospital.

OBSERVATIONS.

It would be difficult to say exactly in what particular texture of the joint the morbid action in this case originated. It is probable, however, that it commenced in that peculiar passive thickening of the synovial membrane, so well described by Sir B. Brodie, which in its progress extends to the other tissues, and ultimately, sooner or later, terminates in the destruction of the joint, observing, "I have already remarked that this disease is peculiar to the synovial membranes, at least that I have never met with it in any other part of the body; but it belongs to the same order with tubercles of the lungs, scirrhus of the breast, the medullary sarcoma or fungus hematodes of the testicle, and numerous other diseases in which the natural structure of the affected organ is destroyed, and a new and different structure is added in its place. To these, also, it bears a near resemblance in its progress. Thus, tuber-

cles in the lungs, in the first instance, occupy the vesicular and interlobular substance, but ultimately they inflame and ulcerate, abscesses form in them, and then the pleura, the bronchia, and other contiguous parts become affected. Similar circumstances mark the progress of other maladies of the same description.

Of course, the true diagnosis of this morbid alteration in the synovial membrane of the joints is in its commencement extremely difficult, but I have fancied I have been able to detect it in a few cases which have come under my observation in the hospital, where there have been present some of the signs referable to this condition, as commencing stiffness, and some slight swelling, of that peculiarly rounded character which distinguishes even the earlier stages of scrofulous enlargement occurring in scrofulous habits. In these cases I have used with advantage the tincture of iodine locally to the part, as suggested by Mr. Buchanan; and have every reason to believe, from the effects resulting from its use, that it is—when combined with perfect rest, in this, as in almost every other affection of the joints in their early stages—a very valuable remedy. Latterly, however, I have employed strips of plaster composed of iodine, combined in particular proportions with some adhesive material (as prepared, under my direction, by Mr. Ewens, of Jernyn-street, St. James's), with tolerable tightness round the joint; and by this means have succeeded in several cases of commencing scrofulous enlargement of the articulations; and, in a few of a more advanced stage, in restoring the functions of the joint. It differs only from the ordinary iodine plaster of the hospitals in being rather stronger and more carefully prepared; and it appears to have an advantage over the tincture of iodine, inasmuch as it combines the good effects of moderate pressure with the ordinary action of the tincture in favouring interstitial absorption, and is not followed by the burning, tingling heat and irritation of the skin which the latter occasionally produces.

CHLOROFORM IN SURGICAL OPERATIONS.

Communicated by J. W. GABRIELKE, Esq., Rickmansworth.

It will, I presume, be generally admitted that it is the duty of every surgeon, having cautiously made himself acquainted with the properties and effects of any new agent (such as the one in discussion), to reflect deeply as opportunity may present itself in his own circle of practice, and to contrast the result of his experience with that of others; and should any discrepancy present itself, or any new idea strike him, it should receive publicity. This, surely, is the most easy and ready way of eliciting truth, and it is much to be regretted that it is not more generally adopted; it would be the means of frequently checking those highly coloured statements so greatly tending to throw dust in the eyes of the general practitioner in the country, whose arduous duties press upon him too heavily to afford him the opportunity of devoting much time to the literature of the profession.

For the present, and in all probability for some time to come, it must be to the medical journals alone that we can look for information on the use of chloroform. Notwithstanding the fact that many of the communications transmitted to you may not propound new views, new facts, or new suggestions, yet, if they merely confirm the observations set forth by others, they are not without their value.

Case 1 was a little boy aged eight years, who had, from a peculiar susceptibility of mercury, lost by sloughing a portion of the right cheek, together with a part of the superior maxilla, exposing the side of the tongue and the teeth of the under jaw, those of the upper jaw having lost their attachment during the process of exfoliation. My object was to unite the upper and lower portions of the cheek, and thus to reduce the opening of the mouth to its natural dimensions.

It is useless to tax my readers with a detailed statement of the operation, suffice it to say that it was after the manner of the operation for hare-lip; of course more tedious, and, as is usually the case in operations about the face, attended with considerable and troublesome hemorrhage. In this and the following operation I was assisted by my kind and intelligent friend Mr. Haynes Walton, of Bernard-street, who has given me his valuable assistance on many previous occasions in operations of greater importance. In the present instance, a piece of lint was saturated with half a drachm of chloroform and applied to the nose and mouth, over which was placed some oil-silk to prevent too ready evaporation; in a few minutes the patient yielded to its influence, and manifested perfect insensibility to the first part of the operation, but before it was completed consciousness returned, and the relative advantages of operating on a subject in a state of quiescence, as contrasted with one offering strong resistance, was strikingly apparent. I immediately attempted to readminister the chloroform by applying it to the nose only (it being impracticable to do so to both mouth and nose, in consequence of troublesome bleeding into the mouth), but without producing any effect; the operation was, therefore, completed during a state of consciousness.

Case 2 was a boy, aged five years, who had been three years since the victim of a most extensive and deep burn of the neck; a strong bridle of condensed cellular tissue, extending from the chin to the humeral end of the clavicle, bound the head firmly in one position, approximating it closely to the chest, and producing frightful deformity. Here the uses of the chloroform were strikingly manifested. I administered one drachm in the manner before described, and insensibility followed in one minute. The lint was kept over the mouth and nose during the whole operation, which occupied the space of half an hour: that is, in making the necessary dissections to set the head free, and adjusting and dressing the wound, &c. At the expiration of thirteen minutes, the little patient showed alight signs of consciousness, when half a drachm more chloroform was administered, and the most profound insensibility followed, no sign of consciousness returning till five minutes after the completion of the operation, when sickness of rather a violent kind followed.

REMARKS.—From the statement I have given of the two operations in question it is evident that chloroform is not alike available in all cases. In the first case I was unsuccessful, from the fact that chloroform could not be satisfactorily inhaled through the nose only, and it was impossible to apply it to the mouth in consequence of bleeding. It would then suggest itself to me, in operations implicating the mouth, to use chloroform, but in doing so to get the patient as decidedly under its influence as possible, and keep it up for some little time previously to commencing the operation, so that we may, at any rate, spare the patient a portion of suffering; and, seeing the child in Case 2 did not recover his consciousness for five minutes after the operation was concluded, may we not hope that, under an efficient dose, we may still accomplish many painful operations, presenting less formidable symptoms than existed in Case 1, before sensibility returns? There are yet other obstacles offering themselves to the happy effects of chloroform in operations about the mouth; sickness, as in Case 2, would have been highly prejudicial to the fate of Case 1, where, from the extensive loss of substance, great tension was necessarily made on the soft parts in approximating the edges of the wound. Again, in other operations which have come under my notice, although complete insensibility be present, and the muscles generally be in a relaxed state, the lower jaw will be firmly locked against the upper, causing considerable hindrance.

Case 2 exemplifies one of those successful instances where chloroform stands pre-eminent, and offers a kindly aid to the general practitioner such as he has long stood in need of: for, situated

as I am in a district of which four-fifths of the population are manufacturing, I am frequently called upon suddenly to perform capital operations without being able to command that assistance which is so desirable, and which in towns is considered absolutely necessary.

In the operations here described, Mr. Walton and myself were the only persons present; and without the soothing influence of chloroform, where such extensive dissection was necessary as in Case 2, and in so young a subject, it would have been impossible to have done what we deemed requisite. In both cases the muscles were in a complete state of relaxation; the breathing slow and laboured; pulse slightly accelerated, but soft; and the skin moist.

I would yet make one more comment on the uses of chloroform, as recommended by many eminent men in obstetric practice. There appears yet some considerable discrepancies amongst the profession respecting its influence on the uterus when thrown into strong muscular contraction; as yet I have not used it in this branch of my practice: for, could I feel convinced that efficient uterine pains would proceed under its employment, there would still exist in my mind another obstacle to its use, viz., that, should the patient to whom chloroform had been administered be of that peculiar idiosyncrasy of constitution where extreme syncope follows the emptying of the uterine cavity dependent on the shock done to the nervous system, much embarrassment must assuredly follow its employment, and the practitioner in attendance would probably regret the use of an agent having the power of masking symptoms at a moment when the admission of a doubt may prove fatal to the patient.

PROGRESS OF GERMAN MEDICAL SCIENCE.

By Dr. BUSHNAN.

I do not think that the English practitioner is as informed as he ought to be concerning the progress of German medical science, or that he is fully aware of the fertility of the German mind in originating bold conceptions and useful speculations. Germany has, in less than three-quarters of a century, given birth to the eccentric studies of phrenology, mesmerism, homoeopathy, and hydropathy; and, not now stopping to consider whether these additions to medical science be sound or unsound, true or false, useful or useless, I would merely observe that the reflections of a people, none of whose competitors have produced parallel inventions, are worthy of more consideration than the English medical press seems inclined to give to them. Again, the Germans are a profoundly reflective, but not a practical, people; while with the English these qualities are reversed: the German excogitates, the Englishman turns to account; and thus I conceive it would be well if our more practical countrymen were made better acquainted with the progress that medical science is making among the colleges and hospitals and scientific associations of the fatherland. My papers in the *Medical Times* upon the surgical practice of the late Professor Deffenbach have, I think, communicated some useful information; and, with the above views, I now propose to continue a series of similar desultory and immethodical articles upon the progress of medical and collateral science in Germany; and first, as a means of relieving one of the greatest torments that flesh is heir to, I offer—

1. A NEW REMEDY FOR TOOTHACHE, more efficacious than creosote, and hitherto always successful in the cases where I have seen it employed. This is carvacrol ($C^{10}H^{16}O$ —HOP² H¹⁷ O). Carvacrol, according to Professor Schweitzer, is formed by the action of potassa, iodine, or hydrated phosphoric acid, upon *pleum carui*, *ol. thymi*; and, according to Claus, by the action of iodine upon camphor. Schweitzer has shown that the product from camphor is the same as that obtained from the oil of caraway.

Preparation.—I. *Ol. carui* is to be distilled

with hydrated phosphoric acid. The liquid that passes over is to be poured back into the retort until it no longer retains the smell of the oil of caraway. The carvacrol separates itself in the form of an oil from the phosphoric acid.

II. In the same way a saturated solution of iodine must be distilled with oil of caraway until no more hydriodic acid is formed. The red mass which remains in the retort must be operated upon by potash. The yellow solution is to be distilled. Carvene ($C^{10}H^8$) passes over, and the carvacrol remains. It is to be purified by redistillation.

III. Equal parts of camphor and iodine are to be rubbed together and distilled until no red vapour is given off. The black mass remaining in the retort contains carbon, resin, camphine, colophene, iodine, and carvacrol; that in the receiver, camphine, colophene, carvacrol, and a little iodine and hydriodic acid, which, on standing, separates into two layers. The upper layer is to be distilled, and at 180° camphine passes over, while colophene and carvacrol remain. This is to be acted on by potash. The carvacrol may be obtained from the alkaline solution by the action of an acid and by distillation over purified lime. —(Claus.)

Carvacrol is an oily liquid, very similar to creasote, with a very unpleasant smell and strong taste. Applied on a piece of cotton to a decayed and painful tooth, it gives immediate relief. I hope Mr. Hooper will prepare this successful and hitherto unpublished remedy, and enable the profession to judge of its value.

2. ON THE OCCURRENCE OF THE SARCINA VENTRICULI IN THE HUMAN STOMACH.—There are few diseases for which so many remedies have been proposed as dyspepsia; and, nevertheless, there are few diseases more empirically treated. Almost every journal we take up has something to say upon the subject; and, if all the sayings and proposals for the treatment of indigestion during the last few years were to be collected, the volume would reflect but little credit upon medical practice, and establish the melancholy fact, that it resembled rather a mode or fashion than a solidly established and grounded art. And, more than this, it would show that now one remedy, now another, had been not only in vogue, but resorted to in every form of stomach disease; and, if at the same time we could inspect the prescriptions of the leading physicians of any given date, we should find a wonderful sameness in the means they had employed. The reason of all this is that we are still woefully deficient in our knowledge of the pathology of the disease, the phases of which are as variable as those of the "ambiguum proteus;" and hence it is that every fact relating to the cause of the miseries the dyspeptic endures ought to be recorded, and the knowledge of it widely published. Of this nature, as I think, is the occurrence of the sarcina ventriculi in the human stomach. The reader is perhaps aware of the great interest that has lately been excited by the parasitical organisms, whether animal or vegetable, that have been discovered in the human body, and the importance—whether exaggerated or not—which some authors have attributed to them. I would now, however, merely refer to a case which was published some five years ago in one of the Edinburgh journals by Mr. Goodair, in which he relates his discovery of a vegetable substance in the matters vomited by a patient labouring under dyspepsia. The history of the case was that of a young man labouring under indigestion, who always vomited a short time after meals, and that a multitude of means had been unavailingly used to check so disagreeable a symptom. At length, examining the vomited matter under the microscope, Mr. Goodair discovered a vegetable existence, which, on account of its resemblance to a bale of goods tied together with cords, he called sarcina ventriculi. Mr. Goodair could not discover any external means by which this plant had entered the stomach and made that its habitat; and he therefore concluded that it had originated in that viscous, and was proper to it, just as certain parasitical animal existences

are proper to certain organs—for example, the hamuliera subcompressa to the bronchi; the strongylus gigas to the urinary passages; the polystoma pinguicola to the fat of the ovaries; the cysticercus cellulose to the choroid plexus; the muscles and aqueous humour of the eye; the filaria medinensis to the cellular tissue; the echinococcus humanus to almost every organ of the human body; and the six entozoa, which are found only in the several portions of the alimentary canal, including those branches from it constituting the gall-ducts. Mr. Goodair's discovery was soon after verified by Mr. B. Bell, of Edinburgh; and Mr. Bush also described the sarcina in "The London Microscopical Journal" of the same year. To these works the reader is referred. Four similar cases have lately been published by Professor Hasse ("Mittheilungen der Naturforschenden Gesellschaft"), which I shall abridge:—

CASE 1.—H. Knecht, aged thirty, a labourer, of very miserable appearance, had, as a boy, suffered much from scrofula. In his eighteenth year he became a shoemaker. At twenty, in consequence of severe indigestion, and repeated vomitings after meals, he left his trade, being recommended that a less sedentary employment would be better for him. He became a field labourer; but the change of occupation did not affect the disease, which continued with very little modification; experience, however, taught him that he was better when he ate sparingly and took aperient medicine. In 1846 he applied to Professor Hasse, and was admitted into the hospital. He was then very thin and cadaverous-looking, complaining of constipation, heartburn, with acid eructations and severe pains in the stomach, which were always aggravated by food, and continued until relieved by vomiting. He underwent the regular routine of practice, but without avail; on the contrary, although regimen and purgative medicines gave him some relief, the vomitings continued; he became daily thinner, and his bowels very irritable; he passed much slimy matter by stool, and, examining this under the microscope, Professor Hasse immediately recognised the sarcina among it, which was also found in the matter vomited.

CASE 2.—J. Weber, a peasant, aged forty-six. Three years previous had begun to complain of pain in the region of the stomach, sour eructations, and occasional vomiting after meals. In July last year, these became so severe that he was confined to bed, and in the following November he had suffered severely from diarrhoea, passing much blood and slimy matter with his stools. When he applied to Professor Hasse he was very weak, much emaciated, complained of great pain in the stomach, particularly after meals, flatulency, and repeated vomitings of sour matter. The sarcina was sought for and found in great quantities.

CASE 3.—J. Maag, a ragman, aged forty-seven. Had long laboured under indigestion, with frequent vomitings; is very feeble and thin. Milk immediately excites vomiting, and coffee and vegetables especially disagree with him. Appetite good, with a constant craving for food; flatulency and heartburn after meals, until relieved by vomiting. Sarcina found.

CASE 4.—J. Flachman, a weaver, aged forty-seven. Has been ill more than two years, and suffers from flatulency, heartburn, and vomiting after food. Sarcinae were found in the vomited matter. Another very similar case has also lately been published by Dr. Schlossberger, of Tirbingen ("Archiv für Physiologische Heilkunde").

In all the cases the patients were affected in a very similar manner with cardialgia, sour eructations, vomiting after meals, and great emaciation. All means of cure had failed until the sarcina was discovered; and then the symptoms readily yielded to repeated doses of the nitrate of silver, continued so long as sarcinae were to be found in the feces. This treatment lasted from six to eight weeks, when all unpleasant symptoms had ceased, the patients' health was restored, their strength returned, and they all got rapidly well.

The practical importance of these cases is too

obvious to require comment: and now a few words as to the origin of the sarcina ventriculi. The varied and repeated experiments of Hasse and Schlossberger, conducted with all the excess of patience and perseverance which characterize the German, failed to multiply the plant out of the stomach, or even to "acclimate" the plant, if I may use the term, in the stomachs of the dogs and cats that were fed with food containing it. I would, therefore, conclude that the parasite originated in the stomach, and was proper to it. Whether it was the cause of disease or the consequence of disease, is another question; at any rate it is obvious that the stomach in which it was found was a congenial nidus for its production, out of which it could not exist; and, indeed, of the five opinions which have been received as to the origin of parasites found in the human body, that which seems infinitely the most tenable, the least objectionable, and the best supported at once by common sense and by all the most enlightened views of modern physiology, is that of Rudolphi and Bremser, that parasites in general are generated primarily, not from ova at all, but spontaneously in each organ in which they are found. This is not a return to the "equivocal generation" of the ancients, nor is it a renewal of the "univocal generation," supported by Redi, by which was implied the communication of life to certain pre-existing substances by already living beings; but it is the formation *de novo* of smaller living beings by the separation of certain living particles from larger ones; and, for my own part, I am abundantly satisfied of this truth, as to the production, not only of parasites, but of the proper offspring of every kind of animal, the formation of the ova in the ovaries of which, like that of semen in the testicles, being attributable only to secretion; a fact which becomes sufficiently obvious when we contemplate the strict analogy which subsists between the ova of the most perfect animals and the germ of those which are least so. This germ, as in the polypus, is at first a part of the animal itself, and as certainly the product of secretion as any other of its organs; it constitutes primarily a sprout or limb of the parent, and it is only when afterwards thrown off that it enjoys an independent existence. In all these circumstances the ovum of the human being strictly corresponds with it; and, if we admit that ova of the most perfect animals are thus the products of the secretion of the ovaries, we must, *a fortiori*, allow the possibility of animals so much less perfect being in like manner the product of other organs of the body, each of which is capable of forming living tissues which are susceptible, in like manner, of an independent existence. The objection to this doctrine, founded upon its implying a power of creating life, I need hardly advert to. Such an objection could never have been urged had the real nature of life, consisting as it does only in a peculiar mode of being—a series of proper phenomena—been rightly understood. Animals can create nothing; but they can form, out of ultimate elements, certain new compounds endowed with irritability, which, when acted upon by proper stimuli, give rise to the display of all the phenomena in which alone life consists. It is absurd to talk of finite beings creating anything; but it is worse than absurd to talk of their creating that which has no existence. (a)

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Dec. 27, 1847; M. BRONGNIART in the Chair.

CHLOROPFORM.—M. Girardin and M. Verrier (of Rouen) communicated the results of their experiments upon animals. According to these observers, it is not by occasioning asphyxia that

(a) See "The History of a Case in which Animals were found in Blood drawn from the Veins of a Boy." Highley. 1833.

chloroform produces insensibility; a small quantity of that substance injected into the circulation causes unconsciousness and ebriety as readily as inhalation. Its effects would, therefore, be due exclusively to the action of chloroform upon the brain and nervous centres.—M. Amussat endeavoured to explain the differences of opinion expressed by various experimentalists, on the change of colour of the arterial blood during inhalation. M. Amussat believed these differences arose merely from the operative process employed. The veins and arteries should be dissected before inhalation in one region, and their colour well observed; during the production of the effects of ether or of chloroform, the artery would be seen gradually to assume a darker colour.—Dr. Blanchet forwarded some remarks upon the exhibition of oxygen gas, pure or mixed with air, for the purpose of removing the accidents produced by chloroform; and also drew the attention of the academy to the property possessed by that agent of causing dilatation of the pupil, by which several operations on the eye might be facilitated.

ACADEMY OF MEDICINE.

Meeting of Dec. 28; M. BÉGIN in the Chair.
The meeting was almost exclusively occupied by the election of a treasurer. M. Patissier obtained a majority of votes, and was appointed to the office.

M. Guersant, jun., presented to the academy the anatomical preparation of a cerebiform cancer of the femur, removed from a child, aged five years. The operation had been performed after inhalation of chloroform. The child was doing well.—Meeting adjourned at four P.M.

ICTERUS OF NEWLY BORN CHILDREN.—*IN-AUGURAL THESIS BY DR. HERVIEUX.*—The author recognises only one sort of icterus in newly born children, constantly appearing during the first month of extra-uterine life, occasioning always the same symptoms, and furnishing invariably the same results on dissection. M. Léger, in 1823, asserted that induration of the cellular tissue was constantly accompanied at its onset by icterus; this opinion M. Hervieux does not adopt, and brings forward in opposition ninety cases of sclerema, in thirty-one of which, only, jaundice was observed; and further, forty-five cases of icterus, in thirty-one of which, only, induration was noticed. Enteritis is not either, in M. Hervieux's opinion, the cause of the icterus of first infancy; it is merely a complication. The author cannot, from his own statistics, confirm the view of those who ascribe this form of jaundice to inflammation of the liver. The yellow colour of the skin was also, by some, ascribed to a sort of general ecchymosis, or transformation of the red colour of the skin of the newly born child. This theory must fall to the ground, when it is recollected that the deep-seated organs—the brain, heart, and osseous structures—partake of the yellowish tinge observed on the skin. The jaundice of the infant is considered by M. Hervieux merely as a momentary disturbance of the functions of the liver, which serves in intra-uterine life the purposes of hematosis, and is suddenly called into action after birth for the secretion of bile. All the tissues of the body are susceptible of acquiring the yellow tinge in proportion with their relative degree of vascularity. Dr. Hervieux never met with a single case of obstruction of the biliary ducts, and observed in the kidneys two sorts of yellow stains: one variety, the result of jaundice, consists of a uniform chamois colour of the tubular substance, which terminates at the separation of the latter from the cortical substance; in the second variety, the yellow patches are of a bright orange colour, occupying the apices of the papillae, and striated. In the urine, M. Hervieux never noticed the yellow hue, so remarkable in the adult affected with icterus, nor any discoloration of the fæces. M. Hervieux concludes his thesis by deprecating the various methods of treatment

hitherto recommended, and advising to abandon to the resources of nature the icterus of infants.

INFLAMMATION LIMITED TO THE SEROUS LINING OF THE VENTRICLES OF THE BRAIN, BY DR. RILLIET, OF GENEVA.—(From the "Archives" for December.)—A girl, aged ten years and a half, was suddenly seized with violent headache, accompanied with sickness, fever, photophobia, and fear of noise. On the fifth day violent general convulsions occurred, and on the seventh deafness; from that time forward headache, vomiting, and frequent convulsions. On the twenty-first day the pulse became slower and irregular; from the fifty-second day the intellect was gradually weakened, and complete idiocy was established on the sixty-eighth day; weakness of the right side of the body soon was noticed, and death four months after the beginning of the disease. On dissection, the convolutions of the brain were found completely effaced, the envelopes were slightly opaque, and ten ounces of albuminous fluid were extracted from the ventricles. The ventricular lining was gelatinous, thick, and remarkably consistent. This case is considered by the author to have been one of inflammation, limited at first to the ventricular lining, and terminating in chronic hydrocephalus. In order to establish the diagnosis between inflammation of the peripheric envelopes of the cerebrum and ventricular phlogiasis, M. Rilliet compares their respective symptoms. Both set in suddenly with headache, vomiting, constipation, and fever. But in peripheric meningitis the intellect is disordered at a very early period; whereas, in ventricular meningitis, it may be preserved until a very advanced stage of the malady. In external meningitis of children above two years of age, convulsions are not a characteristic symptom. They are remarkable in the other form for their precocity, their repetition, and their frequency.

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

Gunshot Wound of the Elbow and Forearm.—Mr. Aston Key recently exhibited to the London Pathological Society the forearm of a man who submitted to amputation above the elbow-joint in consequence of disease induced by a stray grape-shot striking him in March, 1845, while on service in India. The shot entered the forearm anteriorly, carrying away a large portion of the ulna, and also apparently implicating the elbow-joint: he was ill eleven months in bed, during which time upwards of thirty pieces of bone came away, and the wound had not healed till two years afterwards. He was admitted as a patient into Guy's Hospital in the month of October last, when he was found to be suffering under a perfect ankylosis of the elbow-joint and superior radio-ulnar articulation. There was a very imperfect motion of the fingers, which, together with the hand, the forearm, and the arm, were much wasted. The hand and fingers had a peculiar purplish-red appearance; the thumb inclined to the palm, and was almost immovable; there was severe constant pain of the thumb, the index, and second finger, together with numbness on the palmar surfaces, the pain and numbness increasing when the patient was in the open air, and subsiding entirely when he was near a fire; the little and ring finger were devoid of pain, but only partially moveable, and retained perfect sensibility, which was all but absent in the index, middle finger, and thumb; great pain and numbness existed at the back of the elbow-joint, and also from the fingers to the shoulder. The radial pulse was full and strong. In the dissection of the removed limb, the humerus, ulna, and radius were found ankylosed; the internal condyle projected anteriorly, the external posteriorly. The flexor muscles had lost their condyloid attachments, and were connected by fascia principally to the ulna below; they were much smaller than natural; the flexor longus pollicis had become shortened from the injury, and would not allow of the proper extension of the thumb. The median nerve, at a point corresponding to the bend of the elbow, presented a bulbous enlargement, about the size

of a pea or small bean, and immediately below it was intimately adherent by processes of thickened fascia to the textures surrounding it, so that for the space of half an inch the nerve apparently consisted of fascia, and could not be distinctly isolated by dissection; below this its appearance was natural. The ulnar nerve was similarly adherent to the cellular tissue surrounding it for the space of an inch, immediately after it emerged from between the two heads of the flexor carpi ulnaris. The extensor muscles had lost part of their attachment to the external condyle.

Malignant Disease of the Clitoris.—Mr. Brooke exhibited to the Pathological Society a specimen of this disease taken from a woman, forty-five years of age, who had been married for nearly twenty years, but had never been pregnant: menstruation had always been regular. For several years preceding any external appearance of the disease, sexual intercourse was followed by pain in the region of the clitoris, which at last became so severe as to compel its discontinuance. About two years since, an excrescence, attached by a pedicle, and about the size of a nut, was removed by ligature from the region of the clitoris; shortly after which, ulceration commenced at or near the point from which the morbid growth had been removed, and had gradually progressed ever since, and, previous to the operation, had involved one of the nymphæ (the other having been apparently eroded) and a considerable portion of both labia, and extended downwards to within three quarters of an inch of the urethra. The patient was placed under the influence of mercury, and subsequently took sarsaparilla with iodide of potassium for several weeks, but without in any degree arresting the progress of the disease. She had latterly suffered from almost incessant pain, which rendered necessary the repeated exhibition of opiates. The pain was much aggravated by the application of escharotics. The removal of the morbid parts by the knife was considered advisable, although one of the inguinal glands was a little enlarged. This was accordingly done, the actual cautery being freely applied to the course of the clitoris, and to every point of the surface that wore a suspicious aspect. Profuse hemorrhage followed from several small vessels, which there was much difficulty in arresting. The operation was much protracted, but the patient was kept under the influence of chloroform for nearly an hour; and, when its exhibition was discontinued, she soon recovered, without any unpleasant symptom. The wound is now perfectly healthy, and nearly healed, and the patient is free from pain.

Famine Fever.—Mr. George Bottomley, in his remarks, in "The Provincial Journal," on the fever among the poor Irish which occurred at Croydon in July last and the two following months, says:—In this fever the complications were those of the head and mucous lining of the intestinal canal. In three patients jaundice occurred, terminating fatally with one of them; and in one or two only was there any tendency to chest affection as a consequence of the fever. The form of fever approached nearly to that known as the 'simple continued,' the 'synochus' of Cullen; but a strong tendency invariably existed towards a termination in one of a low nervous or typhoid type. Keeping this in view, the indications were plain, viz., to be as sparing of antiphlogistic treatment as the case would allow, discarding the use of the lancet altogether. This plan was literally adhered to. Even in the administration of mercury, antimony, and purgative medicines, great care not to be too liberal in the use of depressants was necessary, and to commence the exhibition of nutritious diet, however small the quantity, as soon as the stomach was enabled to perform its functions; while the first tendency to exhaustion was promptly met by stimulants, cautiously and gradually afforded according to the urgency of the symptoms, with strict attention to the cerebral affection, when evidenced by a comatose condition of the patient, insensibility of the pupil, subultus tendinum, by means of cold

applications and counter-irritation of every kind. There was not much ground for believing the fever to be infectious, as infection appeared to arise only from the accumulation of cases in one ward, the air becoming so impregnated with noxious effluvia, emanating from their bodies, that those who came in contact with it suffered in a way the same as miasmata would produce arising from any other source; and, by separating the patients, the appearance of infection immediately vanished. Those who were suffering from it were distributed indiscriminately among other patients in each ward, as the principle adopted was to divide as much as possible the cases, and not to accumulate them in one apartment. With unremitting attention to ventilation and cleanliness—points of the utmost importance, especially in the treatment of the Irish—little or no danger of infection existed. Had separate wards been devoted to the fever patients alone, the results, doubtless, would have been far less favourable, while under the plan adopted the other patients have not suffered. Two out of six nurses, who were engaged in constant attendance, were attacked, and exhibited the type of disease described in rather a severe form; but this is not surprising, if the very arduous character of their engagements at this period be considered. The number was by no means adequate to the duty; the nightwork was severe, and the daily attendance of a most trying character, owing to the condition of the patients. The nurses had full and stimulating diet, and official visitors took a glass of wine and a biscuit before entering the wards; and not the slightest fever symptom appeared in those brought into contact with the sick. The result would have been much less satisfactory had fever wards been made, and so concentrated the miasmata, which it was the grand object to disperse. The mortality was as under:—

In-door cases 100—Deaths 3
Out-door „ 79— „ 1

This very small mortality may be attributed chiefly to the unlimited supply of stimulus and concentrated nutriment, and to the constant attention afforded to the patients.

Manner in which the Chinese Nutgalls are Formed.—Mr. Edward Doubleday stated, at a meeting of the Pharmaceutical Society, that the insect contained in the galls belonged to the family of the Aphidians. When the gall is broken it is found to contain a downy matter of a white appearance, and numerous little rounded dark-brown substances, not bigger than grains of coarse sand. These are the insects which have produced the gall by the puncture of the leaf, and the down is a peculiar white secretion with which the gall-making aphides are covered. Their very dry condition and continued shaking about in the gall detach this down, and break off the legs and antennae of most of the insects brought under notice. The galls are formed in the following manner:—The first puncture is made upon the upper surface of the leaf by the female aphid; from this wound a cavity is formed by the preternatural expansion of that part immediately around it, which assumes on one side the appearance of a small blister, but on the other has an opening of greater or less dimension. In this sac the insect is lodged, and eventually brings forth its young. Their puncturing the inner surface of this cavity, for the purpose of sucking the fluids which form their food, increases the disease of the leaf, and the swelling goes on increasing, but not at the basal part, and it thus becomes of a bladder-like form, connected to the leaf by a narrow neck. As the bladder extends and thickens, the neck also becomes thickened, but this thickening going on internally only, or at least chiefly, closes the aperture. Here the insects probably live and increase for some time, and only getting so much of the outward air as passes through the compact substance of the gall; ultimately these galls probably burst, and thus allow the insects to escape. This takes place at the period when there is brought forth a winged generation of both sexes. These winged individuals can then fly to other spots

and deposit their eggs, which in another year will give birth to a fresh race. This is only a supposition, but rests on the observed habits of other species. It would be very interesting to ascertain the real nature of the shrub on which the galls are found, and the mode in which they are attached, whether it is to the upper or under surface of the leaf, what is their appearance when they have burst, and especially to discover the insect in its winged state.

Imperforate Vagina presenting itself during Labour.—Dr. James Ogden relates, in "The Obstetric Record," the case of a lady who, having been married for ten years, was taken in labour of her first child. When in her nineteenth year she was attended for retention of the menses. An incision was made in the closed vagina, and a tube kept inserted in the opening for a week or two. The opening, however, ultimately closed; after which she regularly menstruated through the passage by which she voided her urine. On a careful examination of the patient, who now suffered severely from labour pains, recurring at short intervals, there was discovered a dense, semicircular, smooth tumour, presenting itself to the touch; and no trace of the organs of generation, nor the slightest appearance of a cul-de-sac, could be discovered, for the labia, the nymphæ, and the clitoris were wanting; in fact, there appeared nothing but a flat, hard tumour, about the size of the foetal head. The pains continued to be extremely violent, accompanied by strong expulsive efforts, creating some degree of exhaustion. An opening of considerable extent was made with a scalpel, as large as the rectum and meatus urinarius would admit of, without injury to the parts. The barrier or intervening substance was fully an inch and a half in thickness. The membranes were unavoidably severed in the operation, and a considerable quantity of water was evacuated. In about an hour after the section had been completed, she gave birth to a stillborn, moderately sized male child, during the expulsion of which, great care was required to prevent laceration. About two years after she became again pregnant, when it was found necessary to open the vagina again with the scalpel, and to extract the fœtus with the vectis. It appears that the gentlemen who attended her prior to her marriage had attempted to open the vagina with a lancet, for retained menses; but, finding the intervening substance so thick, were compelled to resort to the scalpel. After cutting to the depth of an inch and a half, they were much surprised by a gush of water issuing from the wound, and, on opening a little farther, they succeeded in evacuating a quantity of thick grumous blood, and agreed to introduce a canula to keep the opening pervious: this, however, was not retained long; and they supposed the opening closed. The escape of water during the operation could never be accounted for; but now it was supposed that the meatus urinarius, in the upper part of the vagina, must have been opened, and remained pervious; and through this she must have menstruated, and become impregnated. There is no proof that the like ever before occurred, or has been recorded in any book.

Fatal Apoplectic Collapse after Coition and Debauch.—Dr. G. C. Watson relates in "The Obstetric Record" the case of a female, twenty-seven years of age, to whom he was called at midnight, in consequence of being in what was reported a fit—apparently dying. When seen she was lying on a sofa divested of her dress except her chemise, her whole frame passive and motionless, her extremities cold (especially the feet); the features wore an inexpressive look, and she could not be roused out of her stupor. Her feet were extended and incurved so forcibly that it was with difficulty any degree of flexion of the foot, or of eversion, could be practised; they turned back to their spastic contraction immediately. She frothed at the mouth; her teeth were firmly clenched; the heart's action was feeble. A warm bath was ordered to the feet, brandy exhibited internally, and volatile applications to the nostrils. She, however,

never rallied, but died in the course of three hours. It appears she had led for some time past a very debauched life, frequently getting dead drunk; and a week or two before her death had fallen in the streets and hurt her head. The day previously to her death she appeared in her usual health, but depressed in mind in consequence of a young man, who used to cohabit with her, having taken up with some other girl. On the night of her death she had been out, and returned home saying that she felt very ill with something wrong in her head, and vomited a dark brownish liquid mixed with solids. It appears she retired to bed with the young man just referred to, who, supposing that she was only inebriated, had just been in the act of coition with her, when she was seized with the fit. At the post-mortem examination the summit of the uterus was found in a normal condition. On tracing it further there were detected signs of increased vascularity, of which the left ovary also partook, being much gorged with blood, as if stained with port wine. The left Fallopian tube was found with its fimbriated extremity grasping this ovary, and required some gentle force to detach it without doing any violence to the integrity of either organ. The os uteri was rather vascular. The left ovary contained a considerable quantity of blood in its substance, being in a congested state, and a cavity filled with a claret-coloured fluid. The right ovary was natural.

Irritability of the Muscles of Paralyzed Limbs.—Dr. Bentley Todd sums up the results of his observations in the following propositions:—
1. The contractility or irritability of the muscles of paralyzed limbs bears a direct relation to their state of nutrition. 2. The excitability of the paralyzed muscles to galvanism varies with the condition of their nerves more than with that of the muscles themselves. 3. In the majority of cases of cerebral palsy, the contractility or irritability of the paralyzed muscles is less than those of the sound side, simply because their nutrition is impaired by want of exercise. 4. No diagnostic, to distinguish between cerebral and spinal palsy, can be based on any difference in the irritability of the paralyzed muscles: for the muscles in spinal paralysis exhibit the same states as those in cerebral paralysis. 5. The tendency of strychnine to affect the paralytic limbs before the healthy ones is attributable to its being attracted in greater quantity to the seat of lesion in the brain than to the corresponding part on the other side. 6. The manner in which the muscles of a paralyzed limb respond to the galvanic stimulus assists us in forming an opinion as to the state of its nerves: if they respond feebly, or not at all, the nerves are in a depressed state; if they respond vigorously, more so than the healthy muscle, the nerves are in a state of irritation.

Method of Discovering Iodine in the Urine.—M. Rayer recommends to boil thirty-two ounces of urine down to one ounce. Soak in this residue a strip of starched paper, then rub over it a glass rod, previously dipped in nitric acid, which will produce a blue colour if there be iodine present. In this manner iodine may be detected in the urine of an individual on whom the injection of the tincture had been practised for an hydropic knee. This process is remarkable for its extreme simplicity and readiness of execution. When the iodine is in large proportion, it may be found even without previously evaporating the urine. The process is insufficient when iodine is in feeble quantity.

Spontaneous Aneurism at the Head of the Arm.—M. Velpeau had a patient in whom there was a tumour containing fluid in the above situation. It had no pulsatory movement, and pulsation had never been felt in it since its first appearance, five or six years before. He had no pain in it, and suffered inconvenience only from its limiting the motions of the arm. Several surgeons saw it, but none arrived at the conclusion that the tumour was aneurismal except M. Velpeau. He thought, however, that diminution in the size of the tumour could be produced by

pressure, and, on introducing an exploratory needle, some arterial blood escaped. A ligature was accordingly placed on the brachial artery, immediately above the tumour, but without the effect of changing in the least the size or condition of the latter. An attempt was afterwards made to obliterate the sac, by producing inflammatory action in its interior, and for this purpose several needles were introduced through it. These were allowed to remain ten days, and when removed the contents of the tumour were still found to be fluid. Compression still diminished the size of the swelling, but pulsation had ceased. It was then determined to lay open the sac, and apply a ligature above and below the opening in the vessel, if such were found to exist. An incision was made, five inches in length, through the tumour, when a cavity was found in the muscular substance, from which, on slackening the tourniquet, dark blood flowed in a continuous stream. Several small bleeding points were tied, but the hemorrhage continued from above. A small sac was found at the upper part of the wound, around the base of which ligatures were applied, and the whole cavity was filled with charpie. The hemorrhage was now entirely arrested; the patient was put to bed, and the limb placed in an elevated position. Two days afterwards there had been no return of the bleeding, but the patient had suffered from epistaxis, and seemed to be in an unsatisfactory condition. This tumour was considered a rarer variety of aneurism, consisting of the presence of a small sac, like a thimble, around an opening in the coats of the artery; and that from this sac the blood exuded or escaped by a direct communication between the large cavity and the interior of the aneurismal sac.

Brandy in Childbirth.—M. Retzius had a patient in labour, in whom the shoulder of the child had been firmly wedged for three days, and, in spite of copious venesection, all attempts to turn proved fruitless. Brandy was now given to the mother till complete intoxication was produced; in two hours afterwards turning was performed without difficulty. The woman recovered perfectly, but lost one of the labia externa from gangrene.

Incision of the Cervix Uteri.—M. Michet proposes an operation in cases of rigidity of the neck.—1. In puerperal convulsions, in which the extraction of the fœtus is considered necessary. 2. When serious hemorrhage occurs at the close of pregnancy, and the cervix remains undilatable. 3. In contraction of the pelvis, when it has been ascertained by measurement that the application of the forceps will be necessary, and the cervix does not readily dilate. 4. When the head is separated from the trunk and remains within the uterus, and the rigidity of the cervix will not allow of the introduction of the hand.

Iodide of Lead.—When this preparation is formed by precipitation of acetate of lead by iodide of potassium, a certain quantity of iodide of lead always remains in solution. There is about ten per cent. less of iodide of lead than theoretically ought to be. This is owing to the formation of a double compound, an iodide of lead and potassium remaining in solution. This portion may be thrown down by the addition of a few drops of nitric acid. It is better, however, to prepare it by precipitating iodide of potassium with nitrate of lead.

ROYAL COLLEGE OF SURGEONS.—Mr. Arnott has been elected into the Court of Examiners in the room of the late Mr. Liston.

The cholera has made its appearance in Diarbek and Orfa, and had visited more or less most of the principal towns in Mesopotamia and Armenia, always advancing in a westerly direction. Three cases of cholera had appeared in Damascus. In Bagdad the cholera had entirely ceased. Two hundred Algerine families have arrived in Damascus to settle there, and were well received by the authorities, as they stated that they preferred living under Mahomedan rule to being subjects of Infidel France.

THE MEDICAL TIMES.

SATURDAY, JANUARY 8, 1848.

DISCOURSES ON THE HEART, BY WARDROP.

Our number for
JANUARY 22, 1848,
will contain the first part of an elaborate
work by

MR. WARDROP;
entitled
DISCOURSES
ON THE
NATURE AND TREATMENT
OF THE
DISEASES OF THE HEART,
WITH OBSERVATIONS ON THE
ANATOMY AND PHYSIOLOGY
OF THE
ORGANS OF CIRCULATION.

[THE AUTHOR'S ANNOUNCEMENT.]

"Before entering upon the consideration of the diseases of the heart, and in order to illustrate some important pathological phenomena connected with circulation and respiration, I propose in the present inquiry to draw the attention of the reader to some points in the anatomy of the circulating apparatus, and to certain functions of the heart, which I have on a former occasion endeavoured to point out, and by a knowledge of which I am confident that many disorders, not only of the heart, but of the respiratory and nervous systems, may be satisfactorily explained, and rational principles for their treatment established.

"Jan. 6, 1848."

"JAMES WARDROP.

This important work, on whose extreme value to science all commendation is needless, will be published weekly, to the extent of from two to four sheets, and in such a shape that it may be readily separated from the journal and bound into a distinct volume, with its own title-page, index, and paging. It is calculated that this work alone will be worth the whole annual subscription to the journal. Gentlemen wishing to receive this work with punctuality are requested to give their orders immediately to their booksellers, or to forward their orders, with remittances, to our office.

THE POOR-LAW CONVENTION.

THE committee met on Wednesday, and had under consideration very important business.

It is understood that the returns made to the committee have extended to about eight hundred, and that subscriptions have been received from a great number of the gentlemen forwarding such returns. It is unnecessary to say that the information thus laid before the committee is of the greatest importance, and must exercise a very useful influence in the application of a remedy. Apart from any result that may be produced on the Government, the Convention has great reason to congratulate itself on the great and favourable change produced in public opinion, and, through it, on many boards of guardians. Since this movement was first publicly originated, increases of salary have taken place in the Holborn Union, in Southwark, in Birmingham, and in Shoreditch, and reports have reached us of similar changes in other districts.

Very recently the board of guardians of the

Whitechapel Union voted the sum of £100 to Mr. Byle and Mr. Liddle, their very able medical officers, who are members of a committee of poor-law medical officers; and we hear that the board of guardians of St. George's-in-the-East engaged the services of a medical practitioner at seven guineas a week to attend to the paupers during the illness of one of the medical officers.

At Plymouth, within the last ten days, a coroner's inquest was held on the body of a pauper, in consequence of some alleged neglect of the medical officer. The jury, however, showing the more enlightened views recently made known through the Convention, instead of bringing in the usual stereotyped verdict of neglect by the medical officer, declared that it was not he, but the parsimonious system, that was at fault; and a similar verdict has been found by a jury in Mile-end, the details of the inquest being as follows:—

"ALLEGED NEGLECT OF A MEDICAL UNION OFFICER.—Before Mr. Baker, at the Bricklayers' Arms, Mile-end Old Town, on view of the body of Thomas Harrington, aged twelve.—The mother said that about five weeks ago she removed from St. George's-in-the-East, where deceased had been attended by Mr. Watt, medical officer of the parish, for scarlet fever and whooping-cough. He recovered from the former. After she came to reside in Thomas-street, she applied to Mr. Watt, who directed her to go to the medical officer of the union she was residing in. She did not do so, as deceased got better, till Saturday last, when she became alarmed at his appearance. She obtained on that morning an order from the relieving overseer for the attendance of the surgeon of the union, Mr. Howlett. At eleven o'clock she saw his assistant, and acquainted him with the urgency of the case. As no one came she went again at five o'clock, when the assistant gave her some medicine, and directed her to come again at nine o'clock. She administered the medicine, and about seven o'clock her child died.—Several of the jury observed that there appeared to be some neglect, and they were of opinion that the inquiry ought to be adjourned.—The coroner remarked that it was very possible that there was no intentional neglect, and that Mr. Howlett was fully engaged in his medical duties.—The foreman said, had there been a sufficient number of medical officers, and properly remunerated, the deceased might have received assistance. He thought that they might embody in their verdict that the opinion of the jury was to that effect.—Verdict, 'That the deceased died a natural death, and the jury are of opinion that a liberal compensation should be afforded to a competent number of medical officers, whose duties are to attend to the poor.'"

THE COLLEGE OF PHYSICIANS AND THEIR DIGNITIES!

WERE the ruling powers of this body more zealous in controlling and regulating the conduct of its members, and did they talk less about its dignities, and say less of the flimsy pretences by which they endeavour to sustain their corporate superiority, they would be infinitely better employed, and they would more contribute both to their own interests and to the moral character of the College of Physicians.

The disreputable correspondence of Drs. Watson and Williams ought to read the president and his officials a useful lesson, whilst it affords to the profession at large a public test of the discreditable and unjust principles which guide the conduct of the members of that body towards each other. In all those associations where men assemble and congregate together in the various classes of society, whether under the denomination of colleges, companies, corporations, or

clubs, there are some specific regulations amongst them by which certain fines or other punishments are inflicted on those members whose conduct becomes in any way inconsistent with the character, or hurtful to the well-being, of the body to which they may belong; and it is earnestly to be desired that the College of Physicians would not only enact but put assiduously in force some code of laws, the sole and avowed purpose of which should be to expose and punish such members of their body as shall in any way trespass on the usages of society, and who shall depart from the paths of honour and justice, in their conduct towards their professional brethren. Such a system of legislation would, doubtless, lead to incalculable good: it would not only add to the respectability, or the dignity, if they please so to call it, of the College, but it would be the means of fostering a more kindly and honourable feeling amongst its members towards one another.

There would be a further object—a more extensive benefit—that would arise from the rigorous application of such a code of laws as we have alluded to. The College of Physicians would then hold forth a most praiseworthy example to all the other medical bodies, and thus a system of moral "surveillance" might ere long become universal throughout the medical profession.

To those who, like ourselves, have daily opportunities of seeing the quarrels and bickerings amongst professional men, and the gross injustice that the younger branches of the profession, and those, too, in the more humble walks of it, are constantly exposed to;—to those, we repeat, the practical benefit of such laws would be a great and welcome boon: for with deep regret we acknowledge that it is too much the custom for many, even of those who occupy the highest positions and are in the most lucrative walks, to endeavour to shake the confidence of the sick, and to depreciate the abilities of their former attendants. Nor is it surprising that amongst a body of men whose conduct towards one another can be like that of Drs. Williams and Watson, that their treatment should be of a still more disreputable character of those whom some physicians have contemptuously, but most ungraciously and ungenerously, denominated the "low and ignorant apothecary"!

THE "QUACKLEY" OPERATIONS.

"AN OLD PRACTITIONER" addresses us in a very full letter on these interesting accessions to surgical science. He enters into a more elaborate scientific scrutiny of these "antiquated barbarities" than they merit, or our readers would hear. He concludes thus:—"Such are the operations, so curious—so unwarranted—and such are the circumstances under which they are paraded to public notice! Alas for us, such are the benefits we are to receive from our protectors! Such the examples that printed authority sanctions! A liberal profession, indeed! Gentlemen, forsooth! I should be glad for the *recipe* which can secure us for the future such advantages—if the Free-Hospital system and all its detestable vulgarities are in this way to override our old codes of established right and wrong."

"GALEN" suggests that there is at least one professional use found for "the bankrupt concern in Gray's Inn-lane:" its practice will henceforth be a constant indication of what honest members of the profession should avoid. "For the thousands and tens of thousands of

pounds that folly has misspent on that eleemosynary bubble, we have now at length a show of some return: twenty occupied beds so well looked to that they furnish the papers with a surgeon's daily puff! What a hint for Morrison! What a suggestion for Holloway! Cannot they try their hand on a small scale at something 'Free' and very 'easy'? How it would enhance their advertisements! As to the audacity of the thing—as to the daring profanation of the use of charity—have they not examples enough in the profession to keep them in countenance?"

"LEX SCRIPTA" says that we have not done justice to the famous advertisement in our parallel of the barrister's puff. He says that the "extraordinary operations" of the surgeon are advertised with a skill impossible to transfer to any professor of the law, but ventures to suggest, as the nearest thing he can find to it, the following:—

"FORENSIC ELOQUENCE!—Three hours' speech, in the case of a venerable female moving in high circles, eloquently delivered under the influence of ethereal excitation, by Jacob Buzfuzz, Esq., Jun., Barrister-at-Law, Standing Counsel to the Sham Plea Society! Also four hours' speech in the case of an interesting female, aged seventy-five—under ether inhalation—successfully given forth by Jacob Buzfuzz, Esq.: perfect success of both clients," &c.

Mr. H. F. WARD insists that it is a case which requires the immediate intervention of the Council of the College of Surgeons. They are the guardians of the public morality and honour of the surgical profession; and it is for them to see that no public surgical establishment, however obscure, and no hospital surgeon, however exceptional, be permitted to introduce such frightful practices into a profession that avowedly, at least, cannot afford to tolerate them. He adds, that in a less degree Dr. Innis and his Skin Dispensary have claims to be overhauled. He proposes a memorial to the council from every surgeon who shares his opinion.

"CHIROUS" writes in a similar spirit, adding his expression of alarm at the mischief threatened to the medical practice of the rising generation by the *per fas et nefas* mode of winning notoriety and causing a sensation, especially when the plan is actively countenanced by all the influence possessed by a medical periodical. He thinks that legitimate practitioners ought to "mark by the most emphatic demonstration in their power that there exists between themselves and such empirical attempts the most decided lines of demarcation."

MEDICAL CORPORATIONS AND PROFESSIONAL EDUCATION.—MR. GREEN AT THE HOUSE OF COMMONS.

We consider it our duty to offer a few remarks on the evidence of Mr. Green, given before the Select Committee on Medical Registration, which we this week publish. It is of great importance to the general practitioners, as it still further shows the anomalous position in which they are placed, the danger to which they are exposed, and the opinions entertained in reference to them by those who practise only the pure branches of medicine and surgery. The opinions of Mr. Green are especially important, inasmuch as he is a gentleman of liberal education, and of great intelligence; yet we are compelled to differ from him as regards many of the views which he entertains, and we regret sincerely that the prejudices of his professional position should have biased his judgment in medical politics.

It is evident that the great subject of Medical Reform has remained unsettled to the present moment, in consequence of the difficulties which have arisen in disposing satisfactorily of the class of general practitioners. It is only within the last few years that their numbers, education, and usefulness have brought them into notice, and procured them respect. In days past and gone, they had no well-defined system of education—no barriers to protect them from illiterate empirics, who assumed not only their name, but exercised their functions to the injury of their reputation and of the public health. A legislative enactment, thirty years ago, made them a distinct people, who, like the ancient Hebrews in the land of Egypt, have become renowned and powerful in spite of the most strenuous efforts to keep them down. Their social and professional advancement has been opposed by the most formidable barriers erected by class interests. These mutilated the Apothecaries' Act of 1815 by insisting that the Hall examiners should be chosen from the Company: the education of the general practitioners was thereby periled, as individuals perfectly unacquainted with any branch of medical science might have exercised the responsible office of commissioning individuals to practise the healing art upon her Majesty's subjects throughout England and Wales. The guilt of this iniquitous clause lies at the door of the College of Physicians, who still further insisted that the slavery of a five years' apprenticeship should be endured before a candidate should be permitted to obtain the apothecaries' licence. Nothing short of the most persevering exertions could have averted the evils which such enactments were intended, and were calculated, to produce; and, while we are no friends of the Company as a licensing medical corporation, we must award it a wreath of laurels for its praiseworthy efforts on behalf of medical education.

Yet Mr. Green endeavours to cast opprobrium on the apothecaries for defects in their acts of Parliament which are chargeable upon the physicians, and in the teeth of the profession tells us that the study of anatomy and surgery is interrupted by the preparation necessary for the examination before the Society of Apothecaries. If we may take experience for a guide, we are led to the conclusion that Mr. Green's college has been less disposed to compel the mass of students to cultivate diligently the aforesaid sciences than the Company, for, if we mistake not, it set Surgeons' College the example of requiring an increased amount of anatomical knowledge by more attention to dissections than was formerly demanded of young men attending the medical schools.

We admit the justness of Mr. Green's remarks in reference to apothecary apprenticeship and apothecary examinations, though they come with a very ill grace from the member of another licensing medical body which has done all in its power to force the sale of its diploma for the twofold purpose of replenishing its funds and of benefiting the members of the corporation. Let us not be mistaken in the term just employed—A member of the college is not a member of the corporation, the former being destitute of all privileges, while the latter is made a partaker of the honours and emoluments of the institution.

Mr. Green's remarks in reference to apprenticeship are good: he says, "I do not see the advantage of it; on the contrary, I see many disadvantages, as regards the education of professional men; if you could always secure a

master who could teach, and who would teach, it might have its advantages; but the facts are so notoriously opposed to that, that one cannot but wish the apprenticeship clause done away with. The dedication of five precious years taken from the time of study to the compounding of drugs is an unreasonable period; but even then they do not seem to learn pharmacy, at least they do not acquire an adequate knowledge of the *matéria medica*; they may know how to make up a draught, but they do not obtain a scientific knowledge of pharmacy; as regards this, the five years are thrown away." These are truths which few will be disposed to controvert; and the observations in reference to the Court of Examiners are equally important. The witness says, "If you will allow me to refer to the constitution of the examining court, there seems to be no adequate provision for examination by those best qualified for the office. The examination in medicine would best devolve on those who have made its science their especial object, and the examinations in chemistry and pharmacy should be conducted by those persons who have made the sciences of chemistry and pharmacy their study. Now, a general practitioner, merely as such, cannot be supposed to have made chemistry and pharmacy the objects of special and scientific study; he, for the most part, and especially a member of the Apothecaries' Company, buys his compounds already prepared."

If the Court of Examiners, of which Mr. Green is a member, had always manifested a concern for the education of medical students, and had invariably instituted an intelligent and searching examination whenever a candidate presented himself for the diploma, these statements of a college advocate would have exercised no small influence amongst the members of the profession; but what has the Lincoln's Inn corporation done for medical education, or for the social improvement of general practitioners? We answer, from Mr. Green's own showing, scarcely anything. "The examination," he says, "as now conducted by myself and colleagues, is stricter than it was when I was admitted a member: the standard has been rather raised than lowered." Rather is a term of comparison which shows but a slight shade of difference; and what has occurred within a very short time proves that, if the examinations are stricter than they were, they are far removed from anything like perfection. Nor does the College of Surgeons wish to improve either its *curriculum* or its examination, as regards those whose only ambition is to obtain a member's diploma. The excuse made is, that a race of general practitioners, highly educated, would not suit the wants of the people, while it would be one of the most powerful means of promoting quackery. The learned surgeon of St. Thomas's must certainly not have been in earnest when he gave utterance to this sentiment, or he must have indulged in a certain figure of speech by which one thing is put for another—the wants of the people meaning those of pure surgeons—for in proportion as general practitioners receive a good professional education, will the public not require the services of the "pures" of medicine and surgery. A love of gain has influenced the two London colleges in all their proceedings: it shackled the associated surgeon-apothecaries in their movements prior to 1815; it has made the council in Lincoln's Inn-fields so insensible to shame as to send forth into the commonwealth of medicine men who, according to Sir James Clark, "could not spell very common words in their native language;" it has

prompted the same official body to seek a new charter for their college; it has excited Mr. Lawrence to insult the members by the opprobrious epithet of "geese"; and it is still in operation to the detriment of medical education and the enfranchisement of general practitioners.

To this latter circumstance Mr. Green has adverted in his evidence, now under consideration, where he says, "The council of the College of Surgeons are elected entirely by the fellows. I should hardly say that there is a feeling among the profession, there is among the general practitioners, that the council ought to be elected by the whole body of members. The election then would be with persons who do not make surgery their exclusive study; and other interests would be involved in the election than those which are essential to the promotion of the science of surgery. You would have then electors who were not properly qualified, by reason of their not making surgery their exclusive study." This, then, should be sufficient to teach the members that they will be for ever excluded from corporate privileges in Lincoln's Inn-fields. It is not a college of general practitioners, but of pure surgeons; and the ordinary diploma is nothing more than a mercantile commodity forced upon a certain class of the profession, in order that the college funds may be augmented.

The evidence of Mr. Green shows in a very strong light the necessity of an immediate incorporation of general practitioners, if they are to make further advances in knowledge and respectability. The College of Surgeons has utterly rejected them; it has resolved that their education shall be of as an inferior a character as is compatible with the safety of the public; and it is using every effort to wrest from the Society of Apothecaries all that is valuable in the Act of 1815. In a new college, examiners in the various branches of medical science may be appointed such as Mr. Green himself will approve, and which will obviate the necessity of compelling general practitioners to undergo four examinations before as many different courts prior to their being allowed to practise. In a new college the principle of popular elections may be safely attempted—the electors becoming such in consequence "of not making surgery their exclusive study;" and here the experiment may be tried, how far quackery can be suppressed by raising the standard of medical education. It is evident that reform, to be permanent, should have connected with it the incorporation of general practitioners—their honour, respectability, and usefulness require it, and they have power to accomplish it.

PROFESSIONAL SQUABBLES AT THE GREENOCK INFIRMARY.

THE Greenock Infirmary, like some of her sister institutions in the southern part of this island, has obtained an unenviable notoriety within the last few weeks, in consequence of a misunderstanding between two of the medical officers, and the sudden death of a patient admitted into the hospital with a compound dislocation of the knee and other injuries. These two circumstances the public, by a process of reasoning in which it is very prone to indulge, has coupled together, and the conclusion drawn is, that, if the doctors had not disagreed, the man had not departed this life in so precipitate a manner. It is a well-known fact that the poorer members of the community look with great suspicion on the charity of eleemosynary institutions, and there is a dread of entering hospitals in cases of sickness or accident

which nothing but sheer necessity overcomes. This feeling has been produced from the idea that either they will not receive all the attention which their cases demand, or that they will be made the subjects of experiments, and, should they die, that their bodies will be dissected. The occasional derelictions of duty which have occurred in hospitals, and the unwillingness of governors to hold the scales of justice with an even hand, have not only increased the dread of the poor to enter these institutions, but, in case of any supposed injustice, have induced them to pass a very severe judgment upon the offenders.

The Greenock Hospital appears, from the statement of the governors, to have been in the happy enjoyment of the public confidence, till a man of the name of John O'Neil was admitted, on the 12th of November last. He had met with an accident at the new harbour, and his employer, not being able to procure immediate medical assistance, sent him to the infirmary. At the time of his admission, Mr. Arch. F. Richmond was the medical officer in charge of the wards. While going his rounds through the hospital, the man O'Neil was brought in, and Dr. Speirs entered the ward in which Mr. Richmond was, and mentioned the circumstance. Shortly afterwards the patient was carried up and placed on a bed, and, according to the statement of Mr. Richmond, Dr. Speirs resolved to take the entire charge of the case to himself.

When the patient was admitted he had a pale, anxious look, complained of want of breath, and called loudly to be raised up when in a recumbent position. Mr. Richmond, considering that it was his duty to examine the case, commenced doing so, when he was interrupted by Dr. Speirs, who, with the assistance of the house-surgeon, endeavoured to reduce the dislocated joint by powerful extension of the limb. Tartar emetic was then administered, to the amount of five or six grains, according to the testimony of some of the witnesses, and the man removed to the operating theatre. Here pulleys were brought in requisition, and ether administered by means of a sponge. Mr. Richmond, supposing that he was to be excluded from the management of the case, in the meantime left the infirmary in company with Dr. Mc'Gowan. On the evening of the same day, at six o'clock, the patient expired. On the following morning a *post-mortem* examination was instituted (without the consent of the friends of the deceased), when it was discovered, on making incisions over the knee, that great effusion of blood had taken place under the skin, that the ligaments were extensively lacerated, and that a portion of the bone had been fractured. On examining the chest three ribs were found to be fractured on the right side, one of them slightly protruding into the cavity, but no effusion of blood had taken place. The left collar-bone was also found broken, and *crepitus* indicated lesion of the scapula on the opposite side; but no incision was made for the purpose of examination.

It is evident that this misunderstanding between two of the medical officers of the infirmary was anything but advantageous to the unfortunate patient, as it appears he died without the full extent of the injuries he had experienced being discovered: for we hear of no means employed to set the fractured clavicle or to remedy the injuries which the bones of the chest had sustained. How far the exhibition of tartar emetic was indicated, Dr. Speirs is perhaps the best judge; but we should think that the administration of ether, where three of the ribs were

fractured, and the end of one projecting into the cavity of the chest, would have been as well dispensed with.

Dr. Speirs is singularly unfortunate in thus having taken the charge of a case which so very soon ended fatally, for he has not only incurred the charge of a breach of professional etiquette, but has involved himself in a paper war with the local newspapers, and brought down upon himself the displeasure of the patient's friends, the committee of the infirmary being his principal supporters in the painful controversy.

But that which has given further offence to the public is, that the body should have been examined without the permission of the relatives of the deceased. The *Herefordshire Advertiser* has the following remarks upon this part of the affair:—"The institution can never enjoy public confidence until some precise understanding exists, that the bodies of patients will not be violated without the express concurrence of the relatives. In the finding of the managers, which is quite a curiosity in its way, and on which a very instructive running commentary might be made, did we feel so inclined, the matter is not even alluded to. That finding is a virtual sanction and approval of all that has been done; and no one has, therefore, any guarantee that a better system will be carried out in future. For anything we know, relatives are still to have their feelings outraged by the mutilation of the bodies of their deceased friends. For aught we can ascertain, there is still to be carried forward the same utter disregard of feeling, the same harrowing species of infictions, as we and the public complain of in this case. The public have a right to demand that no dissection shall take place without the express concurrence and sanction of the relatives of the deceased. Indeed, if we mistake not, there is an act of Parliament which imposes a penalty of £50 in such cases of unauthorized procedure as that at present under consideration."

Now, while we must condemn the strong terms employed by the editor to designate *post-mortem* examinations—such as violating the body, mutilation of the bodies, harrowing species of infictions—by which the minds of the poorer classes may be more strongly prejudiced against an act which is performed not to gratify a morbid curiosity, but to promote the interests of science and humanity, we think that, in the present instance, there was not that prudence exercised which ought to have been. The law gives the friends of deceased persons power over their bodies, so as to permit or disallow an autopsy, except when a magistrate interferes. To invade this right is neither prudent nor proper, under present circumstances, on the part of the medical officers of public institutions, as it is calculated to increase, as much as the harsh terms of which we have just complained, the prejudices of the poor classes against hospitals and opening the bodies of the dead. Taking the case in all its bearings, we must confess that it is one calculated to damage the good name of the infirmary, and to reflect no credit upon those who had the management of the patient. The misunderstanding of Mr. Richmond and Dr. Speirs evidently prevented that close examination which was requisite, in order to ascertain the full extent of the injury which had been received: Dr. Speirs stating in his evidence before the house-committee, "That, as far as he was aware, the deceased did not appear to have sustained any injury sufficient to account for the patient's death, which had taken place

somewhat unexpectedly; and that the next day, when he had assisted at the *post-mortem* examination, the appearance presented by the body, on being opened, satisfactorily accounted for the suddenness of the deceased's death."

The hospitals of our country are certainly becoming peculiarly renowned: Leicester for its perfection—Norwich for its dirt—Gloucester for its surgery—and Greenock for its melancholy squabbles. A few more instances such as these will cause a complaint, under which the Westminster is at present labouring, to become general amongst them—want of funds.

INSANITY AND CRIME—CASE OF THE BOY ALLNUTT.

THE case of the boy Allnutt, who destroyed his grandfather by poison, has been the subject of much consideration amongst the members of the medical profession who especially interest themselves on the subject of insanity. We have received two communications from Dr. Duesbury, one of the medical witnesses examined on the trial, who, from the opinions he expressed in reference to the criminal's condition, was subjected to some severe remarks from the judge who presided, and subsequently from the editor of the *Times*. We have considered it our duty, therefore, to turn our attention to the subject, and have examined closely into the bearings of the case, in order that we may form as correct an opinion as possible on a matter so highly important to individuals and to society.

That even intelligent persons are very ignorant on the subject of insanity is evident from the observations made by the judge and counsel at the trial referred to, and it will require much effort on the part of medical men to effect such a change in the criminal law of insanity as shall make it more in accordance with the advanced condition of society and the claims of humanity. We are compelled to acknowledge, however, that, as regards Allnutt, the proofs of *moral* insanity were so vague that unprejudiced persons could hardly expect they would make such an impression upon the minds of judge and jury as to ensure an acquittal. Even in the minds of those who have a considerable knowledge of mental disease there is a diversity of opinion as regards this boy, and it can hardly be expected that non-medical persons should be biased by doctrines which to them are not only new, but hard to be understood.

The great end for which laws are enacted is the good of the community, and this can only be accomplished by administering such an amount of justice to culprits as shall restrain them, so far as possible, from perpetrating crime hereafter. If the plea of insanity were to be lightly admitted, the trial of a culprit would only be a mockery of justice, and the foundations of society would, consequently, be undermined. Persons with moral feelings anything but sane would exercise without restraint morbid propensities which at one time might exhibit an irresistible desire to appropriate to their own use the property of others—at another to effect the destruction of human life.

While, however, judges, council, and jurymen may be unable to appreciate the scientific conclusions of medical men in reference to insanity, they ought certainly to abstain from attributing unworthy motives to them; and the press should be especially careful not to lend itself to anything calculated to damage, prejudice, or evade the real question by an attempt to make ridicule the test of truth, and to excite groundless fears in the public mind.

EVIDENCE 'TAKEN BEFORE THE SELECT COMMITTEE ON MEDICAL LEGISLATION.

(Joseph Henry Green, Esq., F.R.S., called in and Examined.)

PROFESSIONAL TITLES.—I am a member of the College of Surgeons and one of the council; I have been one of the council for ten years, and a member of the college about thirty years. I have ceased to practise generally, but I still continue to be surgeon of St. Thomas's Hospital. I have been one of the surgeons of St. Thomas's Hospital about twenty-five years. My connection with St. Thomas's Hospital has enabled me to watch the progress of students in general in the acquirement of the knowledge of their profession, for I have been occupied in teaching during the whole of that time, and indeed longer, for upwards of thirty years; I began to be a teacher before I was a member of the college. I have been engaged, therefore, instructing the surgical youth upwards of thirty years. I am now one of the council of King's College; I was professor of surgery there.

OPPORTUNITIES FOR OBSERVING THE PROGRESS OF STUDENTS.—My connection with those two institutions has given me opportunities of observing the progress, or otherwise, generally made by youths studying surgery within the last thirty years. I should fear that their proficiency as a body has been rather retrograde in respect of those particular branches which I have taught, anatomy and surgery. Those two branches are the cardinal points in the science of surgery, certainly. I ascribe this retrograde movement to a greater demand being made upon the time of the young men by the system of instruction, which requires attendance upon a greater number of lectures, and attention to be given to a greater number of subjects, than formerly. A great many of the young men are destined for general practice in the country; and for that general practice, according to law, it is necessary that they should obtain a licence from the Apothecaries' Company. Therefore, in preparing themselves for general practice, they not only study anatomy and surgery under me, but they study those subjects which it is necessary that they should learn, with a view to preparing themselves for examination before the Society of Apothecaries. The examination before the Society of Apothecaries enters into other subjects than anatomy and surgery. It is necessary that the young men should prepare themselves for examination upon the subjects of the practice of medicine, *materia medica*, medical jurisprudence, botany, chemistry, and midwifery, which are inconsistent with the devotion of their time to the study of surgery and anatomy. Those are the various subjects into which the examiners of the Society of Apothecaries enter. I believe the preparation for the examination before the Society of Apothecaries does not prevent the students attending the lectures which are prescribed by the college; but I apprehend it interferes with their time for dissection, and for attending the practice of hospitals.

GRINDING.—My observation would lead me to infer, that this preparation for examination before the Society of Apothecaries interferes materially with their study of surgery, and the acquirement of superior attainments in that science; the effect which we find (I think I may say "we," as one of the examiners of the College of Surgeons) is, that those young men are obliged to qualify themselves by means of what is commonly called grinding, getting their information by rote instead of acquiring it by inspection of the dead body, and by attending the cases in the hospitals. That preparation by grinding applies equally to the examination before the College of Surgeons as to the examination before the Society of Apothecaries; my observation was directed to that; I apprehend that they could not get up the information that is required by the Society of Apothecaries without grinding, the information required being so various and extensive. There is a difficulty in

saying that the subjects are more various than it is really necessary for general practitioners to study; but I am afraid that if the public, as they do, require practitioners who can only be paid at a moderate rate, they must content themselves with something lower in the scale of education. A knowledge of all those subjects is no doubt required for a full knowledge of the medical profession; but formerly many of those subjects were left for the students to acquire a knowledge of during their apprenticeship, or as they might acquire a knowledge of them afterwards in practice. I dare say they were not very scientifically informed upon those subjects; but with respect to the ordinary cases, generally met with in the practice of medicine, they were probably competent enough. Formerly, when the young men came to London they devoted themselves especially to anatomy and surgery. When I first taught at St. Thomas's Hospital a great number of the students did not attend to the practice of medicine at the hospital at all; and many of them did not even attend the lectures upon the practice of medicine and kindred subjects. Their exclusive attention to anatomy and surgery being now interrupted by the preparation for that extensive examination before the Society of Apothecaries, in my opinion, the acquirement of surgical knowledge on the part of young students has been materially diminished. I have mentioned grinding as preparatory to the examination before the College of Surgeons; I am now an examiner of the College of Surgeons, and by examination we can detect grinding, and imperfect knowledge based upon grinding, to a very considerable extent. We consider it our duty to check that system by the course of examination in the College of Surgeons. I do not know whether the examiners on the part of the Society of Apothecaries are public teachers, but I believe that they are limited in their selection of examiners, and that, therefore, they are not capable of choosing those who may be best fitted for the office.

UN SOUND KNOWLEDGE, BY WHOM DETECTED.—I apprehend that no other persons than those accustomed to teach have the power of detecting unsound knowledge from grinding. It is part of the business of a teacher to be constantly examining, with the cases of disease, the dead body, or whatever the subject may be, before him. We do not, in examining for admission to membership of the College of Surgeons, test surgical skill by actual dissection; the only practical part of the examination is that of having the bones before us, but which assist very much in examining as to the knowledge of anatomy.

EXAMINATION OF MEMBERS.—I have been examiner only about twelve months. The examination as now conducted by myself and colleagues is stricter than it was when I was admitted a member, and underwent examination—considerably so. Therefore, unless it were for this interruption of the study of surgery and anatomy which I have described, from the interference with it by the preparation necessary for the examination before the Society of Apothecaries, so far as it depends upon the College of Surgeons the standard has been rather raised than lowered; the students too are impressed with that opinion, that the examinations for membership are much stricter than they were formerly. I cannot speak from my own experience, but only from the information I have obtained among the students; but I believe the examinations are now more strict and searching than they have ever been.

EXAMINATION OF FELLOWS.—Passing from the examination for membership to the examination for fellowship, that examination is a stringent and efficient one: there dissection is introduced into the examination and operations. Grinding cannot prepare for that examination, as regards the practical part of it. I think one must concede to physiology the rank of being the highest, but anatomy is the foundation of medical science. The examination does not extend now beyond physiology, nor does it branch into general

literature and general acquirements; it will do so in the year 1850. Notice has been given that, after that year, mathematics, the demonstrative sciences, and general literature, and those acquirements which are necessary for the bachelor's degree at the universities, will form part of the examination for the fellowship. I examine for fellowship as well as for membership. The institution has been somewhat recent, but I think, taking it on the whole, that as many have come up already as might have been expected; and it has not only excited emulation amongst the young, but likewise among the older men; we have had many members of long standing who have come up for examination for the fellowship. From what passes under my own eye among the young men at St. Thomas's, I think I can hardly say generally that they look forward to standing out, when they attain the age of twenty-five, for the fellowship; and that at an early period of study they look forward to preparing themselves for that honour; but I have met with many instances of men who have so determined. I can venture to say quite affirmatively, on the whole, that the institution of the fellowship has acted, and will act, as a stimulus to the acquirement of greater surgical skill. I approve of the amended charter of the College of Surgeons; it is a very great improvement upon the old one in respect of the institution of fellows especially. I did not entertain the general opinion with respect to the mischief of what has been, mistakenly, called self-election; I had no objection to that; but I think that the establishment of a higher grade is an unmitigated good; that it is calculated to be of great benefit to the profession and the public. I mean the distinction between fellows and members. I do not think it invidious, but useful, as far as the members of the profession are concerned.

A SINGLE FACULTY.—That being my opinion with respect to the members of the college, that classes are not invidious but useful, I am not favourable to a single faculty in the whole profession—certainly not.

THE REGISTRATION BILL.—And I would not approve of any system of registration which had a tendency to favour or produce a single faculty. I should think it would be a great misfortune to the profession and the public. I have seen the bill which has been introduced this session into the House of Commons for the amendment of the law regulating the practice of medicine and surgery in England. The tendency of that bill is to produce a single faculty. My understanding of it is that that was its object. Looking at it calmly and dispassionately, taking it with its various clauses and provisions, such is its tendency.

THE COLLEGE PETITION AGAINST IT.—I am aware that the College of Surgeons have petitioned against that bill. I have seen that petition. I know the objections which are urged in detail against the bill. It was a petition, I believe, of the president and vice-presidents, but afterwards read to us, and approved of in the council. It was read in my presence. I entirely adopt the objections to the bill stated in the petition. The president here has stated those objections in detail; the petition has been read in my presence, and adopted by the council. I concur in those objections entirely. The petition was read at a meeting of the council. I think there were not any dissentients from that petition. There were some dissentients as to the form; there were some objections made upon the ground that the president had not called together the council sufficiently early after he had presented the petition, in order to approve of what he had done; but I do not think that there was anybody who disapproved of the substance of the petition. I recollect one observation that was made, and that was that something ought to have been stated in the petition with respect to the approval of the principle of registration, and that was entirely concurred in.

OPINION ON REGISTRATION.—I myself approve of registration, properly framed, and under competent authority. I do not think that the registra-

tion under this bill is a registration such as ought to be the standard registration for England, because it does not sufficiently inform the public what the qualifications of the persons registered are. I have seen the register. My opinion is, that there should be a register setting forth in classes the qualifications of the persons registered. I have said that I do not think that amongst surgeons in our college the distinction of fellows and members is invidious, but that it is useful. With respect to the term "invidious," I suppose there are many persons who would dislike the distinction, because there are certainly many people who are now exclaiming against any distinctions; they wish for only one faculty; therefore I suppose to those it would be invidious; but I do not apprehend it could be properly considered invidious, or that they could make any real objection to it. I cannot think that what is only stated as a ground of complaint, without sufficient reason, can be called essentially and properly invidious; therefore I use the expression with this reservation. And, with respect to the subdivision into classes of physicians, surgeons, and apothecaries, or general practitioners, I should say such a classification would not be invidious, but useful to the whole profession. A counsellor with a stuff gown may rather regret that he has not a silk gown, or a solicitor may regret that he is not a barrister, but yet such subdivision may be very useful both for the profession and the public. I see an analogy of that kind in the case of our profession; and it is especially useful, as provision is made for every one rising into the upper ranks if he so pleases, and exerts himself for that purpose. I see an advantage in the postponement until the age of twenty-five of the qualification for the fellowship. It gives an opportunity for a more extended education, and this not only with respect to what is strictly professional, but likewise with respect to what I believe is equally necessary as the groundwork, a preliminary liberal education. If classification have the effect of promoting emulation in the profession, and emulation lead to distinction tested by excellence, that is an advantage both to the dignity and honours of the profession, and also to the safety of the public.

TENDENCY OF THE BILL.—I think that the bill which is now before us has a tendency to the introduction of a single faculty, so it appears to me; but, more than that, it appears to me very likely to diminish very seriously, and very dangerously to the public, the education of medical men. As no benefit would be derived from a higher qualification on the register, they would naturally seek the cheapest schools, and it is very likely to produce a rivalry among the schools for affording medical education at the cheapest rate and in the shortest time, and that must necessarily induce a lower professional standard of education.

PENALTIES.—There are certain reservations with respect to poor-law unions and prisons, but otherwise there is no restriction now to prevent any man practising surgery in England; submitting to examination for the membership and fellowship of the college is a perfectly voluntary act on the part of those who seek them. That it would be desirable, by penalty, to check practice without qualification, or that it would be more expedient to induce, by encouragement, the possession of qualification, is a very difficult question to decide; but I am disposed very much, if it be possible, to make some legal penalty against unqualified persons practising. The Apothecaries' Act is founded upon that principle, and also the exclusive right of the College of Physicians; that principle has not been found effectual under either of those acts. There is a difficulty in applying the efficacy of the principle of penalties; but still the fact of a person doing an illegal act affixes to him a certain stigma, and the College of Physicians and the Society of Apothecaries have, I think, been deterred, from other causes than from the want of power, from putting the law into execution; the College of Physicians, I think, found that no

juries would convict. That indicates that public opinion is rather opposed to proceeding by penalty in those cases. It is one thing so to act in violation of the law, and another to pass a law which shall legalize practice without such qualification. They are two very different things. It is my opinion of this bill which we are now considering, that it would legalize general practice without any adequate qualification.

NO SECURITIES FOR GOOD EDUCATION.—I have looked at the securities which this bill affords for the test of adequate qualification, as contained in clauses which make the curricula of the licensing bodies subject to the sanction of the Secretary of State or the Queen in Council, and examinations under those curricula to be tested by inspectors in different parts of the United Kingdom. Those provisions appear to me to be not only not adequate, but not calculated in the least to answer their purpose. The examining bodies have been appointed as those best qualified for their office, and the inspectors, if appointed by the Queen in Council or the Secretary of State for the Home Department, may or may not be persons qualified, and they may not know anything about the subject which they are to inspect. I have no great faith in the medical knowledge of Secretaries of State or Presidents of the Council, and, as they would have to choose the inspectors, I presume that I can have as little confidence in those inspectors. I have not considered that the pressure would be very great upon those inspectors, in Scotland or Ireland, to favour particular licensing bodies, or to act with greater severity towards others; or, at all events, that the suspicion of favour would be very great.

COUNCIL OF HEALTH.—While I am not satisfied with the provision respecting the exclusive power vested in the Secretary of State or the Queen in Council, as the case may be, as proposed by this bill, another central authority has occurred to me as advisable, to which control of the whole scheme of registration might be intrusted, such as a Council of Health. I would view such an institution with favour, certainly. If it were composed partly of medical men from different parts of the United Kingdom, and partly of laymen of distinction, that body, in my opinion, would be a useful body for other purposes besides the direction of medical education, and ascertaining that the standard then fixed was duly observed by examination; the want of such a body appears to me to be a defect in our civil polity. I think that a Council of Health sitting in the metropolis might perform both functions; that it might control the medical education required by the different licensing bodies, and that it might also aid the Government by its advice upon great emergencies affecting the health of the people. I think the combined operation might be intrusted to such a body. I would prefer creating such a body, for the purposes of this bill, to the control proposed by this bill to be vested in the Queen in Council or the Secretary of State.

EQUALITY OF PRIVILEGE.—If this bill passed, with the provisions, such as they are, with regard to the standard of education, and the examinations under that standard as controlled by inspectors, the effect, in my opinion, of admitting to an equality of practice in England and Wales, Scotch and Irish practitioners, would be very detrimental, in the first place, to the interests of general practitioners, and I had always supposed that that was the cause of the main cry for medical reform; and I apprehend that very badly qualified persons may come from some of the schools there. So far from equality of privilege, so granted with restraints only such as are proposed to be provided under this bill, giving security to public health by having well-qualified medical advisers, my fears would be the other way.

IMPROVEMENTS IN THE COLLEGE CHARTER.—I think that the charter of the College of Surgeons, if undisturbed, will work well. The only mistake, I think, that was made was the nomi-

nation of too large a number of fellows in the first instance. That was done once for all, and not to be repeated. That defect will in lapse of time disappear necessarily. I do not object to an unlimited number of fellows admissible by examination.

APOTHECARIES' APPRENTICESHIP.—Apprenticeship under the Apothecaries' Act I do not see the advantage of; on the contrary, I see many disadvantages as regards the education of professional men; if you could always secure a master who could teach, and who would teach, it might have its advantages; but the facts are so notoriously opposed to that, that one cannot but wish to see the apprenticeship clause done away with. The dedication of five precious years taken from the time of study to the compounding of drugs is an unreasonable period; but even then they do not seem to learn pharmacy, at least they do not acquire an adequate knowledge of the materia medica; they may know how to make up a draught, but they do not obtain a scientific knowledge of pharmacy. As regards learning pharmacy, the five years are thrown away. I have expressed an opinion that practically the examination by the Apothecaries Company interferes very seriously with the study of surgery.

THE APOTHECARIES' EXAMINERS.—And in that sense I would not approve of the Apothecaries' Act; but, if you will allow me to refer to the constitution of the examining court, there seems to be no adequate provision for examination by those best qualified for the office. The examination on medicine would best devolve on those who have made its science their especial object, and the examinations in chemistry and pharmacy should be conducted by those persons who have made the science of chemistry and pharmacy their study. Now, a general practitioner, merely as such, cannot be supposed to have made chemistry and pharmacy the objects of special and scientific study; he, for the most part, and especially a member of the Apothecaries' Company, buys his compounds already prepared. There is not that I am aware of any penalty for assuming the designation of a member of the College of Surgeons. I propose that the College of Physicians should examine the general practitioners in medicine. The examination of the Society of Apothecaries should not be confined to pharmacy and chemistry. I do not think that they are persons fitted to examine in pharmacy and chemistry. I would propose another body. They are not by profession what the French call *pharmaciens*, or pharmaceutical chemists. It must be a board composed of persons who have especially made those subjects their study; we have no such body in the profession that I know of; but I did not wish at all to convey the idea that the Society of Apothecaries had not been of very considerable benefit to the profession. Care must be taken not to render the education of general practitioners too expensive. I propose that the College of Physicians should examine them in medicine, some other body in pharmacy and chemistry, and the College of Surgeons in surgery; and it would be very essential likewise that another body should examine them in midwifery, that body being composed of professed accoucheurs. That branch could not be brought within the province of the College of Surgeons; it does not belong properly or entirely to surgery; but you have here in London a much better opportunity of forming such a body by taking physicians and surgeons who practise in midwifery. That would make four examinations.

ELUTION OF THE COLLEGE COUNCIL.—The council of the College of Surgeons are elected entirely by the fellows. I should hardly say that there is a feeling among the profession—that there is among the general practitioners—that the council ought to be elected by the whole body of members; the election then would be with persons who do not make surgery their exclusive study; and other interests would become involved in the election than those which are essential to the promotion of the science of surgery. If any one

was to compare the whole body of members of the College of Surgeons to the masters of arts of the two Universities of Oxford and Cambridge, as proper constituents to govern and control the bodies, I do not know what distinction should be drawn between the two, because I do not know exactly the extent of the functions of masters of arts in respect to their elective powers. I have said before that you would have then electors who were not properly qualified, by reason of their not making surgery their exclusive study; and then the next objection is, that the election by the whole body of members is really almost impossible; they could not come up to London for the purpose. If our council were elected by the whole body of general practitioners, I have considerable faith in the good sense of the profession, and I do not know, therefore, that the result would be very different. The more sensible of the general practitioners who are members of our college are dissatisfied with the present arrangement. The complaints have been very loud, and, indeed, there has been an association for promoting medical reform; but the objections that have arisen seem to me to have originated in a mistaken view, that scientific bodies were to be guided by exactly the same principles as governments, and that it was to be a representative body, to whom the interests of science were to be confided. Now, that does not apply at all. The principle of popular election and representation may be rightly applied to municipal corporations and commercial companies; but the peculiar character of colleges of learning and science is the selection of those who are best fitted to promote learning and science.

EDUCATION OF SURGEONS.—I think it desirable that surgeons, or a certain number of the most eminent surgeons, should receive their education together with the more eminent members of the law and the church, and the gentry of the country, at the universities. I do not think that there is anything in the nature of the occupations of a surgeon which would make a university education a bad preparation for his professional avocations. On the contrary, I should think it would be of great service to him, in disciplining his mind even for his professional studies, without any ulterior views; without considering the man, only considering the surgeon. I cannot point out any distinction between the mode in which a man who is aiming at the higher and more scientific position in his profession pursues his studies, and that in which a man who is only seeking for general practice pursues them. I should think the principle to which they must both advert would be the same; but it is the misfortune of a person who cannot aim at the higher rank in his profession, that he cannot have his mind so opened, invigorated, and disciplined by preliminary education as to obtain the advantages which the other obtains; but still the profession, I take it, must be studied upon the same principle, and with the same views. For example, if you take, as it has been frequently my lot to see, a young man who has come from an apprenticeship of five years, and compare him with one who has been at the university, who has merely taken his first degree in medicine, both of them young men, and nearly of the same age, you will find that it is with the greatest difficulty that the one who has been apprenticed in the ordinary way to a country practitioner acquires information: he has no power of observing and generalizing; in many instances he cannot spell, and cannot put down his thoughts in writing; in short, he evidences in every way great imperfection of mental development, whilst the young man who has come from the university gains more perhaps in a couple of years than the other would if he were at the hospital for ten years. The students for general practice are obliged to study too many subjects at once under the present system of examination. They come unprepared in point of mind, and the whole of the information has to be poured in at once. They are over-lectured. There is not any other sug-

gestion that I would wish to make for the improvement of medical education at present. The subject requires much consideration. It is of importance that a surgeon should have a rather extensive medical knowledge. Persons, previous to receiving the diploma of the Royal College of Surgeons, are not examined on medical subjects; they are examined on surgery; but there is a regulation by which they must produce a testimonial or certificate of having attended a course of lectures on the practice of medicine and the practice of an hospital. I think it would be desirable that no person should be allowed to practise as a surgeon till he had acquired a certain amount of medical information. I think it would be an improvement in the education of the surgeon. In fact the observation might be extended, that no person ought to be allowed to practise in the profession until he had obtained a considerable acquaintance with all the principal branches of it. There is no probability of the College of Surgeons adding that medical examination to their present examination; we have no means of doing it, unless we sent the candidates to the College of Physicians, which I should be perfectly willing to do. And the College of Physicians might send their pupils or students to us; it would be very useful. It is the practice of many diligent students who become physicians to take the post of dressers to surgeons.

PROFESSIONAL TRADING.—I have expressed in print a very strong opinion that the medical profession should be as far as possible removed from anything that should give it the character of a trade. I doubt whether it would be possible to carry it so far as to make it a regulation that general practitioners should not sell drugs; it may be left to their good feeling and to the improvement which may be hoped for by raising the standard of education; but in the country it would be quite impossible for them not to keep their own drugs; and I take it that their patients derive advantage from it, by getting better drugs than they would get from the small chemists and druggists' shops. I am apprehensive that the tendency of elevating the education of general practitioners may be to introduce a lower class of practitioners in the chemists and druggists. It does not occur to me to make any suggestion to remedy that: I think that the Legislature must always require a certain amount of information, such an amount as will qualify persons to practise with safety to the public; and if you find that chemists and druggists are rising into practitioners, you must require of them the same; therefore it is, though I cannot very well say how it is to be done, that I stated to Sir James Graham that it was desirable that there should be something like illegality or penalty affixed to unqualified practice. I trust a good deal to the high standard of professional and gentlemanly feeling for correcting some of the evils which the law cannot prevent. I would endeavour by a system, whatever it was, to produce the highest qualification that you could produce; and to give hope to all, even in the lowest grade, that they might rise to the highest if they would give the time and study requisite for its attainment. I attach the greatest importance to keeping up a high tone of gentlemanly feeling in our profession. On that ground I think it important to encourage the high grades in our profession going to the universities, as tending to connect the heads of our profession with the highest persons in the land; but I would add to that, that I think it essential to the interests of even the lower ranks of professional men: for I think that the one-faculty plan would soon be found to have a very serious effect upon the pocket of the general practitioner. It is the fact that that gentlemanlike feeling is now to a great extent spreading through the profession, and tending to elevate persons who before were in the lower scale of society.

FEES FOR EDUCATION.—The serious effect upon the pocket of the general practitioner to which I referred is, if the standard of payment were not regulated by high fees you would have a

reduction of fees; you would have a run for cheap practice, as you have in other trades. I would not then regulate the fees of the medical practitioner by law; the fees of the physician are not regulated by law, and I am very sorry that the fees of surgeons are regulated by law; it ought to be an honorarium. The way I consider the adoption of a single faculty in medicine would have a serious effect on the pocket of the general practitioner would be this: if you have one faculty that faculty must all be brought to the level of the lowest; there would be no grades, no distinctions, nothing elevated in it; and if you brought all to the level of the lowest, it would be a run for cheapness; you would have it degraded into a trade; they would be cheaply educated, and they would compete with regard to the cheapness with which they could attend patients.

(To be continued.)

COMMITTEE OF POOR-LAW MEDICAL OFFICERS.

(From the *Provincial Med. and Surg. Journal*.)

The large portion of the present number which we are compelled to devote to the Index renders it impracticable to do more than very briefly refer to a subject of pressing importance. We allude to the proceedings of the Committee of Poor-law Medical Officers. A notice has been issued by the committee acknowledging the receipt of many replies to their circular of inquiry, at the same time stating that a large number still remain unreturned. In this notice we find the subjoined passage:—

"It has been intimated to the committee that some medical men are deterred from sending their answers, by apprehension of the displeasure of the guardians. As the committee is engaged in no party or querulous undertaking, and merely asks the statement of facts for the elucidation of truth, it can scarcely believe that it would be doing justice to any board of guardians, or to any individual members of such a board, to admit that they could employ threats or other unworthy influence to prevent the return of the answers which have been required. But should it happen that any guardian or subordinate officer, through misapprehension, has been induced to employ menaces to prevent the returns being made, the committee would encourage the subject of such menaces not to allow himself to be intimidated by them, but to rely with confidence in the justice of his cause, and in the full assurance that the best protection against such influence is to be found in tranquil publicity and steady perseverance in the path of duty."

We would fain hope that no such intimidation can be used in this country—that no board of guardians, nor any subordinate officer attached to them, would dare thus to interfere with the Englishman's privilege of freely expressing his opinions, and making known his grievances; but under any circumstances there can be no question of the soundness of the advice given by the committee.

It is requested that the returns may now be sent up with as little delay as possible, and the 7th of January is named as the latest day for reception. It is obvious that the committee will then have an important and laborious duty to perform in reducing the documents before them into order, in arranging the information which they contain, and in drawing the conclusions which they may afford. The time left for the fitting performance of this duty will not be more than is barely sufficient before the period arrives at which the information thus collected can best be used with effect, and we hope the members of the Provincial Association will not be found wanting in at once sending up the returns applied for.

AN IRISH INQUEST.

On Sunday, the 21st ult., an inquest was held at the police-office of Cappamore, by James

Bennett, coroner, on the body of a farmer named Daniel Dillon, who was brutally murdered on the Friday night previous, his skull having been fractured in an awful manner, and his brains left in the field.

Dr. Arthur, resident physician and surgeon, having examined the body on the night of the murder, and attended a man who accompanied Dillon, and who was also injured, and considering, in accordance with the act of Parliament, that he (Dr. Arthur) was the person to be called on to give evidence on the inquest, proceeded to the barrack above named, on the arrival of Coroner Bennett, and went into the head-constable's room. On being introduced to Mr. Bennett, Dr. Arthur said, "How do you do, Sir?" and Mr. Bennett replied that he "could very well do without his inquiry."

The jury having been sworn, proceeded to the house of Dillon to view the body, and Coroner Bennett, going to the bed, called on Dr. Heffernan, whom he brought with him, to come and view the body.

Dr. Arthur said: I am the resident physician and surgeon, and I have seen the body on the night of the murder, whereas Dr. Heffernan has not seen it until this moment, consequently I am the proper person to give evidence in this case.

Coroner Bennett: I want to have nothing at all to do with you, nor will I have your evidence, and if you say any more I'll get you arrested by the police.

The party then retraced their steps towards the barrack, and on entering it, Dr. Arthur came forward, and, stating that he had valuable information to give, appealed to the jury not to make up their minds until they heard it; whereupon Coroner Bennett, placing himself in a menacing attitude before Dr. Arthur, said, that he would not hear his evidence; that, for all he knew about him (Dr. Arthur), he might be a quack, and he knew nothing at all about his family.

Dr. Arthur: I can produce my diplomas, and prove to you that I am a legally qualified physician and surgeon; and if I am not better qualified than Surgeon Heffernan, I willingly resign the case; and, as respects family, I consider mine far more respectable than yours.

Sub-inspector Enright: I can tell you, Sir, that Mr. Bennett is a very respectable man.

Dr. Arthur: I say it is not your business to interfere.

Sub-inspector Enright: Oh, Dr. Heffernan is the man that was called on, and has a right to give evidence here.

Dr. Arthur: It is not for the paltry sum given by the coroner that I came here to-day, but to vindicate the rights of the profession to which I belong; and I appeal to you, Surgeon Heffernan, as a brother in the same profession—if you be a man of honour, and an honest man—to have nothing to do with the case. I went some time back to Doon to assist Surgeon Shanahan—

Dr. Heffernan: I don't care; I was called on by the coroner, and I'll act.

Dr. Arthur: Very well, Sir.

Coroner Bennett then rushed over, and, catching Dr. Arthur by the collar, swore he'd drag him out if he did not leave the room.

Dr. Arthur: Do not lay violent hands on me, Sir.

Coroner Bennett: Mr. Enright, why don't you arrest that fellow?

Dr. Arthur: He cannot do that, Sir. I intend to commit no breach of the peace. I have the greatest respect for the court. I wait here to hear the evidence given.

Sub-inspector: I think, Mr. Bennett, we might leave the doctor here, if he is quiet.

Coroner Bennett: No; by G—d, he shall not remain here. Mr. Enright, drag out this fellow!

Dr. Heffernan: Had I known that matters would have turned out so, I would not have come at all.

Coroner Bennett (to Dr. Heffernan): If you do not act, I shall never give you a call again.

Dr. Arthur: Mr. Enright, I warn you not to arrest me; if you do, I shall certainly hold you accountable for the consequences. I committed

no breach of the peace, and therefore you cannot arrest me.

Sub-inspector Enright: I shall do my duty if the coroner desires me.

Dr. Arthur: Then you shall take the trouble to make out my committal before you remove me.

Coroner Bennett: I shall do that for you, Sir. Then Dr. Arthur was removed into the head constable's room, a policeman placed on the door, where he was detained over two hours, at the expiration of which time Mr. Enright came and told him that he might go now as soon as he wished.

Dr. Arthur requested a magistrate should come and discharge him,

Mr. Enright replied he had the magistrate's order to do so. Dr. Arthur was then removed, and threatened to proceed legally against Coroner Bennett for false arrest, &c.

GOSSIP OF THE WEEK.

WAR-OFFICE, Dec. 30.—41st Foot: Assist.-Surgeon David Stewart, from the Staff, to be Assist.-Surg., vice Hart, deceased.—43rd Foot: John Lawrence Johnston, gent., to be Assist.-Surg., vice Agar, appointed to the Staff.—Hospital-Staff: Assist.-Surg. Rowland Agar, from 43rd Foot, to be Assist.-Surg. to the Forces, vice Stewart, appointed to the 41st Foot.

NAVAL APPOINTMENTS.—Surgeons: T. W. McDonald, to the Victoria and Albert; Dr. A. S. Allen, to be surgeon and medical storekeeper at Plymouth Hospital; Benjamin Bynoc, to the Ganges.

WEST NORFOLK AND LYNN HOSPITAL.—An election for a surgeon to the above hospital took place on Tuesday last, in the Town-hall at Lynn, in consequence of the resignation of Mr. J. B. Whiting. Mr. George Sayle, formerly curator of the Anatomical Museum in the school of St. George's Hospital, being proposed and seconded, was declared unanimously elected.

CHAIR OF CLINICAL SURGERY IN EDINBURGH.—Professor Miller, now in the chair of surgery, is about to be appointed by Government to the chair of clinical surgery, vacant by the removal of Professor Syme to London.

THE CHOLERA CURED BY ETHER.—The *Courrier des Etats-Unis* quotes the following from the *Gazette des Hôpitaux*:—"M. Bruno Taron, surgeon-major of the Ottoman army, and formerly inspector of health in Bulgaria Syria, &c., was a physician at Marseilles at the time of the second period of the prevalence of the cholera in that city in 1837. In the midst of his care of his patients and his service at the hospital he was one day himself seized with the epidemic, and had no doubt of the symptoms. The following is M. Taron's description of his situation:—"It was midnight, I had been in bed an hour, when suddenly a general chill seized me. This chill was soon accompanied by vomiting and other symptoms of the cholera, including the cold sweats. An hour after, these were followed by violent cramps in the extremities." These are certainly symptoms of cholera. M. Taron was alone, his family having fled from the scourge, and he had no servant. He found himself without help in the middle of the night, overpowered by the disease, and by the terrible certainty of a near approaching death, and without any remedy, he says, but a large bottle of sulphuric ether which happened to be in his chamber. "Having no other resource, I seized this large bottle," says M. Taron, "and I inhaled it freely. Immediately my respiration, which had been oppressed, became more free, and I felt a sensation of relief and general comfort. Afterwards the perspiration, which had been cold and wearisome, became warm and gentle. The functions of my senses were soon suspended, and I slept profoundly. All these happy ameliorations took place promptly under the influence of the inhalation of sulphuric ether. I slept without pain or disturbance for six hours, after which I awoke, feeling all over me great weakness. I had un-

consciously been in a perspiration through the night. This day and the following I had some blackish alvine evacuations. My strength returned by degrees. I was completely cured." M. Taron finished his letter by confessing that, not knowing at the time the power which is exercised by ether over the nervous centres, he did not attribute to this agent the honour of his sudden cure, but that he referred it entirely to one of those fancies, those caprices of nature, for which it is impossible to account. It is a pity, adds the *Gazette des Hôpitaux*, that the observation of our brother should be isolated and unique, but it is important, as being the first point from which experiments may start. Heaven grant that we may not have an opportunity among ourselves for experiments of the kind. The *Gazette du Midi* says, that a physician of Marseilles, a friend of the editor, has confirmed, by his testimony, the observations of M. Taron. Experiments of this kind have been made with success in the countries of the East, where the disease had made its first ravages. Academies of medicine will doubtless gather positive information on this subject, and order new trials with all conditions which may render them decisive for science."

THE CHOLERA.—We read the following in the *Constitutionnel*:—"The *Gazette des Hôpitaux* of Friday contains a notice of a case of cholera, terminated in some hours by death, addressed to it from Fontaine-sur-Somme, by M. Judey. It is of importance that the public should familiarize itself with facts of this kind, and know well that the cholera, like the typhus fever, may, without reigning epidemically, find, in certain meteorological states, conditions which sufficiently favour its development to cause it to show itself at one period sooner than at another, under different forms and with different results; and assuredly the path which the cholera now follows far from us, in places where it reigns epidemically, ought to fix our attention and our solicitude much more than the isolated cases which we may meet with around us. During the last fifteen days the epidemic of the *grippe*, which continues to reign at Paris, although diminishing in intensity, has changed a little in character. We now observe oftener than at the beginning, in the place of colds, coughs, coryza, and accidents in the organs of digestion, colics, diarrhoea, and rarely vomitings. This change in the form proves that the character of the *grippe* is to fix on such or such a part of the organs, more under the influence of a disposition common and unknown than of an individual and explicable disposition, without ceasing on that account to be the same malady, the same epidemic. It is possible that this change of form is owing to the temperature, which is singularly mild for the season, and to the fogs which have prevailed for some time, circumstances which manifestly predispose people to abdominal affections."

CHLOROFORM.—This agent was lately employed at St. George's Hospital during the removal of the upper jaw and portions of the bones of the face. The operation was performed by Mr. Henry Charles Johnson, on a boy nineteen years of age, suffering from a large fungoid growth, and implicating a large amount of the upper jaw and other structures about the face itself. It was most satisfactory to observe the effect of the chloroform, which, though it could not be applied entirely throughout the operation, afforded so much ease and composure to the sufferer, that the surgeon was able to proceed without those impediments which have formerly stood in the way of similar dangerous and painful operations. Several non-professional gentlemen attended to witness the effect.

PYKE v. HARVEY.—Mr. Sergeant Byles (with whom was Mr. Leek) appeared for the plaintiff; and Mr. Humfrey, Q.C. (with whom was Mr. Cook Evans), for the defendant. The action was brought to recover the sum of £65. 2s. 8d. for commission due upon the sale of a surgeon's practice. It appeared from the evidence that the plaintiff is a law and medical agent carrying

on business in Chancery-lane, and that the defendant was formerly a surgeon residing in Great Queen-street, Lincoln's Inn-fields, but had recently become surgeon to an institution in Soho-square for the cure of diseases of the ear. On the 14th of December, 1846, the defendant had instructed the plaintiff to offer his practice in Queen-street for sale, and the plaintiff had accordingly inserted an advertisement in the *Lancet*, and another in the *Medical Times*, containing a description of the business. On the 23rd of December the plaintiff had received an application from a gentleman of the name of Stevens, who subsequently became the purchaser, requesting to be furnished with the particulars, which the plaintiff's son, formerly a barrister, said were forwarded to him by himself on the same day; but the contract was afterwards concluded by the defendant without the intervention of the plaintiff. Mr. Pyke, the plaintiff's son, who was called to prove the plaintiff's case, underwent a rigorous cross-examination, and admitted that he had been disbarred by the benchers of his inn, and that he had appealed to the fifteen judges, by whom the decision of the benchers had been confirmed; but he said he had appealed to the House of Commons, which had referred the matter to a committee, by whom it had been reported that the benchers had no such power. Mr. Humfrey called Mr. Stevens, who said he had written to Mr. Pyke, but that the letter which he had received was not dated, as had been stated by him, on the 23rd of December, but on the 24th, and was received by him (Mr. Stevens) on the 25th. He also proved that on the same morning he received a letter from a Mr. Orridge, an agent, who had also been employed by the defendant, containing particulars of a business to be disposed of; and that without replying to the plaintiff's letter he came to town, and was introduced by Mr. Orridge to the defendant, and purchased his business; and that he did not discover till afterwards that it was the same business about which Mr. Pyke, the plaintiff, had written to him. It was also proved that the defendant had tendered £5 to the plaintiff for the trouble of receiving the instructions, and to cover the expense of inserting three advertisements in the papers. The learned Chief Justice summed up the evidence very minutely, and the jury gave a verdict for the defendant.

OBITUARY.—At Cupar-Fife, on the 23rd ult., Andrew Mackie, Esq., M.D., aged 30.—At Pangborne, Berks, on the 26th ult., James Craig Somerville, M.D., aged 48.—At Southsea, on the 28th ult., in his 79th year, Benjamin Lara, M.D., upwards of forty years resident physician at Portsmouth.—On the 27th ult., Swinton M'Leod, Esq., Deputy Inspector-General of Hospitals, and late of the 42nd Royal Highland Regiment, aged 72.

THE FATAL BLUNDER.

[To the Editor of the Medical Times.]

SIR,—Dr. Watson's reply to the special pleading of Dr. Williams, and Dr. Williams's rejoinder to Dr. Watson's "facts," are very important documents to the medical public, as the whole correspondence affords the most incontrovertible proofs of the blunders of the whole conclave of eminent physicians on whom the late Mr. Liston had pinned his faith, and of the dangers and fallacies which those are exposed to who trust alone to the physical signs of disease. It is not surprising that Dr. Watson should have felt bitterly the imputations cast upon him by Dr. Williams, and, above all, that he should have felt acutely the exposure which Dr. Williams has made of the mummery of auscultation. I say Dr. Watson's disapprobation of Dr. Williams's conduct, but I take it for granted that Dr. Watson is put forward on this occasion not only as his own advocate, but as the mouthpiece of Drs. Forbes and Latham, to whom Dr. Williams's sarcastic observations are equally applicable.

It appears that even after the second examination made by Dr. Watson, as quoted from "my notebook," that he mistook the aneurism which Mr. Liston then suffered from for "the rapid multiplication of small tubercles;" and, by the confessions

of "my own note-book," the learned doctor was led to his erroneous conclusion of the true nature of the disease, not only from the fallacy of his stethoscopic examinations, but, to use his own words, "from Mr. Liston's mother and sister having both died of consumption." Subsequently to his having given up that fallacious opinion, Dr. Watson, along with Dr. Forbes, came to the conclusion, which must have been most unsatisfactory to the unfortunate patient, that they really did not know what the disease was, and, consequently, they did not adopt that rational system of treatment which might have impeded the progress of the aneurismal tumour.

I perfectly agree with Dr. Watson in accusing Dr. Williams of his want of courtesy and fairness in publishing his letter without previously ascertaining the facts of the case, and also that it was uncharitable and ungenerous in Dr. Williams to exhibit the "mistakes" of his professional brethren, more especially as such exhibition was made to throw a veil over his own blunders. Still more sincerely do I agree with Dr. Watson in the bad taste, not to say dishonourable course, which those medical men pursue in proclaiming the "ignorance or unskilfulness" of their professional brethren; and, though I cannot look back far enough to know what a Heberden or a Baillie might have done—a question put by Dr. Watson so emphatically—let me ask him, in my turn, what a Seymour, a Holland, a Latham, or a Forbes would not have done?

With too much justice I can assure Dr. Watson and his friends that general practitioners have great cause to complain of the very same system of conduct of physicians, of which Dr. Watson now writhes under from a *Fellow* of his own caste!

HUMANITAS.

Windsor, Jan. 4.

MORTALITY TABLE.

For the Week ending Saturday, Jan. 1, 1847.

Causes of Death.	Total.	Average of 5 Summers.
ALL CAUSES.....	1599	1046
SPECIFIED CAUSES...	1599	1039
Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	420	211
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	150	104
Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	203	157
Diseases of the Lungs, and of the other Organs of Respiration.....	497	333
Diseases of the Heart and Blood-vessels.....	48	34
Diseases of the Stomach, Liver, and other organs of Digestion.....	87	74
Diseases of the Kidneys, &c. Childbirth, Diseases of the Uterus, &c.....	15	9
Rheumatism, Diseases of the Bones, Joints, &c. ...	23	14
Diseases of the Skin, Cellular Tissue, &c.	9	7
Old Age.....	4	2
Violence, Privation, Cold, and Intemperance.....	64	65
	79	29

TO THE SUBSCRIBERS OF THE MEDICAL TIMES.

Gentlemen are respectfully informed that the following are the terms of subscription to the *Medical Times*:—

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oblige the publisher by forwarding their renewals without delay. The large reduction, indeed, made in favour of annual and life subscribers is given with the view of securing, without trouble, the punctuality, promptitude, and certitude of subscribers' payments.

TO CORRESPONDENTS.

The "QUACKLET" ADVERTISEMENTS.—Several more correspondents have addressed us during the last week on this subject: one, by the way, which appears daily to arouse a very wide-spread and increasing indignation and disgust. The general recommendation of our correspondents centres in this: that if all odds—including professional honour and journalistic reputation—be staked in purloining surgical practice for a youthful offshoot, the party, whether succeeding or not, must be prepared, both as M.P. and as journalist, to pay the price of his daring enterprise, and give the penalty of his anti-professional outrage. There are few readers of delicate honour, who have not already anticipated this decision.

"A Member of the College, and a Subscriber."—We are not aware of any particular privileges which members possess. Any unqualified person may assume the name of surgeon without the danger of prosecution. Membership, however, is a necessary qualification for a poor-law appointment, combined with the holding of the Apothecaries' certificate.

"Civis."—Mr. Walker's efforts on behalf of sanitary reform are very praiseworthy. The conduct of the parish authorities towards him, for permitting the public to view the disgusting receptacle under Enon Chapel, not only redounds to their disgrace, but will indirectly help forward Mr. Walker in his work.

"T. O. B. Manchester."—We cannot offer any opinion on the case from a mere written statement. Inspection and close examination are necessary in order to arrive at just conclusions.

"An Assistant Surgeon, R.N."—The statement had better be laid before Sir Wm. Burnett; it is a matter in which the public press can do but little.

"Alpha."—Some German physicians have used, in the treatment of psoriasis inveterata, the aqua picis liquidæ, which they say has effected a cure when all other means have failed. This is prepared by pouring a quart of cold water over a pound of pitch and leaving it to stand for twenty-four hours in a cool place, and then to filter. A beer-glassful is to be taken every morning fasting; and the parts affected to be bathed with it twice or three times a day.

"Mr. E. Jamieson, Edinburgh."—Any person can set up as a chemist and druggist in London without undergoing an examination. The heads of the trade are endeavouring to get some enactment to compel persons hereafter to undergo a systematic education, and an examination.

"Medicus."—There are no difficulties in obtaining admission to the Parisian hospitals. Foreign medical men, on presenting their medical qualifications, are permitted to see the practice in these institutions without the payment of a fee.

"Scalpel."—The facts stated shall not be overlooked; we shall be glad to hear again from our correspondent.

"Busticus."—Access to the library of the British Museum can only be obtained by an order from one of the trustees.

"Edward S."—The preparation has been employed with success in the case mentioned.

"A Graduate, Cambridge."—Special certificates would be necessary; the secretary of the college ought to be consulted.

"Crassus."—The lesion referred to is of frequent occurrence, but the symptoms of its existence are often obscure.

"A Practitioner of Twenty Years' Standing."—The debt can be recovered in the county court with but little expense.

"Mr. Edward Littleton."—Some medical gentlemen use an apparatus for the administration of chloroform, but it is not necessary; its principal advantage is, probably, that it prevents waste of the anæsthetic agent.

"Questor."—A letter forwarded to the publishers will be the means probably of stirring them up to the fulfilment of their promises.

"B. B. Clapton."—The communication has been acknowledged, and we regret that we have not yet been able to find a place for it in our columns.

"Detector" writes us, in reference to the Hunterian School of Medicine:—"Your correspondent 'Vritas' does not deserve the name he assumes. In the first place, the lectures have been most regularly delivered, with the exception of one or two, which were omitted in consequence of preparations to be made in the museum (which is considerably enlarged) on account of the expected visit from the College of Surgeons, who had requested the lecturers to prepare a catalogue. Three of the lecturers, Dr. Aldis, Mr. Riadore, and Mr. Chippendale, undertook these duties, the latter gentleman being compelled to devote a considerable portion of his time for more than a week. What was this but attending to the interests of the pupils? I beg to deny that the preparations in the museum have been seized, but I am willing to admit that a few preparations belonging to one of the lecturers were seized in a room in Tottenham-court-road, for a debt which was contracted before the present management of the school was commenced, and of which the lecturers were entirely ignorant. The dissecting-room has been closed, it is true, for a few days, as the Inspector of anatomy did not approve of it; but another will be immediately provided. Now, with regard to supercilious treatment, Dr. Aldis, the superintendent of the school, when written to

on several occasions by the pupils, always returned an answer immediately, and at their request gave an ample explanation of the unavoidable difficulties by which the lecturers had been beset during the present session, and which they have one by one surmounted, at a full meeting of the pupils, in the lecture-room, on the 15th ult.; and, if I may judge from the manner the explanation was received, it seemed to be most satisfactory."

"Mr. C. D. Fitzpatrick, Bootle, Liverpool," complains of the hardship under which members of the College of Surgeons labour in not being able to recover in the county courts debts for medical attendance, &c. He remarks:—"I was a few days ago informed by an acquaintance of mine, a highly-respectable surgeon of acknowledged ability, for many years practising within a short distance of Liverpool, that after many repeatedly unsuccessful applications to some of his patients, who, though in comfortable circumstances, continued a long time in his debt, he at last summoned six of the most incorrigible of the delinquents to the county court for the recovery of his fees, where he was publicly informed by the judge of the court, that he was not legally entitled to an address, as he did not possess a licence from the Apothecaries' Company, and all his claims were dismissed. If this really is the state of the law, it is to my mind, a palpable injustice, and a practical denial that the surgeon has any right to receive compensation for his time and skill, in the exercise of the most useful and exalted department of his profession—that of exerting, by the skilful application of remedial agents, the necessity of painful operations, by which he is often enabled to obviate the revolting spectacle of blood-spilling, and the forfeiture of a valuable limb; and it is scarcely necessary here to remark, what is now universally admitted by the best informed, that the success of every surgeon depends more upon his skill in conducting the medical treatment of those cases requiring operation, than upon his dexterity in the use of the knife. It is, therefore, a downright injustice to deny to the surgeon redress by law, whenever he has had the good fortune of being able to save life and spare limb, but the misfortune to have met with dishonest parties; and it is too often the case that dishonourable men, aware of the unprotected condition of the surgeon, take advantage of the legal defect, and do not hesitate to make him their victim."

"Mr. Thomas Garlike, Rickmansworth."—The observations on the uses of chloroform were received, but they have been delayed from press of matter.

"Chemicus."—The test is of doubtful efficacy. It would be better to seek the assistance of some practical chemist.

"A Student, King's College."—The work is now complete, and can be had of any bookseller.

"A Country Surgeon" will find the general subject of his note anticipated.

"An Edinburgh Physician" is qualified for examination at the London College.

"An Invalid."—The office mentioned is a respectable one.

"F. Mansfield."—An inquiry shall be made, or a private note transmitted.

"A Subscriber for a Year" writes us, in reference to the election of a medical officer to a poor-law union, as follows:—"Three candidates started and canvassed; two were legally qualified, one was a 'M.C.' from Glasgow, and had no other qualification. The election terminated favourably to the Glasgow 'M.C.', though the guardians had passed a resolution, not five minutes previous to the decision of the election. That the rules and regulations of the poor-law guardians, as related to the election of a medical officer, should be abided by. Yet, strange as I have stated it, the election was favourable to the only illegal candidate, he having 15 votes; the second candidate, 9 votes; the third, no votes. The poor-law commissioners have been petitioned against this return, and have replied, to the effect that 'they will look into the matter.' Now, Mr. Editor, do you think the poor-law commissioners will sanction the election, there being no let or hindrance against the second candidate? And will another election have to take place, should the illegal candidate's election be cancelled? No protest was entered on the minutes against the election of the 'M.C.', yet the chairman, having being asked, prior to the ballot, whether the 'M.C.' alone was a legally sufficient qualification, answered in the negative. Yet, as I observed before, in contradistinction to their own resolution, 'that the rules and regulations of the commissioners should be abided by,' they elected the 'M.C.' The second candidate on the poll was a non-resident at the time of election, though he is a resident now. Will this affect the decision of the commissioners?"

Letters and communications have also been received from Mr. Bruerton, Wincanton; Mr. Osborne, Epperstone; Mr. Hallister, Newent; Mr. M'Pearson, Staleybridge; Mr. Upton, Tadcaster; Mr. Spurgin, Northampton; Mr. Morris, Spalding; Dr. Master, Kildare; Mr. Dovaston, Llandrilo; Mr. Spencer, Hindon; Mr. Tomlinson, Maldon; Dr. Boyd, New Ross; Dr. Montgomery, Southam; Dr. Wilson, Alnwick; Dr. Brady, Nantwich; Dr. Mackay, Waterford; Dr. Byott, Thirsk; Mr. Peart, Fekkenham; Mr. Watson, Bolton; Mr. Fitzpatrick, Liverpool; Dr. M'Tyrr, Maybole; Mr. Mann, Norwich; Mr. Craig, Bath; Mr. Hambden, Grimsby; Dr. Hooper, Buntingford; Dr. Shirley, Lanark; Mr. King, Camelford; Mr. Bruce, Antrim; Mr. Dandy, Rufford; Mr. Carpenter, Castlecomer; Mr. M'Gregor, South Heston; F. Mansfield; An Invalid; An Edinburgh Physician; A Country Surgeon; A Student, King's College; Chemicus; Mr. Thos. Garlike, Rickmansworth; Mr. C. D. Fitzpatrick, Bootle, Liverpool; Detector; B. B. Clapton; Questor; Mr. Edw. Littleton; A Practitioner of many years' standing; Crassus; A Graduate, Cambridge; Edward S.; Rusticus; Scalpel; Medicus; Mr. E. Jamieson; Alpha; An Assistant-Surgeon; R. R.; T. O. B. Manchester; Civis; A Member of the College, and Subscriber.

Mr. H. Norris' paper, "On a Remarkable Disease, analogous to Cretinism," shall appear next week.

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ORIGINAL LECTURES.

LECTURES ON GENERAL PATHOLOGY,

DELIVERED TO THE

FACULTY OF MEDICINE

DURING THE PRESENT YEAR,

By PROFESSOR ANDRAL.

Reported for the *Medical Times* by D. M'CARTHY, M.D.
Paris, &c.

SECOND SERIES. CHAPTER II.—(continued.)

SEMIOTIC OF DISEASES OF THE CIRCULATION.—
AUSCULTATION OF THE HEART.

The morbid sounds heard in the precordial region may be generated inside or outside the heart. Those which are produced within its cavity have received different names, according to their more or less close resemblance with other sounds to which our ear is accustomed; hence the denominations of *bruit de soufflet*, or *souffle* (bellows murmur), cooling, whining, rasping, or sawing sounds. The musical or cooling sounds are more marked in the arteries than in the heart, and we will speak of them on a future occasion. When a morbid sound precedes the first bruit of the heart it is called *præstolic*; when it coincides with the first bruit it is a *systolic* sound. If the abnormal sound accompanies the second bruit, it is named *diastolic*. Diastolic bruits are generally soft; those which precede or accompany ventricular systole are much more frequently rough. In the auscultation of these sounds it is necessary to pay great attention to the extent over which they may be heard, and also to the spot in which they present their greatest loudness; the *semiotic* significance of a morbid sound varying considerably, according to the seat of its maximum of intensity. The pathological conditions in which these abnormal sounds are produced are extremely various; thus we find them in four distinct circumstances: in the first place they are met with whenever alterations existing in the heart interfere with the free passage of the blood from the auricles to the ventricles, or from the latter into the arteries; for instance, strictures of the orifices, valvular lesions, polypous deposits, &c. Secondly, we find morbid sounds when such alterations have occurred within the heart as to permit the return of the blood from the arteries into the ventricles, or from the latter into the auricles; this insufficiency may be produced by various valvular alterations, or by simple enlargement of the orifices consequent upon dilatation of the heart. Thirdly, morbid sounds are formed when an accidental communication takes place between the right and left cavities of the heart. Fourthly, when the heart is lacerated without complete rupture of its walls, and infiltration of blood takes place into its substance. It has been said that in simple hypertrophy morbid sounds may be produced. We believe that in general it is not so: although it is not impos-

sible that by hypertrophy a change may occur in the relative dimensions of the cavities and of the orifices of the heart. Morbid sounds generated within the organ may be produced also by pericarditis, but usually the abnormal bruits characteristic of this inflammation are formed outside the viscus.

The heart remaining healthy, morbid sounds may be also produced. Thus, when the blood has been impoverished, *souffle* is heard. When, for instance, the amount of the globules of the blood descends below $\frac{80}{100}$, *souffle* is always produced in some part of the circulating organs: always in the arteries, often in the heart. In plethora we do not find any change in the sounds. It is incorrect to say that febrile excitement causes murmurs in the heart: this occurs only when some complication is present. In ague, when the prolongation of the disease has brought on anemia, we may hear *souffle*, but it is the anemia, not the fever, which produces it. Laennec believed that certain morbid conditions of the nervous system might occasion in the heart a bellows murmur. We deny it altogether, and assert that hysteria and hypochondriasis present this symptom only when accompanied by anemia. In a certain number of pregnant women, one of the effects of pregnancy is to diminish the globules of the blood, and, therefore, in some instances, we will not be surprised to hear a *souffle* in the heart.

With these data we can now convert these morbid sounds into signs of disease; and from their varieties of nature, of tone, and of seat, ascertain the morbid state which occasions them.

In the first place let us first point out their signification in alterations of the heart. We have said that they might be produced by an obstacle to the free passage of the blood from the auricular into the ventricular cavities. This should chiefly be applied to the left cavities, the right side being very rarely diseased. Laennec had established as a law, that a *souffle* at the second beat of the heart was characteristic of auriculo-ventricular stricture. This *a priori* assertion, supported by no cases, was, however, for many years blindly adopted, when Dr. Corrigan showed that insufficiency of the aortic valves was also productive of a *souffle* accompanying the second bruit. Researches were instituted for the purpose of discriminating these two morbid states from each other, and Laennec's opinion began to be doubted, when it was found that it was purely theoretical and not derived from observation. One case only is in existence, of a *souffle* having been heard at the second beat of the heart, in conjunction with auriculo-ventricular stricture; it has been published by Dr. Andry, in his "Manual d'Auscultation;" but this case is a solitary one, and cannot be considered as a rule. From the interesting researches of Dr. Fauvel, we must conclude that, when the auriculo-ventricular orifice is strictured, a *præstolic* bruit is heard, often beginning before the first sound, and finishing with or a little before it. This morbid sound has its greatest intensity towards the apex of the heart, and

more or less to the left. We should not forget that some strictures of this same orifice cause no *souffle*, and that in these cases the diagnosis must be derived from other sources.

When an obstacle exists to the passage of the blood from the ventricular cavities into the arteries—when, in other words, the arterial orifice is strictured—Laennec correctly asserts that a *souffle* is heard accompanying the first sound of the heart. This sound has its greatest intensity at the basis. It is heard almost exclusively in rheumatic endocarditis—a circumstance which shows that a feeble obstacle generates a morbid sound more readily in the arterial than in the other orifices. When the abnormal murmur is prolonged beyond the first bruit, and occupies also the short silence, or even anticipates slightly over the second bruit, we should conclude that a considerable difficulty exists to the passage of the blood into the aorta.

Morbid sounds accompanying the second bruit of the heart are connected with the reflux of the blood into cavities which it had abandoned; or, in other words, with insufficiency of the valves to close their orifices. This is certain, at least, for the aorta; but the diagnosis of auriculo-ventricular insufficiency is not so far advanced. The general opinion, it is true, is that this disease is productive of a *souffle* at the first beat of the heart; but it is a question which has not received a definitive solution. The insufficiency of aortic valves may be congenital, or result from perforation, laceration, adhesions, &c.; further, they may be unaltered, and still be insufficient, the aorta having undergone more or less dilatation. In all these various states the second sound of the heart is replaced by a constantly soft bellows murmur, the greatest intensity of which is at the basis of the organ. In false aneurism of the heart, when accidental cavities form in its walls, a *souffle* is also heard; and generally at the second bruit. With regard to the communication of the right cavities with the left, a *souffle* is produced, but its diagnostic value is not hitherto well established. If a *souffle* was ever produced in simple ventricular hypertrophy, it would be heard at the first beat of the heart.

In very abundant effusions in the pericardium a *souffle* has sometimes been heard; after the second bruit, and replacing the long silence. On *post-mortem* examination the orifices were all found healthy; and, in order to explain the production of this morbid sound, it has been supposed that this *souffle*, which disappeared when the patients were made to sit upright or to bend forward, and which returned when they re-assumed the horizontal position, was due to the pressure exercised by the effusion upon the origin of the aorta.

Dr. Aran states that, when the second sound of the heart altogether disappears, it is characteristic of adhesions of the pericardium to the viscus. We do not pledge ourselves for the accuracy of this sign.

The *souffle* of anemia has special characters; which we will now enumerate: its tone is con-

stantly very soft; it is always a systolic sound, heard most distinctly at the basis of the heart, and invariably coincides with vascular murmurs.

Disease of the pericardium occasions morbid sounds. They are caused by the friction of the serous surfaces, rendered more or less rough by the presence of false membranes or other deposits. They vary from the softest friction to a creaking sound analogous to that produced by new leather. They may accompany one or the other, or both sounds of the heart, and can readily be distinguished from sounds due to friction in the pleura; the latter accompanying the respiratory movements, and not the contractions of the heart. They may be continuous or intermittent, according to their cause; but they are always superficial. On listening with attention a gurgling sound has sometimes been detected; its origin is in the stomach, not in the pericardium. In one curious case, observed at Hôpital Necker by Drs. Bricheteau and Beau, a gurgling was heard in the precordial region, which those experienced observers compared to the sound produced by the rapid motion of paddles in water. On *post-mortem* examination fluids, mixed with gas, were found in the pericardium, no signs of putrefaction being present at the time. This solitary case is sufficient to prove the mere possibility of such an occurrence, but it is, we repeat, extremely rare.

CHAPTER III.

SYMPTOMS FURNISHED BY DISTURBANCE OF THE ARTERIAL CIRCULATION.

These symptoms may be recognised by inspection, palpation, or auscultation.

Inspection informs us of the increased energy of arterial pulsation. In valvular insufficiency this increased energy is very remarkable, and often assists materially the diagnosis. We also find in cerebral congestion that the pulsations of the carotid and temporal arteries can be recognised by inspection. Aneurisms and erectile tumours present the same sign. In hypochondriasis and hysteria the aortic pulsations may sometimes be seen in the epigastric region—a singular and hitherto unexplained symptom. Patients occasionally feel the arterial throbbing; hypochondriacs, for instance, and persons affected with cerebral congestion, acute gastritis, or phlegmonous inflammation.

By palpation we recognise the frequency, strength, and rhythm of the pulse.

Some physiological circumstances cause the pulse to vary in frequency—age, for instance. Drs. Jacquemier and Lediberder state, that shortly before birth the pulsations of the fetus in utero vary between 108 and 160; during the first four minutes of life they descend to 72–94, and rise in the course of the first day to 96–164. Sommering asserts that the average of the pulse during the first year is 135; 120 during the second; 110 during the third; 100 during the following years, and 80 at puberty. Goreham gives 123 as the average pulse of children one day old, and 128 during the first week. M. Val-leix says that between the second and the twenty-first day the average of the pulse is 90. M. Trousseau, during the first two months of life, considers 137 as the standard of the pulse; from the second to the sixth month, 128; and 120 during the second half of the first year; from one year to eighteen months, 118. The pulse varies at all times of life during sleep. In thirty children, aged from fifteen days to six months, Professor Trousseau found the average of the pulse, awake, 140, and asleep, 121; in twenty-nine children, aged from six to twenty-one months, when awake, 128, and when asleep, 112. The pulse of the child becomes in disease much more frequent than that of the adult, and tends to remain so during convalescence—an important fact which should not be lost sight of. In the adult the average of the arterial pulse is 60–70. But great individual differences are observed; it is rare, however, to find the pulse descend below 50. Napoleon is said to have had only 40 pulsations in one minute. Below this number we believe that a pathological cause may

always be found to exist, and to account for the extraordinary slowness of pulsation. In some persons the pulse is naturally quick, 80–90, and even 100. The researches of Drs. Leuret and Mitivré, at the Asylum of La Salpêtrière, show that in the aged the frequency of the pulse increases. At twenty-one years of age the average of the pulse is 65; at seventy-one it is 74. The pulse of women is more frequent and more changeable than that of men, and, like children, women often preserve a quick pulse during convalescence.

In disease we find sometimes 200 pulsations in one minute; beyond this it is difficult, if not impossible, to count the pulse with any degree of accuracy. The increase of frequency of the pulse is the rule in fever, although some exceptional cases are said to exist in which the pulse remains low, but animal heat is augmented: we believe these cases refer to persons who, during health, have naturally a very slow pulse. Muscular exertion increases both animal heat and the quickness of the arterial beat; but excitement of the nervous system quickens the pulse without augmenting the animal heat: hence what are called nervous subjects usually have a frequent pulse. Debility and loss of blood generally quicken the pulse. In acute disease increase of frequency of the arterial circulation is usually an unfavourable circumstance, and when it is consequent upon venesection it shows that depletion was improper. The exhibition of some medicines, digitalis for instance, slackens the pulse; in some cerebral affections it is also slower than during health. Of all the diseases of the heart, that which produces most frequently acceleration of the pulse is, beyond doubt, insufficiency of the aortic valves; and in general, when the pulse is diminished in frequency during organic affections of the heart, it is only diminished in appearance, and not in reality, some of the arterial pulsations being merely so weak as to escape detection.

With regard to its strength, the pulse may be soft or hard, strong or weak, high or low, depressible, full, wiry, undulating, or double (*bis feriens*). In simple hypertrophy of the heart, the pulse is hard; it is, on the contrary, remarkably soft in atrophy and in dilatation of the viscus. When the aortic orifice is considerably strictured, the pulse loses its strength; it becomes small and wiry (*serre*) in contractions of the auriculo-ventricular orifice. When the aortic valves are insufficient, the pulse is hard and full, a fact accounted for by the almost invariable coincidence of aortic insufficiency with ventricular hypertrophy. Whenever, therefore, in organic disease of the heart, you find the pulse peculiarly full and strong, direct your attention towards aortic insufficiency, which you will seldom fail to detect.

At the ages of sixty-eight or seventy the pulse generally acquires a considerable degree of hardness, perhaps on account of the tendency at that age to hypertrophy of the heart.

The strength of the pulse is also modified by the condition of the blood. In plethora it is full and strong; in confirmed anemia usually weak, on account of the smallness of the column of blood propelled into the arteries, and of the diminished energy of the contractions of the heart. We cannot admit with Dr. Beau that in advanced anemia the pulse is full. We conceive that opinion to have been brought forward by that observer as a theoretical consequence of another view of his—which we do not adopt—viz., the increase of volume of the mass of blood from the augmentation of its watery element.

Hemorrhages are often preceded by that state described in the first series of these lectures under the name of molimen hemorrhagicum. Besides this general disturbance, the pulse acquires an undulating character. After hemorrhage the pulse is depressed and low, in proportion to its abundance.

It is important to distinguish between two varieties of small pulse, each indicative of a different condition of the system: in one vital power is really depressed, in the other it is concentrated. The pulse of peritonitis and the pulse

of advanced fever are both small; but the former is hard, the latter depressible; the former becomes fuller and stronger by depletion, the latter would by venesection be brought still to a lower state. In marked feverishness the pulse becomes full and tense, particularly on the approach of perspiration. It is not explained why in typhoid fever the pulse is so often double (*bis feriens*). The pulse of internal inflammations is not by any means always the same; compare in this respect the pulse in peritonitis and in pneumonia. When the nervous system is deeply affected, the heart is not solicited to powerful action, and the pulse becomes small and sometimes very difficult to feel, as in the pains of painter's colic, of hepatic and nephritic colic, &c.

If we consider the rhythm of the pulse, it may be regular, unequal, irregular, or intermittent. The inequality of the pulse refers more to its strength, and the irregularity to the succession of its beats.

Great nervous disturbances may render the pulse irregular and intermittent; in meningitis, particularly of childhood, after the exhibition of digitalis, before syncope, in confirmed debility, after abundant alvine discharges, this is frequently observed. In acute diseases irregularity of the pulse is uncommon, except when they draw rapidly towards a fatal termination.

Constant and persisting irregularity of the pulse indicates almost always disease of the heart. In hypertrophy of the heart, and in valvular insufficiency, the pulse is seldom irregular; but in strictures of the orifices, on the contrary, we often meet with this symptom, and mostly in strictures of the left auriculo-ventricular passage. The souffle may be absent, but the irregularity of the pulse is quite as important. The aortic orifice, on the contrary, when strictured, more constantly is accompanied with souffle, and less often with irregularity of pulse.

It is frequent after the age of sixty to find the pulse intermittent, no other symptom of disease being present; this almost always indicates incipient alteration of the bicuspid valves. Repose and venesection remove this sign, but aggravate it if improperly repeated. When organic disease of the heart causes these intermissions of the pulse, it is not very unusual to see them suppressed by accidental feverishness, by which the heart is stimulated to increased exertion. Some patients are conscious of these irregularities from a peculiar sensation experienced in the region of the heart. Not to forget anything, let us also add, that when the principal artery of a limb is obliterated, its pulsations cease to be felt. Corvisart stated that some organic diseases of the heart, passive aneurism (dilatation), for instance, might occasion gangrene of the skin of the lower extremities, or even of other parts of the cutaneous surface. No case had, however, been brought forward in support of this opinion; but in July, 1847, an interesting case appeared in the "Gazette Médicale," of Paris, observed by Prot. Forget, of Strasbourg; it was one of very considerable stricture of the left auriculo-ventricular orifice; the aortic passage being healthy; the pulsation of the radial artery was unequal and intermittent; none was discernible in the femoral arteries. Mortification showed itself on the feet and legs, and on dissection the iliac and femoral arteries were found obliterated by ancient clots of blood, the vascular walls having remained perfectly unaltered.

In our next lecture we will pursue this subject, and treat of the signs furnished by auscultation of the arteries.

CLINICAL OBSERVATIONS ON SOME OF THE MORE FREQUENT DISEASES OF CHILDREN.

By W. HUGHES WILLSHIRE, M.D. (Edin.), M.B.S., Physician to the Royal Infirmary for Children, &c.

(Continued from page 251.)

GENTLEMEN,—I have to conclude to-day the consideration of the treatment of diarrhoea. You will recollect that in my last lecture I laid be-

fore you those means of procedure which I believed to be most beneficial in the catarrhal or non-inflammatory forms of the disorder; and most of what I said to you related rather to non-febrile or more moderate attacks of the former: such cases, in fact, which, whilst you attended to the removal of their general causes—the putting in force proper dietetic and hygienic regulations—would, in all probability, be cured by the administration of an emetic, absorbent and antacid powders, or the common chalk mixture, containing aromatic confection and an astringent tincture. I, however, noticed those examples in which opium and some other remedies were advisable—even purgatives, although the disorder you had to treat was diarrhoea. In the forms of this affection which I have now to speak of you must have recourse to the additional means which I shall now refer to.

I have told you that the simplest forms of diarrhoea may run on to the most severe inflammatory one, and that it is often very difficult to say when the transition has taken place from a mere functional derangement into one now dependent upon, and kept up by, decided anatomical alterations. This partly arises from the fact that between the intensity of the symptoms of the more frequently met with forms of enterocolitis, and of those of obstinate and severe types of catarrhal diarrhoea, there is little or no difference; and, luckily, the treatment proper for the one will be that which is right to be adopted in the other. There, undoubtedly, occur cases in which acute enterocolitis breaks out at once with intense febrile erethism and increased action of the capillary system, accompanied with much pain of the abdomen; stools squirted out forcibly, and having blood in them. In such cases as these a direct antiphlogistic treatment must be employed, some leeches placed upon the belly, and afterwards hot poultices continued there, care, of course, being taken that there is not too great loss of blood. Or the turpentine epithems or mustard poultices may be used, at the same time that, here as in the other case, emollient enemata, containing a small quantity of opium, must be administered; small doses of nitre and the tincture of hyoscyamus, in mucilage, given internally, and milk diet alone ordered. In some of these cases, when symptoms break out supposed to indicate “ramollissement” of the stomach, M. Dubois advises the application of a blister to the epigastric region, and M. Bouchut remarks that the procedure is often crowned with success. I confess, to young children I prefer the application of turpentine epithems and mustard poultices, and the internal administration of soda and hydrocyanic acid in infusion of calumba or caraway-water.

It is not, however, often that you will be called upon to treat enterocolitis by loss of blood and other depletory measures. You have a child suffering this disease brought to you, already in a condition of marasmus, with persistent discharges of a thin, watery, green matter; perhaps has had diarrhoea for a month before; and these, and other symptoms I have already dwelt upon, tell you it is labouring under enterocolitis, or, at the least, under such a bad form of catarrhal diarrhoea that stopped it must be as soon as possible. You will lose time here in trying the more simple remedies I have before alluded to, and so, after paying all attention to the diet and general regimen of the child I before advised, you will order the one or other of the following remedies:—

R. Plumbi diacetatis, gr. ij.—iv.; confect. aromat., 3ss.; tinct. hyoscyami, m. v.; mucilaginis acac. gummi, 3 ij.; infus. gent., 3j.—3vj.; sumat. 3j. aut 3ij. post singulas sedes liquidas.

R. Argenti nitrat. gr. j.; acidi nitrici diluti, m. vj.; mucilaginis acac. gum., syrupi, aa. 3vj. sumat. 3j. 4ta quaque hora.

You may give these doses to very young children. I have given a teaspoonful of the first and weaker formula to a child six months old; the latter, to one a year old. I dare say I may have ordered them much earlier, though I have no note of such by me; but of the ages I

mentioned I retained the prescriptions. As to choosing between them, I would advise you to follow this general rule:—If the patient be below ten or twelve months of age, try the weaker lead mixture first; if the child is above that age, and the diarrhoea very severe, begin at once with the silver. I must say that I know nothing like the argent. nit. for stopping the diarrhoea, even if it does no more; but I think it does far more than this: it appears to me to alter the general assimilative functions. This drug is largely given in the French hospitals, both by mouth and by rectum. In the form of injection, Trousseau recommends from one-sixth of a grain to two grains, according to the age of the child, dissolved in distilled water and syrup, and then injected in as much as ten ounces of fluid, for a child above two years of age. He says a smaller quantity of fluid should not be placed in contact with the surface of the colon; and, in order to ensure the proper action of the injection, the intestine should first be cleared out with a lavement of common water. In mild cases he recommends one injection a day for three or four days; but in bad ones it may be repeated twice in twenty-four hours. I have not yet employed these injections, having confined myself to those of starch, with catechu, or with the tincture of opium, but of the value of the salt of silver given by mouth I can assure you, from experience. Combined with these measures you must use either mustard poultices or turpentine liniments to the abdomen, and afterwards fomentations, together with the occasional aid of the warm bath. Boiled milk and ground rice for older children, isinglass pap for younger ones, will be, as a general rule, most advisable.

I see that, in the 6th vol. of “Ranking’s Abstract,” there is a condensed report of the success which various practitioners have met with from the use of the nitrate of silver in the diarrhoeas both of adults and children; and, if you will refer to page 58 of the work in question, you will find some available hints as to its administration. I may just remark that I have lately had a case in which, although the mere discharge from the intestines did not seem to be very much influenced by this drug, even though two grains had been taken, yet under its use the appetite returned in a remarkable manner, the child gained strength, and was stated by the mother to be a great deal better. I dare say I shall find that, under the tonic influence of the drug, the intestinal exhalations will, however, gradually diminish in quantity. Generally I find that the nitrate has at once a marked effect upon the latter.

Of course you cannot expect always to be successful, and you will meet with cases in which the diarrhoea will not stop, and the child will still dwindle away. You cannot in such go on continuously with the lead or silver; and, if you do not see reason for at once passing to the true tonics, you had better add the chalk mixture, with aromatic confection, and with catechu or opium, not forgetting the injections of starch, &c., and the local applications I have alluded to. There is another practice which I can advise you to adopt in some cases, more especially those which have remained rather obstinate to other remedies, and in some of those doubtful cases of true inflammatory character: this is to give small doses of the neutral salts after you have given an emetic, and whilst you continue at bedtime a powder of one or two grains of ipecacuanha and rhubarb. Part of this practice is recommended by Trousseau, in what he calls bilious diarrhoea. You may use either the double tartarate of potassa and soda, phosphate of soda, sulphate of magnesia, or sulphate of soda. In the henteric forms of the disorder, this experienced practitioner highly vaunts the employment of common salt, not exactly to stop the diarrhoea, but to alter the composition of the blood—occasionally a primary, but more frequently a secondary, alteration upon the intestinal irritation and discharges. These remedies are not to be given in purgative doses, but in what we may rather call alterative and antifebrile ones—from ten grains up to 3j., ac-

ording to the age of the patient—and frequently repeated. Trousseau, in speaking of the use of common salt, says, “Be cautious, however, gentlemen, how you order this substance in private practice. The absurdity of the public in these matters is such, that the prescription would most probably be treated with contempt, but if you order the mineral waters of Homburg, Kissingen, or Niederbrunn, in which this salt is really the active element, the therapeutic action will be the same, and you will preserve the confidence of your employers, which a more candid prescription would most probably have deprived you of.”

Many cases will come before you in which the general symptoms may be said to predominate over the local ones—in which the marasmus and debility will attract more share of alteration than the mere diarrhoea will. It is in these cases that—whilst you do not neglect the diarrhoea, always bearing in mind how important an intestinal alteration is at the basis of everything—you will find the immediate recourse to the true tonics in particular combinations so useful, whilst at the same time you keep up counter-irritation on the abdomen.

I have found the union of the iodide of potassium with the disulphate of quina exceedingly beneficial. (a) You may give, also, the wine of iron, or the compound tincture of cinchona, or the syrup citrate of quinine and iron.

Not only will you have to employ the tonics, but you will be frequently called upon to order direct stimulants, in treating the various forms of the diarrhoea of children. You will have a child brought to you, who has had urgent and continuous diarrhoea for two or three days, the powers of life being completely knocked down, the face and extremities are pale and cold, it lies in a state almost of stupor; in fact, you might think it labouring under disorder of the nervous centre, and such a mistake has often been made. Such a child presents the evidences of what I before called hydrecephaloid disease. (b) Any other treatment than a stimulating and supporting one would be fatal. In such a case you must order a few drops of brandy to be given in some milk, at once, and repeated again in half an hour or an hour, if necessary, at the same time advising the mother to make some strong beef gravy, such as I before told you of, and give the child a spoonful of it frequently. Chalk mixture, combined with a few drops of ether, and of the aromatic spirit of ammonia, and the compound tincture of cardamoms, or to older children the sesquicarbonate of ammonia in infusion of cascarrilla, should be given internally, whilst the injections of starch and opium I have formerly spoken of be administered too. Such cases as demand these measures are undoubtedly serious ones; but you will constantly meet with others in which, from the great debility, pallor, and coldness, it will be advisable to combine the aromatic spirit of ammonia, or the tinct. cinchonæ c., with the chalk mixture you are giving, and to impress upon the mother not to let the child starve. These are cases not so serious as the former, but which will demand, nevertheless, the use of a stimulant.

In concluding this subject, I shall say a few words upon some remedies, which I have not dwelt upon, which have been praised here or on the Continent. Riiliet and Barthes recommend the injections to be varied with the extract of ratanhy, tannin, alum, and decoction of walnut leaves, &c.; a syrup of ratanhy to be given internally, and especially the pernitate of iron, in a mucilaginous julep. They state they have also employed the chlorhydrate of gold, ferruginous chocolate and bread. The trinitrate of bismuth is also thought well of by them.

Pommer, Herst, and Camerer recommend the hydrochlorate of iron where intestinal ramollissement is suspected. Trousseau and Pidoux ad-

(a) See *Medical Times*, vol. xvi., page 308 et seq.

(b) See *Medical Times*, vol. xvi., page 426.

vise in certain cases the sesquicarbonate of soda, or the carbonate of lime, to be mixed with the child's diet milk. Many of the Germans think highly of calumba and cascarrilla, whether in the form of infusion, decoction, or of extract. Barrier advises soap in "follicular diacrisis co-existing with aescency;" and Trousseau mineral baths containing from two to six ounces of the sulphate of iron, sulphureous or aromatic baths, with decoction of sage, lavender, and rosemary. He places, also, confidence in the extract of monesia internally, and of the ammonide of copper in the form of injection. The sulphate of copper combined with opium for elder children, and the tincture of the sesquichloride of iron and sulphate of zinc for younger ones, have been employed as astringents by some British practitioners.

ON THE PHYSICAL PHENOMENA OF LIVING BODIES.

By Professor MATTEUCCI, of Pisa.

(Concluded from p. 232.)

PART XVIII.

VISION.

The faculty of distinct vision at all distances must accordingly be referred to certain peculiarities in the constitution and structure of the eye. The several media of the eye were within lately compared to an apparatus composed of lenses with regular surfaces, and having their respective axes in the same line, represented by the axis of the eye itself. Upon this hypothesis, all the luminous rays emanating from any given point of an external object must converge on a distinct and separate point (*focus*) of the retina, and the latter be placed in a manner to permit the formation upon its surfaces of the several foci corresponding to the different points.

But we know that the distance at which a refracted image forms from the refracting apparatus varies with the distance at which the object itself happens to be placed from the latter. To sustain the hypothesis of a compound system of lenses, physiologists were, accordingly, constrained to attribute to certain parts of the eye peculiar dispositions and faculties to counteract the effects of this displacement of the image, and thus to maintain the distinctness of the impression produced upon the retina.

Various hypotheses were suggested in this respect:—

1. Some physiologists attributed to the transparent cornea the faculty of varying in convexity in a manner to remedy the displacement of the image. But observation has demonstrated that the curvature of the cornea is constant and invariable.

2. Others attributed to the crystalline lenses the faculty of contracting, and also of varying, in convexity. This hypothesis, however, is altogether unsupported by fact and observation.

3. Reasoning upon the fact that the pupil dilates or contracts with the recession or approach of the object, some physicists suggested that the rays emanating from distant objects might pass through the less strongly refracting edges of the lens, whereas those emanating from objects placed nearer to the eye might pass through the more powerfully refracting central layers of the crystalline lens. We need not demonstrate here how far from full and satisfactory this attempted explanation is.

4. Some physiologists attributed to the crystalline lens the power of altering its position in the interior of the eye. This hypothesis, likewise, is altogether unsupported by fact; and it would, moreover, be exceedingly difficult to conceive the possibility of a change of position of the crystalline lens.

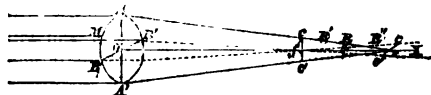
5. Lastly, it has been suggested that the contraction of the muscles of the eye, and the pressure upon that organ resulting therefrom, may suffice to lengthen or shorten its axis at will, and thus to bring the retina incessantly into the proper position to receive the distinct impression of the external object. But this, again, is a

mere hypothesis, without any tangible reasons to support it.

The fact of distinct vision at all distances remained thus wholly unaccounted for, and appeared likely to baffle all attempts at explanation, when STURM succeeded to place the question upon its proper ground, and to demonstrate that the failure of all former attempts was simply referrible to the fallacy of the hypothesis of a system of compound lenses.

According to the admeasurements taken by Chossat on the eye of an ox, the anterior surface of the cornea is a segment of an ellipsoid of revolution round the major axis of the ellipsoid represented by the horizontal section of the cornea; the surfaces of the crystalline lens are respectively segments of two ellipsoids of revolution round the minor axis of their respective generating ellipsoids; each of these two generating ellipsoids having a different length of axis. Moreover, the respective axes of these three generating ellipsoids of the surfaces of the refracting media of the eye do not coincide with the axis of the eye, nor with each other.

Whence it follows, that instead of assimilating the optical apparatus of the eye to a compound system of spherical lenses with perfectly coincident axes, we must, with Sturm, look upon this organ as "composed of several refracting media, separated by surfaces that are not strictly spherical, nor have the same axis in common. Sturm has demonstrated that, the composition of the eye being such as just now given, the pencil of luminous rays falling upon the cornea from a point situated in a line with the axis of the eye, could not be refracted in a manner to make the whole of the rays converge in a single focus. The way in which the rays are actually refracted is very different from what was formerly assumed to be the case. The subjoined engraving will illustrate this.



Assuming the circle $AB A' B'$ to represent the opening of the pupil, and OX the axis of the eye, let us suppose a pencil of rays parallel to the ocular axis falling upon the cornea.

There will be two planes ($AO A'$ and $BO B'$). All the luminous rays contained in the plane $AO A'$ will converge upon the axis in a focus, F , and all the rays contained in the plane $BO B'$ will converge upon the axis in a focus, f . The distance between F and f we will call "*focal interval*."

Let us draw at F a line (CC') perpendicular to the axis, and extending from the prolonged ray Bf to the prolonged ray $B'f$, and at f another line ($c c'$), likewise perpendicular to the axis, and extending from the extreme refracted ray Af to the extreme refracted ray $A'f$.

If now we assume a luminous ray traversing the pupil at any given point (M , for instance) between $AO A'$ and $BO B'$, this ray will not encounter the axis of the eye, but be refracted in a manner to bear both upon cfc' and CFC' . Whence it follows that a pencil of light that falls upon the surface of the cornea parallel to its axis will be refracted in a manner to form throughout the whole extent of the focal interval Ff a very restricted and contracted pencil surrounding the axis on all sides, and terminated by an oblique surface very close to the axis.

The retina is placed between F and f , let us suppose at R . The refracted pencil describes accordingly on the surface of the retina a very small ellipsis round the axis, and within this ellipsis are collected the whole of the rays that have traversed the opening of the pupil.

Hence it follows that the rays emanating from a luminous point placed before the eye do not converge in a single point of the retina, but are distributed over a very minute surface of the latter, comprised between the points at which the extreme rays of the luminous fasciculus concentrated around the axis in the focal interval intersect the retina.

Now, if we suppose the external object to recede from, or to approach, the eye, the focal interval will experience a corresponding change of position, so that the position of the retina will change from R to R'' or R' , remaining always comprised between F and f . The pencil of light concentrated around the optical axis in the focal interval will, accordingly, invariably strike the retina, and the surface of its intersection with the latter will be so little modified that the impression will not experience any perceptible alteration, and the image preserve its distinctness.

What we have said here of an isolated luminous point applies to every one of the points of the luminous object before the eye.

This new theory of the course of the luminous rays through the refracting media of the eye accounts fully and satisfactorily for the important and apparently so inexplicable fact of distinct vision at all distances.

Long-sighted persons see objects distinctly at a distance of two or three feet. The cornea of their eyes is less convex than it is in the perfectly sound eye. This defect of the sight is a concomitant of old age, when the secretions of all tissues decrease. From this flattening of the cornea, the focal interval of the rays emanating from the point of distinct vision for the perfectly sound eye would fall beyond the retina; long-sighted persons are, accordingly, obliged to distance the object so as to make the image fall upon the retina. In individuals labouring under this defect we find the pupil habitually contracted, as if they were making a continual effort to use only the centre of the crystalline lens. To correct this defect, convex lenses are used, which serve to diminish the divergence of the rays previously to their entrance into the eye. The rays emanating from an object placed at the ordinary visual distance are deflected by these convex lenses in a manner to throw them properly upon the retina, just as if the object were placed at the exact distance at which long-sighted persons see distinctly.

The other defect of the sight—near or short-sightedness—arises from the opposite cause, viz., over-convexity of the cornea. Where this is the case, the focal interval of the rays emanating from the point of ordinary vision falls before the retina. Short-sighted people use accordingly divergent or concave glasses. These concave lenses increase the divergence of the rays previously to their entrance into the eye, and thus objects placed at the ordinary point of distinct vision are seen under the same divergence as if they were placed very near to the eye. The concavo-convex glasses, or Wollaston's periscopic lenses, correct these defects more effectually than the ordinary lenses. Concavo-convex glasses being necessarily thinner than the common spectacle glasses, they absorb a less proportion of light, and the objects seen through them appear more distinct.

The achromatism of the eye, which is perfect for objects placed at the distance of distinct vision, may be ascribed to this, that the pencil of light concentrated around the optical axis, and which falls upon the retina within the focal interval, contains rays of every colour in too limited a space to permit the separate and distinct formation of the coloured bands.

It is indeed a well-known fact that where very minute spaces only intervene between images of different colour or intensity on the retina, these images are no longer perceived separately.

And, even though we may not be able to designate the actual cause of the achromatism of the eye, yet this much must be conceded, that we find in the structure of the organ that variety of curvatures and of refractive and dispersive power of the various media that constitutes the principal condition observed in the construction of our achromatic optical apparatus.

How are we enabled to judge of the position, distance, size, &c., of an object, and of its relations with surrounding objects? What is the office of the two eyes?

In the preceding passages we have endeavoured

voured simply to establish the fact, that the image of an object is formed on the retina, that this image is distinct but inverted with respect to the object seen, and that these phenomena are independent of the distance which may happen to separate the object from the eye. However, the mere production of this image on the retina is not in itself sufficient to constitute the perception of the object: this ensues only when the modification experienced by the retina is transmitted to the brain through the agency of the optical nerve. But how does vision result from the modification produced upon the retina by the luminous rays emanating from external objects? The first question that calls for examination here is the position of the external objects; with the metaphysical part of the subject we will not meddle.

Much has been said and written to explain how it is that the images on the retina are inverted with regard to the objects which they represent: we perceive these objects *erect*, and consequently inversely to their image on the retina. In our appreciation of the position of bodies we simply compare the position of their several parts relatively to surrounding objects; otherwise, the words *erect* and *inverted*, as applied to objects, would have no meaning. To our perception, a man is in an erect position when his feet are on the ground, and his head furthest removed from it; and the inverted image formed in the retina does not alter in the slightest degree the respective positions of the several parts of the body relatively to the earth.

There are several ways to estimate the distance and size of objects. Were objects placed at a uniform distance, and always equally illuminated, we might measure their size by that of the image depicted on the retina; the dimensions of that image may generally be considered proportioned to the visual angle formed by drawing two straight lines from the extremities of the object to the centre of the retina: we call this the *apparent size* of objects. To enable us to estimate the distance of objects we have the consciousness—

1. Of the movements made by the eye, that the luminous cone transmitted from the external object to the pupil, and which is more or less divergent, according to the greater or less distance of the object from the eye, nay, from its focus on the retina.

2. Of the movements by which we endeavour to bring the optical axes of the two eyes more or less near to one another, to make them converge upon an object placed at different distances. With objects placed at great distances, however, this mode of estimating the distance fails, since the two axes being in such cases directed nearly parallel to one another, we are liable to optical illusions. Thus, for instance, if we look down a long avenue of trees, the two rows seem to approach more closely to one another in proportion as the distance increases. The same phenomenon is observed in long galleries.

The intensity of the light which we receive from an object, and which diminishes in proportion as the distance increases, affords us another means of estimating distances; here it must be borne in mind, however, that the atmospheric variations, tending incessantly to vary the quantity of light received by objects, render this means of estimating distances rather uncertain. Lastly, to determine the *actual size* of objects, placed at a greater or less distance from us, we have recourse both to an estimation of the distance and to the *apparent size* of the object. Erroneous estimation of distance leads frequently to illusions in our estimate of the actual size of objects. These illusions will occur more particularly in faint light, or comparative darkness. Phantasmagoria is a familiar instance of this kind of illusion.

What is the respective office assigned to the two eyes in the act of vision? The images of objects placed at a considerable distance from our eyes are identical in both eyes; the act of vision is here effected as if the two eyes formed one, the two optical axes being under such cir-

cumstances sensibly parallel. That the impression produced by an object seen with both eyes is single, and not double, is simply the consequence of an intellectual act which, from habit, we perform with inconceivable swiftness.

We will here pass over the theory of a semi-decussation of the optical nerve, by means of which Wollaston endeavours to account for the unity of vision; and also over Wheatstone's experiments with the stereoscope, and proceed at once to the consideration of one of the most curious phenomena of vision—viz., the persistence of the impressions received by the retina.

Look at a piece of burning charcoal in rotatory motion: if the motion be sufficiently rapid, you will fancy you see a luminous circle. It is obvious that this illusion can be accounted for only upon the supposition that the sensation produced by this luminous body persists a certain time, of which the deviation may be estimated by the space of time in which the revolving coal will regain a given position: in this way the coal is seen simultaneously at all points successively traversed by it. The apparent augmentation of volume of a cord in vibration, the disappearance of the spokes of a rapidly-revolving wheel, the luminous train of shooting stars, the white colour presented by a revolving disc painted with the seven colours of the spectrum—these are all phenomena dependent upon the same cause, the persistence of the impression produced on the retina. Look fixedly at a strongly-lighted object, and then close your eyes, and you will still continue to see the object you have been looking at. Some ingenious toys (Thaumatrope) have been constructed upon the principle of the persistence of the impressions made upon the retina. We are, however, constrained here to confine ourselves to a mere allusion to these toys, and equally so to Hime's apparatus for measuring the duration of the impressions made upon the retina.

Plateau, who has studied this subject with great care and attention, found that, to produce a perfect impression, the light must act a certain time upon the retina; that the total duration of the impression is the same for all colours, and may be estimated approximately at 0".34; that the impression preserves the same degree of intensity the longer the less intense the light that produced it; that the divers rays of different colours present certain differences in this respect (thus, for instance, the impression lasts longer for blue rays than for red rays and white light); and lastly, that the total duration of the impressions is the more persistent the more intense the light, and the more protracted its action. Besides this persistence of the impressions received by the retina, there are some other and no less curious phenomena of vision. Look fixedly at a coloured disc placed on a black ground; after a time remove your eyes suddenly and cast them on a white ground, and you will fancy you see a disc of similar shape to the one which you have been regarding, but presenting a colour *complementary* to that of the latter. Thus, if the disc you have been looking at happens to be red, the imaginary disc will appear green; if the former happens to be yellow, the latter will appear violet, &c. These illusory impressions have received the name of *accidental colours*. According to Plateau, these impressions cease after having presented a singular series of phenomena: thus, it would appear that after a certain time the imaginary disc with the complementary colour gives place to a similar image presenting the true colour of the actual disc, but less intensely marked; this, again, vanishes, and is replaced by the image with the complementary colour, but also less distinctly marked than at first. The images continue thus to disappear and reappear alternately, growing all the time more and more faint, until the impression finally vanishes.

These accidental colours form combinations with one another, and equally with the actual colours.

In conclusion, we have to offer a few remarks on the accidental colours observed to form around objects whilst we are looking at them. If we

look for a certain time at a coloured object, placed in the centre of a white board, we see a halo formed around the object—a complementary colour to that of the latter. Place a coloured leaf, with a strip of white paper pasted upon it, near a window, so as to throw a strong light upon it; look steadily at the leaf, and the strip of white paper will speedily appear to your vision invested with the complementary colour of that of the leaf. All strongly-lighted white bodies appear of larger dimensions than black bodies of equal size. All these facts prove clearly that every impression produced upon the retina is surrounded with an accidental halo, and that the excitation extends, accordingly, beyond those points of the retina where the image is formed.

These principles find important applications in all the arts in which coloured objects are employed. We are indebted to M. Chevreul for a most valuable treatise on this subject.

ORIGINAL CONTRIBUTIONS.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

(Continued from page 213.)

CLASS II.

DIVISION I. *Thoracic Derangement; Countenance dusky.*

From Pneumonia.

- " Pleuro-pneumonia.
- " Edema pulmonum.
- " Emphysema pulmonum.
- " Edema pleurae (hydrothorax).
- " Asthma.
- " Bronchitis.
- " Endo and exo carditis.

In the preceding papers allusion has been made to the scientific writings of Sir Charles Bell, in that department of his profession which is still, and will long remain, the theme of admiration, both amongst physiologists and artists—I mean especially that extraordinary work on "The Anatomy of Expression," in which the author has thrown together the various facts in elucidation of the above subject, and which I have had the gratification of hearing from his own lips in former days, whilst he held the office of senior surgeon to this hospital.

If it is laid down as an axiom that "the study of physiognomy consists in the exercise of tact and judgment in searching for, in fixing, and in classing the external signs of the internal faculties, in discovering the causes of certain effects by the features and movements of the physiognomy," (a) then Sir Charles Bell has advanced some steps beyond this point, and has demonstrated most clearly that the muscles of expression peculiar to the human face are not only muscles of respiration, but are also peculiarly subservient, in this lord of the creation, to that instrument, the human voice: so that speech or language, a plaintive cry or an angry tone, weeping or laughing, hallooing or whispering, are, one and all, so intimately bound up in their several actions with the respiratory system, that it is utterly impossible to study the general physiology of respiration without at the same time entering fully into the collateral study of expression, of voice, and of language.

When this department is viewed by the medical physiognomist, under disease, what an extraordinary field for observation, for diagnosis, for prognosis, and, above all, for treatment of disease, does it not open to the mind of the practitioner!

But I shall here take the liberty of quoting the language of Sir Charles Bell's relative and successor in this hospital, from a little work recently

(a) Lavater, *oper. cit.*

published, and written with his usual clearness and peculiar talent, in the following words:—

"In man the organ of breathing is constructed in such a manner that, besides ministering to the oxygenation of the blood, its primary office in the economy, it is the instrument of voice and of expression—two properties which bear relation to his intellectual nature. In order to adapt the organ to these endowments, it is necessary that the mechanism should have a form and arrangement distinct from that in the lower animals, where it serves for purifying the blood alone; and, as a correspondence always exists between the structure of the moving parts of the frame and the nervous system which regulates their actions, the change in the construction of the organ is accompanied with a change in the arrangement of the nerves. Accordingly, by comparing the nervous system in the inferior animals with its order and distribution in man, the author (a) found that a distinct class of nerves is appropriated in the human frame to the organ of respiration, and to that class he gave the name of 'respiratory system.'" (b)

"The tract or division of nervous substance from which these respiratory nerves originate, is distinct from those which give off the roots of the spinal nerves and fifth cerebral nerve," the latter being wholly a motor and sentient nerve, bound up together in the same manner that the ganglionic and non-ganglionic nerves pass off from the spinal cord to minister motion and sensation, respectively, in their varied distributions over the body. But these respiratory nerves, in passing out to the body, course, in a radiating manner, to parts of the head, neck, and chest, where nerves of the former class (motor and sentient) are already plentifully distributed. When we examine the structures thus supplied, we perceive that they enter into the formation of the organ of respiration. Mr. Shaw, therefore, states that Sir Charles Bell styled these nerves "superadded," or "respiratory." (c)

It cannot be too strongly insisted upon that, if the student in medical physiognomy is desirous of arriving at any accurate and useful knowledge in this most important branch of semeiology, if he seeks to read disease, and the seat as well as the nature of that disease, in the varied and ever-

varying shades of expression depicted in the invalid's countenance, he must first study the admirable work of Sir Charles Bell, already referred to, and carry his mind, his thoughts, and his knowledge to the sickbeds of an hospital, where he will be astonished to see the power of the language of expression in disease, the truth of that language, and its steady character under all circumstances. When he has obtained a knowledge of the outlines of the anatomy of expression, and has seen them thus depicted in the human face, he may realize them in the same way that an artist does who places himself before a mirror, and throws the passion of rage, grief, or jealousy into his countenance; thus let him seek all occasions of storing his mind with images of human suffering in disease. He should study the countenance of a patient where anguish is strongly depicted, as in an individual labouring under some cardiac and pulmonary congestion; and from thence let him turn to another, in whom the character of the disease is equally marked, though it is thrown upon the face in a manner totally opposite to the first instance, as is the case with scrofulous disease of the brain, or tubercular softening in the lungs. But it is not expression only that the medical physiognomist has to observe: there is a department in this branch of clinical study which no physiologist can explain, and which no artist can depict; but which experience, and experience alone, at the bedside will enable the mind to seize, to store up, and make use of in forming an accurate diagnosis of the disease which is the subject of study. This additional branch, then, is the shade, the colour, the tint, the hue, the cast, in short, the *tout ensemble* of the face, as it would be viewed by an eminent artist who was about to paint a likeness, wholly irrespective of its being the portrait of sickness or of health.

"But the chief use of the portio dura," observes Mr. Shaw, "is to associate the muscles of the lips and of the nostrils, the two external orifices of the air-tube, with the rest of the organ of respiration; but it fulfils other duties at the same time: its branches which descend upon the neck, and those which go to the orbicular muscles of the eyelids, control movements connected with disturbances in the venous circulation, produced in certain excited states of the respiration." It is a difficult, but, at the same time, an interesting question to consider how far these various movements of expression in the face, under disease, influence the shades and tints of colour which are read in the countenance of a patient labouring under some painful disease of the respiratory system. There is certainly an *expression*, as well as a *colour*, peculiar to the physiognomy of a patient labouring under emphysema pulmonum, or under effusion of lymph into the pericardium. The colour and the expression, though closely allied in both diseases, are nevertheless distinguishable by a practised medical physiognomist. The same observation may be made respecting the *expression* of pneumonia, and the *tint* which that disease throws over the countenance.

Mr. Shaw most ingeniously explains the action of the respiratory muscles in modifying the flow of blood to and from the brain; and observes that these muscles "compress the large veins when the chest is contracted, and when there is a tendency to regurgitation of the blood; and that they take pressure off from them when the chest is expanded and the channel to the heart is free. The orbicularis muscle acts in compressing the eyeball whenever the chest is violently contracted, as in coughing, &c.; by that means it closes the veins at the back of the orbit, and prevents engorgement of the fine branches which ramify on the delicate coats within the eyeball." (a)

Now, whenever the flow of blood is tardy in its course through the venous trunks of the head, neck, and chest, as it occurs in emphysema and asthma; and, moreover, when, from this cause,

there is a tendency to congestion in the circulation of the vessels of the eyeball, and consequent pressure upon the delicate coats of this organ, we always find that the globe is prominent, the eyelids wide open, and the brows raised, in order, as I imagine, to preserve the tissues of the eye from any undue pressure, and to enable the blood to pass out of the orbit with more freedom than it otherwise would do. You may read this venous congestion in the *expression* of the eye. I say *expression*, because in such a state of pulmonary derangement the eye is staring, and, whilst the individual converses, the neck is straight, the head is inclined backwards, the brows are raised, the nostrils dilated, their angles drawn upwards and outwards, whilst the voice is shrill and dissonant, so that a shrewd observer may readily conjecture that emphysema exists in one or both sides of the chest.

Who does not notice these peculiarities of physiognomy in a person who hastens into your presence, breathless and eager to communicate some important information? If a medical physiognomist was requested to draw the portrait of a patient labouring under bronchitis, or an attack of asthma, would he not throw the above peculiarities into his picture? Whilst the opposite cast of expression, namely, the overhauling and knitted brows, the head bent forwards, the half-closed eyes, the retracted nostrils, and the mouth slightly open, with its angles drawn downwards, exhibit that languor of expression peculiar to cerebral distress or disease. In the first instance you meet with increased circulation in the face, hence there is a dusky blush, or a dull tint, thrown over the countenance; whilst in the latter portrait you observe only a dingy, greasy hue, with little or no distinct shade of colour in it.

Some time ago I was spending the evening at a friend's house, when a new servant girl, who had arrived that day, entered the room with the tea service. She was a round, flabby-faced maid, with those peculiar fresh-coloured cheeks which border occasionally upon a purplish hue or brickdust red, and which are thrown into an intense blush by the least mental excitement. Her shoulders were slightly raised, and she had a large, bold, and staring eye; the lips were thick, the nostrils dilated, and the whole thorax rounded.

The lady soon afterwards said, "What do you think of our new maid?" I replied, "She looks weak in her chest, and, if I were to pass a judgment upon her health, I should think that she was asthmatical." In the course of another week I heard from her mistress that she had merited a scolding, and that her face assumed a deep purplish tint, and that her breathing was laboured, like the braying of an ass, as she was trying to cry. This induced me to watch her narrowly whilst she was bustling about her occupation, and I could plainly notice that the girl was asthmatical. On being interrogated, she acknowledged that she was habitually very short-breathed, and that her sister was occasionally almost choked for want of breath, and was obliged to send for the doctor, and that neither of them, all their life, could run without difficulty of breathing.

Since the above period I have seen many well-marked instances of the same character of face: one in a young woman of eighteen, and another in a girl of fourteen; and in both of them there were unequivocal signs of congenital asthma. Other examples might be also adduced to show that the peculiar *colour* of the countenance and flabbiness of the cheeks are more or less connected with some impediment to the course of the venous circulation in the vessels of the neck and chest. This congenital dyspnoea, I apprehend, may be very frequently referred to the imperfect obliteration of the foramen ovale, constituting, in fact, a mild form of cyanosis; whilst the pulmonary disturbance is the effect of such cardiac malformation.

There was a night-nurse lately placed in one of our wards who attracted my attention, soon after her arrival, on account of the inharmonious

(a) Sir Charles Bell.

(b) "On Sir C. Bell's Researches in the Nervous System." By Alex. Shaw, Esq. 1847.

(c) In order to impress the subject upon the reader's attention, I must be allowed to observe that the following nerves control the respiratory system:—

"A. The portio dura, or motor nerve of the face, arising from the medulla oblongata, close to the origins of the nervus vagus, the glossopharyngeal and spinal accessory nerves, included in the respiratory class, gives no branches to any of the muscles of the jaw, and is, therefore, *not* a nerve of mastication. Its branches pass off as follows:—

1. Frontal branches to the muscles of the forehead and eyebrow.
2. Branches to the eyelids.
3. Branches to the muscles which move the nostrils and upper lip.
4. Branches to the lower lip.
5. Branches going down upon the side of the neck.
6. Connections with the cervical spinal nerves.
7. A nerve to the occipital portion of the occipito-frontalis muscle, and to the muscles of the ear.

B. The nervus vagus, or grand respiratory nerve.

- C. The spinal accessory nerve.
- D. The ninth nerve, motor nerve of the tongue.
- E. Diaphragmatic nerve.
- F. Branch of the sympathetic nerve.
- G. Superior laryngeal nerve, a branch of the nervus vagus.
- H. Inferior or recurrent laryngeal nerve, a branch of the nervus vagus.
- I. Glossopharyngeal nerve." — (A. Shaw, Esq., *oper. cit.*)

(a) On the Nerves, by Alex. Shaw, Esq.

and unequal tone of her voice. I was inquiring into the condition of a patient in the ward, when her answers were given with that peculiar absence of symphony which is observable in a lad whose voice is just breaking at the age of puberty. The feeble light of the room would not allow me to pursue the study of the physiognomy of her health until the morning, when I took an especial occasion to enter into conversation with her; and, as she spoke, the shrill voice again was heard, the eyes were widely expanded, the brows raised up, the mouth slightly opened in the acts of respiration, the nostrils distended, and the shoulders and neck were thrown backwards. My diagnosis was instantly formed, viz., that she was asthmatical, and that she would never be suited for the work of a night-nurse. I asked her no questions respecting her health, but merely inquired of her day-nurse soon afterwards, an experienced woman, how she did the duty; and her answer was brief but pointed:—"O Sir, she is a very willing woman, but she is so short in her breath that she cannot do any active work whatever, and is, therefore, of very little use in the ward." This convinced my mind that a thoracic disease may be recognised in the character of the voice, as well as in the expression of the face, and in the expression of respiration. The hollow, deep tones of voice of a patient with tubercular softening in the lungs must be familiar to many practitioners. (a)

Another practical illustration of the influence of disorder of the lungs over the tone of the voice recently occurred. A man applied here with a dusky face, staring eyes, elevated shoulders, and a barrelled thorax, so that emphysema was discernible in the first glance of his countenance, and after the second or third auscultation of his chest he inquiringly said, "Do you think, Sir, that I am consumptive?" "No," was my reply. For, I should observe, that absence of respiration, clearness on percussion, throughout the chest, could leave no doubt that it was a simple form of ruptured air-cells. "Well, Sir," he added, "I have been told that I am not by other medical gentlemen; but is it not very singular, then, that I can sing as well as I ever could in my life?" "Not at all," I replied, "as you have more wind in your chest than you want, or can get rid of, so that you can afford to spend a little of the surplus in singing," &c. I soon afterwards had an opportunity of hearing him sing, though he was not aware of it, when I noticed that the voice was sonorous and clear, but he could only move it upon one note, in semibreves or crotchets, as in singing "God save the Queen;" but if he came to semi-quavers or apogituras, or tried to pass up or down the octave in thirds or in fifths, his voice faltered, and he could not accomplish it. In short, his larynx was acted upon in much the same manner that the bass note of a pibroch is kept going by the accumulated bag of air pressed out from the bellows by the arm; but the voice of such a patient is no more capable of singing an air with fluency and modulation than is the pibroch in giving the treble notes of a Scotch jig.

Patients afflicted with the above disease will often keep up a conversation in the most loquacious manner, expending three times the number of words in one expiration than a healthy person is able to do; so that one might paradoxically say that, although the man is "short of breath," yet he has "more than he wants."

There is another instructive point which the voice elucidates in the formation of a diagnosis of thoracic diseases; and it is the following:—that by your own voice, practised upon the chest of a patient with certain morbid changes in the lungs,

(a) In the Papal States, where every opportunity is taken, and every means are used, to detect and publish the description of persons who travel through the country, the voice is much attended to, and the character and tone of the voices specified in the passports; and by the description of this human sound, man is often enabled to recognise and detect his fellow-man.

you may glean some very valuable information respecting the condition of those organs. Dr. R. G. Latham proposes the classical title of "heautophonics," to this diagnostic help.

But, in order to simplify my meaning, the following illustration may be given:—Let an individual hold a hat in his hand, and, putting his face close to the hollow, let him talk into it for three or four minutes; he should practise this adjoining to a corner of a room where an angle is formed by two solid pieces of wainscot; and, having thus talked, let him suddenly shift his head and talk into this angle of wood, and instantly his voice falls a semitone or more. Let him repeat the experiment both ways alternately, and he will soon satisfy his mind, especially if he has a moderately good ear for detecting variations of sound, that, as he talks into the hat, his voice is raised half a note, and *vice versa*. (a)

This curious study should be pursued several days, and repeatedly gone over, before the voice can be made subservient to the detection of disease in a patient; but when the ear is pretty well tutored, and can distinctly catch the modification of sounds of one's own voice—whether the individual talks into the air, into a hat, into an angle of wood, or into one of stone—he must then place his ear over the base of the heart of a vigorous, healthy man, and recite some portion in an even and in an audible voice, or, what is preferable, he may count from fifty to one hundred, and then he should carry his ear to the subclavicular region of the right side, and again talk aloud, and he will find that his voice rises nearly half a tone in the latter spot. To pursue this study pathologically, he should now place his ear over the latter spot of a phthisical patient, who is labouring under complete solidification of one of the upper lobes, and once more count upwards, then shift his ear to the lower lobe of the opposite lung, which we will presume is healthy, and count again, and the voice which was bass, resonant, and vibrating to his own ear in the first spot, will become raised or more tenor, less resonant and less ringing, in the latter spot.

The same observation applies also to the alteration of one's own voice when we talk over the solidified lung of a pneumonic patient, who is labouring under that stage of the disease known as red hepatization; whereas, on the other hand, if there is a cavity in the upper lobes, as in phthisis, or a permanently distended lung, as in emphysema, a well-tutored ear will notice that, as he talks over such spots, the voice is imperceptibly raised a barytone, and *vice versa*, a semitone. But, again, if the chest is full of fluid, as in dropsy of the pleura, or in empyema, the voice of the auscultator, like the percussion, emits only a "son mat," a dead, non-vibrating, non-resonant sound. These, then, are the fundamental principles of the science of heautophonics, from *εαυτον* (self) and *φωνη* (voice).

During the whole of these studies the patient, of course, is a passive agent, and, therefore, is not required to take any part in the proceedings; indeed, if you begin by catechising him first, as in the usual mode of auscultation, in order to hear his own voice, or his respiration, &c., you will be sadly perplexed by his interruptions when you attempt to auscultate your own voice, through the medium of his chest, if I may be

(a) It is singular that so many students, and even professional men, should be carried away with the false notion, that a musical ear is essentially requisite for the study of auscultation, whereas the very reverse is so oftentimes the fact, that it is doubtful whether it is of the slightest assistance. There is, at this present moment, one of the brightest ornaments in our profession, as a physician and as an auscultator, who cannot hum the simplest tune correctly, as I have witnessed repeatedly. Mr. Elwin, formerly house-surgeon in this hospital, was remarkably quick in detecting the various modifications of sounds in auscultation, and yet he would often acknowledge that he had not the slightest taste for, or knowledge of, music, not even of the most simple air, such as "Rule Britannia," &c. &c.

allowed such an expression, as he thinks probably that you are talking to him, and that, therefore, he must get some answers for you concerning his feelings, &c.

By these means the chest of the patient is used as a stethoscope, or is made a medium for auscultating the organs within, through the medium of the voice of the practitioner. (a) If any of my readers are credulous upon these points, let them amuse their ears and exercise their voices upon the chests of half a dozen healthy men, and their scepticism will very soon vanish, for they have no power to control their own alterations of intonation, since they depend upon the greater or lesser conducting power of the surfaces over which the voice is thrown. Of course, if the surface is spongy and loose, like a feather pillow, the conducting power is very small; but if the ear is laid upon a solid oak chest of drawers, the reverberation of the voice through the conducting power of the wood lowers the tone half a note.

In further proof of the utility, as well as of the certainty, of this new method of auscultating one's own voice over a diseased chest, I have frequently requested one of our sharp pupils to listen to the chest of a patient who had unequivocal signs of phthisis. He has satisfied his own mind on which side the tubercular solidification existed. I have then requested him to withhold his opinion from me until I had auscultated my own voice over the two subclavicular regions; and the information which I derived from this source exactly corresponded with the information which he obtained from the voice and respiration of the patient, and we found ourselves simultaneously agree as to the spot where solidification existed.

The foregoing remarks will show that the study of the physiognomy of thoracic diseases has been commenced with what we can hear rather than with what we can see, as the term implies; but, after touching upon it, it is time to pass on to the consideration of the various morbid sounds which are gathered from the chest of a patient who respires and talks under your ear whilst in the recumbent posture. I shall, therefore, proceed to the several helps which the sense of hearing farther affords in the detection and elucidation of thoracic diseases; and, as it is not my intention or wish to discuss subjects which have already been disposed of in elementary works on auscultation, I need not enlarge on a description of the varied sounds given out by the alteration of structure in diseases of the lungs, &c., and the influence the respired air, the voice, and the cough of the patient exert in producing these sounds. I would, therefore, sum up the whole in a short table, known amongst the pupils who frequent the medical wards of this hospital as "The Alphabet of Auscultation."

(To be continued.)

CLINICAL REMARKS ON CASES OCCURRING IN OBSTETRIC PRACTICE.

By CHARLES WALLER, M.D.,

Physician-Accoucheur to St. Thomas's Hospital.

ON PLACENTA PRÆVIA.

(Continued from p. 234.)

CASE 8.—Partial presentation. In this case the patient had been under the care of a midwife, who had ruptured the membranes on the preceding day, and then left her. Another woman was sent for in the evening, who also got alarmed at the bleeding, and, like her predecessor, decamped, leaving the sufferer to her fate. A medical man saw her on the following morning, who immediately requested my attendance. At that time the hemorrhage had abated; the pulse,

(a) This principle is fully understood and acted upon by singers, performers on wind instruments, &c. The presence of curtains, drapery, and much glass in a room, tends to oppress the chest of the performer or singer to a painful degree; and this effect is fully obviated in the construction of those public edifices which are designed for oratory, or for preaching, singing, &c.

though rapid and soft, was not so feeble and faltering as I have frequently witnessed in similar cases: there was a general warmth over the surface, but the countenance was deathly and corpse-like. This discrepancy between the sunken features and the comparatively steady state of the pulse was specially pointed out by me at the time. On introducing the hand for the purpose of examination, the placenta was easily felt lying in the vagina, but no portion of the child; carrying the finger upwards, the presentation proved to be that of both knees. The child was readily drawn down: some difficulty was experienced in bringing the head through the pelvis; notwithstanding the discharge was trifling, the signs of sinking increased. Stimuli were given after the delivery, and there was a slight rally; difficulty of breathing soon followed, and that most distressing state of jactitation so common in cases of hemorrhage. After an interval of about fifteen minutes the pulse fell, the patient threw her head back on the pillow, and instantly expired. The child was also in this instance dead-born. Would transfusion have saved this female? This operation was not overlooked, my instruments were at hand; the bleeding, however, had not been excessive; there was general warmth over the surface, and a pulse distinctly perceptible until just at last, when there was time for nothing. It should also be noted that the female had been the subject of lung disease for a considerable period.

CASE 9.—This case was entirely under my own superintendence. Pretty free hemorrhage occurred at the eighth month of gestation. On examination the os uteri was closed, and there were no pains; perfect quietude and attention to the bowels were directed, by which means the bleeding was checked, and did not occur until four weeks had elapsed, when it became much more alarming. On my first visit, the os uteri was long, projecting, and only sufficiently open to admit the point of my finger, at the tip of which a firm fleshy substance could be felt, but not the child, which was very high up. The discharge continued throughout the day in small quantities, and on the following morning had considerably increased: still there was scarcely any dilatation. In the afternoon the os was dilated to the size of a crownpiece, and, as the system began to feel the exhausting effects of the hemorrhage, I determined to attempt the delivery. The placenta was attached around the whole of the os; the hand was introduced and the parts gradually dilated, and then passed through the placenta. The elbow was the part presenting. Version was accomplished with the utmost ease; the child born dead, the mother recovering without an untoward symptom.

CASE 10.—Partial presentation. The female about seven months gone, had had several alarming hemorrhages. Her medical attendant, when sent for, discovered the nature of the case, and had seized the feet and brought them into the vagina, where, as the flooding had ceased, he left them. I visited her about ten hours afterwards; there had been no fresh hemorrhage, but alarming faintness had continued for several hours. I thought it better to complete the delivery, in doing which there was great difficulty, for, although the feet had been brought down, the child was doubled, but not turned, and the uterus had contracted forcibly around it. The placenta was naturally expelled, without hemorrhage. After the lapse of four days I was again requested to see her, as there had been no effectual rally, and she was suffering from frequent rigors, followed by heat, but no perspiration. I prescribed calomel and opium at night, with quinine through the day; she appeared to be going on well for three or four days, when a sudden gush of blood took place, and she immediately expired. There was no examination after death.

CASE 11.—A case of partial presentation, under the care of Mr. Greaves, who was called to this female at the eighth month of pregnancy, in consequence of alarming hemorrhage. On examination he ascertained the cause. His patient appearing in a desperate condition, my attendance

was requested. I found her in a very unpromising state, with a completely blanched countenance, pale and livid lips, cold extremities, laborious respiration, and a pulse scarcely perceptible; the general surface of the body was also cold—in short, everything indicated approaching dissolution. Stimulants had been freely given, but they failed to excite even a temporary rally. The vagina was filled with coagula; and, as the hemorrhage appeared to have ceased, I did not think it advisable to disturb the clots in attempting delivery. Stimulants were again had recourse to, but with no better effect. The symptoms of exhaustion increased, and nothing but transfusion seemed, under these circumstances, to hold out the slightest chance of relief. Mr. Greaves concurring in this opinion, we made preparation for its performance. Our first intention was to have laid bare the vein, and to have had all things in readiness, then to have delivered, and, provided there had been no improvement in the condition of our patient, to have transfused immediately afterwards. A little reflection convinced us that this plan would be fraught with danger, for, had syncope occurred, in all probability it would have been fatal. The operation was, therefore, at once commenced. When about 5 oz. of blood had been introduced, the amendment was evident: the pulse was more perceptible, and the countenance assumed a somewhat better aspect. The blood now flowed very sluggishly from the arm of the female who supplied it; we therefore determined to wait awhile and watch the effects, nourishment and stimuli being administered occasionally. The rally continued for about two hours and a half, when the female again began to sink, and jactitation supervened; gruel, with brandy, was given, without any benefit; the pulse was again but just perceptible, and the body getting cold. I again injected about four ounces of blood from the same individual who had previously supplied it, but this time the symptoms did not improve. The stream issuing from the punctured arm was so languid that it was not thought right to proceed, and a fresh subject was sought to furnish us with a better supply. 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 2 oz. produced a marked alteration in the pulse: it became decidedly perceptible. When 9 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. There was no faintness afterwards; the surface was warm; the pulse steady, about 100 in the minute; jactitation ceased; and nourishment was retained on the stomach. The only complaint was of excessive fatigue, with an inclination for sleep; there were also a few "grinding pains." I visited her again in about one hour and a half: she had been dozing, and was extremely tranquil; reaction was perfect, and there was no hemorrhage, no tumult in the circulation. I now left the case in the hands of Mr. Greaves, who afterwards informed me that, after a sleep of some hours, the pains increased, and he felt a portion of detached placenta in the vagina; this was expelled by the natural efforts. A dead child soon followed, the remainder of the placenta coming away an hour afterwards, without hemorrhage. The mother recovered.

CASE 12.—Complete presentation, under the care of the late Mr. Wilson, to whose assistance I was summoned. The patient had lost much blood; the os uteri nearly dilated. The patient was much exhausted. I instantly turned. Recovery of the mother took place, without one unpleasant symptom. Child died.

CASE 13.—Nearly complete. Was requested in this instance to visit a patient of Mr. Dunn, who had been exceedingly reduced by loss of blood, which had occurred at intervals during

the preceding ten weeks. For several hours before I saw her the bleeding had ceased, but the rally was not satisfactory. The pulse was feeble and rapid, but distinctly perceptible; and not inordinately hurried; the face and extremities cold and bedewed with a clammy perspiration; there was no power of moving the body; respiration good, with an occasional sensation of choking; very little restlessness; head light and giddy, with a confusion of articulation resembling that which is observed in an intoxicated person; sickness had been experienced, but it had ceased. On examination, the placenta was felt extending over the os uteri, which was thin and very undilatable; delivery was not, therefore, attempted. The yolk of an egg, beaten up with a little brandy, was given, with apparent benefit; the pulse improved somewhat, but the general condition of the woman was anything but favourable. As there was no recurrence of the bleeding I left the house, making an appointment to meet Mr. Dunn again in a few hours, recommending that in the interval nourishment should be freely, though judiciously, given, and active measures adopted should flooding recommence. I soon afterwards received a pressing message, but before my arrival life was extinct. I was told that all the nourishment had been retained on the stomach, that she had slept a little; afterwards labour pains came on without bleeding, that a dead child had been expelled by the natural efforts, and the patient had expired on the very instant; the placenta was still in utero.

CASES 14, 15, 16.—The only record I have of these three cases is, that turning was employed; and all the mothers recovered.

CASE 17.—Partial presentation. Was requested to see a patient of Mr. Southwood, who was eight months advanced in pregnancy, who had lost blood for several weeks previously, but who was then flooding profusely. Examination detected a partial presentation of the placenta, the os uteri very rigid, the child high in the pelvis, and presenting unnaturally. As the parts were so undilatable I left the patient for two hours, giving a few general directions as to treatment. At this time there was no perceptible alteration in the os; the female began to feel much weakened by the continuance of the discharge. I again left, and was not summoned until about four hours afterwards, in consequence of the hemorrhage increasing. Although the rigidity was great, and the os but little open, I determined, if possible, to finish the labour. The hand passed the os uteri with some difficulty, when the breech was found presenting; the feet were grasped and brought down; the head was detained a little while in consequence of the undilatable state of the os, but this obstruction was soon overcome, and a dead child extracted. The mother recovered without any serious symptom; excepting that for a day or two there was excessive reaction, the pulse mounting up to 140 in the minute.

CASE 18.—Complete presentation. Met Mr. Blyth in consultation in a case of severe hemorrhage; the patient was much exhausted. On examination, the placenta was felt attached round the whole of the os uteri. Turning was effected with ease. Mother recovered, child dead.

CASE 19.—This was also a case of complete presentation of the placenta, under the immediate superintendence of Mr. Eyles. When I first saw this patient, her appearance was most discouraging: she was extremely reduced; pulse very feeble, and countenance perfectly ghastly. I turned the child without difficulty, which was, however, dead. Not a drop of blood escaped during or after the operation, but the general symptoms were not improved. I saw the patient but once afterwards (about four hours after the delivery), when no amendment had taken place; but as there was no hemorrhage, and the nourishment was retained on her stomach, I was inclined to augur favourably as to the result. My expectations were, however, disappointed. Mr. Eyles informed me, that after lingering in the same

state for four or five days, this lady expired; nature appeared to be completely exhausted, and did not attempt a rally; there was not the slightest reaction.

CASE 20.—Complete presentation. Met Mr. Beale in this case. His patient had been seized with profuse flooding, without any decided pains. She had arrived at the full period of gestation, and had never borne a child previously. On examination, the parts were lax, but not much dilated; the os uteri directed very much backwards, so as not to be readily felt; the placenta implanted over it. Although there was but little actual dilatation, the parts were so yielding that, with care, the hand was with facility introduced, and the child delivered; there was slight difficulty in delivering the head. The placenta being retained, my hand was again introduced, and it was brought away. No hemorrhage supervened either during or after delivery; but, although nourishment and stimulants were cautiously given, there was no decisive rally for the space of four hours. Acute hysteritis was set up on the third day, for which the usual remedies were given with success.

CASE 21.—Partial presentation. Was requested to meet Mr. Barringer in this case. The patient had lost much blood, the placenta partially adhering to the os uteri, the parts well dilated. Turning was effected, and the mother recovered. The only thing specially mentioned in my notes is, that I experienced much difficulty in finding the feet; all the digital extremities I could feel appeared to be fingers. When the child was born the cause of this annoyance was obvious: the feet and ankle-joints were so distorted, that the characteristic marks were not distinguishable. The mother recovered.

CASE 22.—Complete presentation. The unfortunate subject of this case was allowed to bleed to death, even without an examination. When called to her, she was in *articulo mortis*; there was no pulse to be felt at her wrist, and no movement could be felt in the region of the heart, or of the carotid arteries; she still, however, retained her senses to a certain extent; there was great jactitation, and her constant entreaty was, that we should "take away her life," which was already fast ebbing away. Under such symptoms the hemorrhage had ceased, and I did not risk a renewal by making any vaginal examination, but despatched a messenger for my transfusion syringe. Some little time necessarily elapsed, but, as there was still breathing when the apparatus arrived, three charges of blood, about two ounces each, were thrown into her veins; but I apprehend there was not power in the circulation sufficient to convey it onwards, as no effect whatever was produced. The operation was, therefore, abandoned, and in a few minutes the vital spark had fled. I then made an examination, and found the placenta attached all round the os uteri. As there were no signs of life in the child, delivery was not effected. This female had flooded for several days without any examination having been made by her attendant.

CASE 23.—Was sent for in this case by Messrs. Powell and Goddard, who informed me the placenta had originally presented, and had been entirely removed; no hemorrhage followed its extraction. The arm presented, and the child was so firmly impacted in the pelvis, that I found it impossible to turn; embryotomy was therefore performed, and the child with difficulty removed. There was no satisfactory rally, and the poor creature died at the end of a week with fever of the low type. I know not whether the presentation was partial or complete.

CASE 24.—Mr. Doughty requested my assistance in this case in the early stage of the labour, before serious exhaustion had come on; and the result was most satisfactory. His patient had been bleeding for some hours, and, although her countenance was pale and the pulse rather faltering, there were no symptoms of pressing danger. When I first saw her she was sitting by the fire: there were no pains, and she felt altogether so comfortable that we had some difficulty in per-

suading her to retire to her bed for the purpose of undergoing the necessary examination. This was at length effected, and the placenta felt encircling the os uteri; a small portion had been detached anteriorly, and through the aperture this formed the funis, which was still pulsating, had descended. The os uteri was considerably dilated; the undilated portion rather firm; bleeding was going on, but it was not excessive. Prior to turning, I detached the placenta entirely from its connection with the uterus, for the purpose of ascertaining whether the hemorrhage would be thereby increased. I thought this a favourable opportunity of testing Dr. Simpson's plan, knowing that, if alarming symptoms came on, I had the labour under my own control. No hemorrhage followed this separation; the hand was carried onward, and the child extracted: although in a state of asphyxia, the ordinary means succeeded in restoring it. The mother had no bad symptom, recovering as quickly as she had been accustomed after an ordinary confinement.

CASE 25.—A case of partial placental presentation, with Mr. Beale. Much blood had been lost, but the constitution had not given way; the membranes unbroken; the os uteri considerably dilated. Everything being favourable for immediate delivery, the hand was introduced, the membranes ruptured, and version effected. There was partial adhesion of the placenta, rendering it necessary to separate it with the fingers. As in the former case, the child, though asphyxiated, was recovered by the usual means. Nothing of an unfavourable nature occurred to the mother.

CASE 26.—Partial presentation. My notes of this case are not very copious, as they were written in a hurry. It occurred in the practice of Mr. Field. His patient was in labour with her first child; had been suffering from gastric fever for several weeks, and was much reduced by it. When the parturient pains set in, flooding occurred, but not to a very alarming extent. On examination I found the placenta presenting (whether partial or complete is not noted), and without delay delivered her of a living child. Her former malady unfortunately increased, and she died within the month.

CASE 27.—A case of partial presentation. The arm presenting; the uterus rigid; the os very partially open. There was considerable hemorrhage. As there was no possibility of turning when I first saw this patient, the placenta was detached, and dilatation waited for. No hemorrhage occurred, and in less than twelve hours afterwards turning was had recourse to, and a dead child extracted. The female recovered from the shock of labour, but died of mucocenteritis during the week, this probably induced by the loss of blood.

CASE 28.—A case of complete placental presentation, with Mr. Hall. This was a very interesting case. I saw the patient in the evening of the day, and learned from her attendant that he had been suddenly called to her, in consequence of profuse hemorrhage; she was then just entering upon the ninth month of gestation, and had previously borne children. The bleeding was considerably arrested, and she was recovering from a state of syncope. The vagina was full of clots; the os uteri rigid, and just beginning to dilate; the placenta attached over its entire circumference. Turning was here impracticable; I therefore introduced my forefinger into the uterus, and separated the placenta throughout its whole extent, without rupturing the membranes. After waiting half an hour to ascertain whether there would be any renewal of the flooding, and finding it had ceased, the female was left to her repose. At four o'clock on the following morning labour pains commenced, when there was a very slight discharge of blood. On my visit at eleven the os was fully dilated; the waters had just escaped. On examination the placenta was felt hanging down into the vagina, perfectly separated from the uterus; the feet presented. With a little assistance the child, which was dead, was

speedily born, the afterbirth immediately following.

(To be continued.)

NOTICE OF A REMARKABLE DISEASE, ANALOGOUS TO CRETINISM, EXISTING IN A SMALL VILLAGE IN THE WEST OF ENGLAND.

Being part of a communication read before the Royal Medical Society of Edinburgh on Nov. 26, 1847.

By HUGH NORRIS, Senior House-Surgeon to the Royal Maternity Hospital, Edinburgh.

The name of the village in which this obscure malady exhibits itself is Chiselborough, a parish situated near the market town of South Pether-ton, in the southern part of Somersetshire, with a population, according to the late census, of 540 inhabitants.

It is situated in an extremely small valley, closely surrounded on three sides by hills, about four hundred or five hundred feet in height. Its immediate neighbourhood is densely wooded with orchards; its lowest part is very damp and dirty, and the temperature very mild; it lies partly on each of the hills, which hem it in, as well as in the valley, or "bottom," as it is provincially termed, at their base. It is open only towards the west, in which direction there is a flat of considerable extent, through which flows a deep, sluggish river, the Parrett, approaching by an elbow or bend to within a mile of the village.

In this small place I have ascertained to exist, I. Four perfect idiots—two male, two female.

II. Seventeen partial idiots—four male, thirteen female. All quite unable to articulate so as to be understood, with memories so deficient as to prevent their being trusted in the simplest affairs of life; though not essentially prone to mischief, yet all requiring constant watching; walking with an uncertain step, and an unsteady, waddling gait.

(Here I would note that one instance of the above class is sufficiently trustworthy to be admitted as a servant, in which capacity she has lived during the last fourteen or fifteen years. She is, however, unable to articulate, or walk steadily; has had two illegitimate children, since dead.)

III. Five deaf and dumb. All, I believe, females of this class: two, who have been educated, are said to be possessed of remarkably quick parts; two, uneducated, of moderately quick parts; and one (an aged woman) I have also included in my second class, as being but little removed from perfect idiocy.

(The individuals composing these three classes have all an enlargement of the thyroid gland to a certain extent, but only one (of Class II.) to a very extraordinary degree.)

IV. To the above I may also add a fourth class, which includes, probably, a majority of the whole population, viz., those with an obvious deficiency of intellect, of more than usually dull perception, or having a very marked impediment in their speech, and I believe, without a single exception, affected with bronchocele.

It may be worthy of remark that the most formidable instances of goitre are to be found in this latter class, and that those possessing the largest tumours are generally subject to epileptic fits.

The appearance of those individuals composing my first and second classes is not that of an ordinarily accidental idiot; there is not that indescribable appearance of listless languor, that kind of involuntary, undesigned perpetual motion of limbs and head; not, generally, that drivelling from the mouth; which affords so pitifully disgusting a sight in ordinary instances.

The personal appearance of these unfortunate beings is exceedingly unprepossessing. The stature short (in one instance, that of a female aged thirty, only reaching three feet and a half), and, in most cases, thickset. Head large, and usually covered with a profusion of very coarse ragged or bristly hair, of a dark-brown colour; limbs bony and exceedingly ill formed. The

contour of the face is pretty much the same in all the cases I have seen: it is wide and flat, forehead very low, but not, in most cases, *very obviously* receding. Eyes generally (but not constantly) small and sunken. Nose flat, almost like that of a negro. Mouth large, and lips thick.

With this similarity of feature, however, the expression differs in different individuals to a remarkable degree. Some appear to be always laughing, and these are amongst the least ill looking. Others have an expression of constant suffering and patient endurance. A third class gazes on you with a look of utter vacancy; whilst in several instances, amongst the females, I have detected, or fancied I could detect, an apparently habitual peculiar lustful expression of the eye, which, in these cases, has been somewhat larger than common.

The walk of these *cretins* (if I may so call them) is most ungainly, and resembles more the waddle of the duck than the peculiar shuffling step of the ordinary idiot.

They are generally very weakly, but some are capable of considerable bodily exertion.

In character, as far as I can learn, they are usually mild and inoffensive, unless provoked, in which case they are highly dangerous. Their temper is very uncertain; but I cannot learn that they possess any vindictive feelings after the first burst of passion, nor am I aware of their possessing any tendency to commit mischief for mischief's sake, as is the case with many idiots; though their total ignorance of moral responsibility often causes them to commit acts of a mischievous nature, which render it necessary to have them constantly under surveillance.

The very remarkable preponderance of females over males, in the above list, must strike every one, and is a circumstance which would serve to strengthen the opinion that the disease in question is not only accompanied, but in some measure caused, by the presence of goitre, which is well known principally to affect the other sex.

With regard to the sexual development of these unfortunates, I am unable to afford any positive information. Few or none of the females undergo the ordinary more obvious changes in appearance, on arriving at the usual age of puberty; and my coadjutress in making these imperfect investigations (the village doctress, midwife, &c.) assures me that in most of the cases which she has had opportunities of observing, menstruation has been either very deficient, very difficult, or altogether absent; still, some of the worst cases *have borne children*.

In some instances in which the catamenia is absent (in those of two of my informant's children, for instance, who are included in class No. II. of my list) monthly *fits of wildness*, as she expressed herself, occur, during which fits they become more or less (often *exceedingly*) intractable; and this she attributes to the influence of that much-abused planet, the moon.

I have had no opportunity of making any observation as to the sexual development of the male portion of my second class (*viz.*, those who are almost complete idiots), there being but four; but of my fourth class I may state that many of the very worst contained in it, men who would be deemed imbecile elsewhere, find women, with no very obvious deficiency of mind or person, who are willing to become their wives, and who bear them families; but, in general, such a union is productive of a mixed race of children, the majority of whom are little, if at all, superior to their fathers; still in no case do I find an instance of a *whole family* (when four or five exist) being imbecile: on the contrary, some of the worst cases have brothers and sisters, very little, if at all, below mediocrity of intellect; quite capable, in fact, of performing all the duties, domestic and otherwise, which fall to the lot of a labourer or a labourer's wife.

It is not my purpose at present to enter into any lengthened investigation of the cause of this malady; I may, however, before closing, make one or two short observations on the subject.

The *cretins* of the Swiss valleys have been supposed by some authors to be affected by the

water derived from the neighbouring mountains, and which consists of melted snow. This is assuredly not the case in Chisleborough.

The constant practice of intermarriage has been assigned as a reason by some, and it certainly does exist to a greater extent in this parish than is generally the case; but not to a degree at all sufficient, *alone*, to account for the malady.

My own impression is that the disease is the effect of a combination of circumstances. *The water* is most probably of a very inferior quality, for the offspring of strangers acquire bronchocoele, if they become residents in the place at an early age, although they do not appear to suffer in any other way.

Again, *the air* must be very impure, from the absence of any current through the village, in consequence of its being so closely hemmed in on three sides by hills, as well as from the great quantity of decaying vegetable matter, at certain seasons of the year, arising from the orchards, &c., in the immediate neighbourhood. Several green stagnated pools also exist in the place.

Here, I should conceive, almost a sufficient reason to account for the prevalence of intermarriages: for, circumstances concurring thus to render the parish so uninviting to strangers, the poor inhabitants were under the necessity of "putting up" with each other, and thus, perhaps, unwittingly completing the unfortunate combination of circumstances which may have produced such miserable results.

I think the plausibility of this idea, as to the remote cause of this disease being a mixed one, is strengthened by the fact that, although it is certainly most prevalent in the lowest and poorest parts of the village, yet well-marked cases are not wanting in the highest and most airy situations—*namely*, are even to be found in the families of two opulent farmers in the place.

I may conclude these remarks by observing that, in one adjoining parish, I am informed that many similar cases exist; whilst in another village, almost equally near, but lying in an open situation and much higher, the inhabitants are remarkable for their healthfulness and fine stature; and this although one of the poorest parishes in the west of England.

FATAL INSTANCE OF POISONING BY SULPHURIC ACID.

Communicated by G. CORFE, Esq., Middlesex Hospital.

Henry Lemont, aged forty years, was brought to this hospital on Wednesday last, Jan. 5, at a quarter after five P.M. 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 whitened by some white fluid. He spoke in a faint whisper on being interrogated, stating that at two P.M. he had gone to an oilshop and had bought half a pint of vitriol, and had swallowed it on his way home; that he instantly rejected it, and was soon afterwards in great agony. A medical gentleman had given him large draughts of magnesia and water, before sending him to the hospital. The epithelium of the lips and tongue was only partially removed, but the destruction of this cuticle was more apparent over the fauces.

He was immediately placed in a hot bath, and detained there for fifteen minutes, to induce, if possible, reaction, which was in some measure accomplished. The throat and larynx were over-spread with leeches, and the bleeding orifices were afterwards covered with a large poultice, which was kept moist and warm by an external piece of oil-silk. He was supplied with lake ice, so as to allow a portion of it to be constantly in the mouth. Six ounces of the bicarbonate of magnesia and two pints of thick barley-water were given him to sip at. A large oily enema was thrown up, the feet were covered with turpentine epithems, and he was ordered to take hydr. chlor. gr. ij., ant. pot. tart. gr. ½, pulv. tragacanth gr. iij., every four hours.

He was tranquil and sleepy at ten P.M., but he had vomited a large quantity of bloody mucus

a short time previously, and his vital powers again faltered; and, after suffering intense agony, he expired at ten A.M. the following morning, seventeen hours after his admission.

The *post-mortem* examination was made on Jan. 7. The oesophagus, 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 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 valvula conniventes of the duodenum and a portion of the jejunum; these surfaces were studded with numerous bulbs or bubbles of air, in size and appearance like cornelian 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.

ETHER IN TETANUS.

Communicated by THOMAS HOPGOOD, Esq., M.R.C.S., Chipping-Norton.

About the middle of last November, a little boy named John Stanley, nine years of age, had an incised wound on the knuckle of the index finger of the left hand, which had slightly injured the tendon of the extensor indicis. The wound was shown to me on the 20th, and it had then a very unhealthy appearance. The joint was much swollen, and a serous fluid was oozing from the cut. The directions I gave were not attended to, and I saw no more of the boy until the 27th; on that day I found that the wound had healed, but there was a great deal of irritative inflammation in its neighbourhood. The general symptoms were most alarming. He complained of a dragging pain at the pit of the stomach, and the impossibility of keeping his hand still. There was continual catching of the left upper extremity; slight twitches of the muscles of the face; pain in the head, and loss of vision. The tongue was clean; skin rather hot, and the pulse nervous and accelerated. Deglutition was difficult, and the respiration oppressed.

I tried various local and general remedies, but at the end of four-and-twenty hours the little fellow's symptoms had increased in intensity, although some temporary relief had been afforded by the shock of cold water dashed over him. The muscles of the jaw and neck were now in a state of rigidity, and so were those of the upper and lower extremities. He shrieked out repeatedly from intense agony.

Under these circumstances I determined to try the effect of the vapour of ether, as a last resort. Having adjusted Startin's pneumatic inhaler, and found it to act properly, I poured three drachms of ether into the receiver. A slight cough was caused by the first inhalation, but in rather less than three minutes my little patient was fairly under its influence, and remained insensible for nearly a quarter of an hour. It was

really delightful to see the countenance of the poor boy change from that of great anguish and despair to one of tranquillity and ease. The whole of the muscles, which were before in a state of tonic spasm, were now completely relaxed. The rigid limbs yielded to every motion. From this time the symptoms gradually abated; he had occasional returns of the spasmodic twitchings, but they were invariably and readily removed by the ethereal inhalations. The wound on the finger reopened and began to suppurate. In a short time he perfectly recovered, and was able to join his playfellows.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF MEDICINE.

Meeting of Jan. 4; M. ROYER COLLARD in the Chair.

The new president opened the meeting by a short address, in which he thanked the academy for the honour which had been conferred upon him: he would use all his efforts to show himself worthy of the trust. He invited the academy to reflect upon the probable invasion of the cholera in France, and to recommend to Government the adoption of such hygienic measures which would be deemed most proper to avert, delay, or modify the scourge. He concluded by proposing the thanks of the academy to the late president, M. Bégín, and by moving that an expression of regret be forwarded to Professor Brüll, and that circumstances had prevented him from accepting the presidency for the year 1848.

These two motions having been unanimously carried, M. Collineau reported upon a paper, by M. Joret, physician of the prison of Vannes, treating of the influence of the penitentiary system upon the production of insanity.

The prison of Vannes was very salubrious and well situated; it contained, on the average, 318 female prisoners, sleeping in nine wards, taking their meals in one refectory, and assembled in one workroom at needlework, knitting, and picking oakum. The food was wholesome and sufficiently abundant. The prisoners were strictly enjoined to preserve, day and night, absolute silence; it was the rule of Aubrun, less the solitary confinement. The punishment was the same, with the exception of corporal chastisement, which had been abandoned. Each day the prisoners had two recreations, each of half an hour, during which they were permitted to walk in silence one by one. Two things, therefore, deserved notice: first, the absolute privation of intellectual communication between the prisoners; and, secondly, insufficient bodily exercise. Since the prison had been opened, from June 20, 1842, up to June 20, 1845, 872 persons had been admitted; of whom 414 had been liberated, nineteen had been pardoned, twenty-five had become insane, eight had been placed in other houses of correction, and eighty-one had died. Thus, upwards of eighty deaths had been recorded, and every year an average of eight cases of insanity had been observed, out of a population of little more than 300 adult prisoners.

After enumerating the predisposing causes of insanity, a bad education, worse examples, a profligate life, and also "heredity," M. Joret considered as determining causes the absolute silence enjoined in the prison, the grief of the prisoners increased by this rule, and the absence of proper exercise. M. Joret forwarded thirty cases of insanity, classed according to their determining causes. The first division, comprising mental aberration attributed to the rule of absolute silence, contained six cases of mania and eight of monomania. The second division, viz., insanity produced by violent sorrow, increased by this rule, contained two cases of maniac delirium, one of mania, and seven of monomania. The last division, insanity from want of exercise, presented one case of acute mania and six of monomania. Of the entire number eight patients only had been cured. From these cases, M.

Joret thought himself authorized to conclude that the penitentiary system at present adopted in the prison of Vannes causes insanity; and, from statistical researches, he arrived at the conclusion that the system of cellular imprisonment (solitary confinement) was far from giving such a large number of cases of madness.

The reporter, adopting to a certain extent the opinions of M. Joret, did not think that the time was yet arrived when any decided judgment could be formed between the two rival systems.

M. Nacquart thought these conclusions were too exclusive; what he had seen in the London penitentiaries could not permit him to adopt them.

M. Ferrus gave some explanations on the system adopted in French penitentiaries: it was the rule of Aubrun—that is, silence and labour in common during the day, and solitary confinement at night. The number of the inmates was, however, an obstacle to this second part of the rule, and they were placed in common sleeping-rooms. The beds were not sufficiently distant, and the temptation to communicate with each other became almost irresistible; hence severe punishment, solitary confinement, and privation of food; hence also disease, insanity, and death. The establishments visited by M. Nacquart were not by any means regulated by so severe a system.

M. Rochoux observed that solitary confinement led to insanity; in the United States the system has been abandoned for that cause. Solitude predisposed the mind to unwholesome excitement; in former days, hermits and ascetics became mad.

M. Londe contended that solitary confinement was an unjust and odious measure. The inspectors of prisons only defended the system because they were paid for it.

M. Nacquart answered to M. Rochoux, that hermits of old were mad before ever they retired to the desert; a measure generally useful should not be set aside on account of accidental occurrences.

M. Baillarger thought the question of solitary confinement too important a one to be thus unexpectedly discussed in the academy without preparation; he hoped that another day would be appointed for the examination of this subject. The frequency of cases of insanity in penitentiaries did not appear to him so considerable an objection as it was generally thought, to solitary confinement. Since prisoners were carefully examined at the time of their first admission into penitentiaries, it had been ascertained that a great number of those whose madness had been attributed to cellular confinement had been deranged before their entrance into prison, and sometimes even gave evident signs of insanity at the time of their admission. M. Lécuyer's researches had shown that insanity was far more frequent in prisons than amongst the free population: misery, reckless passions, and a vicious intellectual and moral organization, were the causes of this difference. He was, besides, with M. Nacquart, of opinion that, even if it was proved that in penitentiaries madness was a little more frequent, that would not be a sufficient reason to abandon solitary confinement, from which, in other respects, great advantages were obtained. The mortality of the central prisons and of the hulks was certainly greater than that of the free population, and still no one had presented this as an argument against these two forms of punishment.

The conclusions of the report were then adopted.

TREATMENT OF BURNS.—The method employed by Dr. Jobert, of Hôpital Saint Louis, in the treatment of burns, consists in the application of bladders filled with ice upon the injured part. The results have generally proved satisfactory, the gangrenous reaction being speedily limited, and the suppuration very much diminished. The patients are much relieved by the application; and, when the burns are very extensive, cold baths are also used. By these means the visceral inflammations which so frequently endanger the

life of persons burned on an extensive surface are also prevented.

NEW METHOD OF TREATMENT IN THORACIC DISEASE.—Dr. Gastaldi recommends, for the treatment of chronic affections of the chest, a new medication, which has been tried with advantage in several cases. This method consists in the inhalation of air loaded with minute particles of nitrate of silver. A powder, consisting of two parts of charcoal and one of nitrate of silver, being agitated under a glass bell, Dr. Gastaldi introduced birds into its cavity, and, after having permitted them to remain a certain time, opened the bodies, and found in the lungs undoubted proof of the contact of the medicine with their mucous surface. From experiments performed upon himself, he concludes that the lungs tolerate very easily the introduction of the nitrate of silver. The dynamic action of this hyposthenising agent in various external inflammations was the circumstance which induced Dr. Gastaldi to test its effects in internal disease. No cases, however, are published in support of this new method.

HYSTERIA.—The most constant phenomenon of this protean malady (says Dr. Briquet) is the presence of a very painful and circumscribed spot in some part of the course of the spinal processes of the vertebrae, and a state of anaesthesia in the skin, generally extending from the painful part of the spine to the umbilicus. Sometimes, instead of being insensible, the skin is, on the contrary, more sensitive than usual. Dr. Briquet considers the disease as a sub-inflammatory condition of the spinal chord, and exhibits for its treatment ferruginous preparations internally, while repeated blisters were applied to the painful region of the spine.

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

Morphia in Mental Derangement.—"The preparation," says Dr. Seymour, "which I have preferred, and, with two or three exceptions, I have always used, is the acetate of morphia; the mode of preparation the solution; forty drops of the solution which I have employed generally contain one grain of the alkaloid salt. 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 grain: it has been rarely, in such cases, necessary to increase the dose beyond half a grain. In severe cases I begin with half a grain (twenty drops), and increase it speedily to a grain (forty drops); rarely beyond this dose. The medicine is given at bedtime only, the period which is intended for sleep; but it must be repeated without the intermission of a single night—for several weeks in mild cases, for at least three months in the most severe ones. In some of these cases, at first, sleep is not produced; in very few rest is not produced. Slight nausea and disturbance of the head are felt the first few mornings, but in these cases almost always at first, and always after a short time, both sleep is produced and the waking hours are free from pain."

Mercury in Pericarditis.—In the last number of "The British and Foreign Medical Review," the following inferences are deduced from Dr. Taylor's cases, illustrating the utility or non-utility of mercury in pericarditis and some other inflammations. Ptyalism was not followed by any abatement of the pericarditis in twelve cases. In one case ptyalism was followed by speedy relief. In two cases by a diminution, and then gradual cessation, of the pericardial murmur. In one case this murmur had been diminishing some days before, and it ceased soon after ptyalism was produced. In one case pericarditis and pneumonia both increased in extent and intensity after ptyalism. In four cases pneumonia supervened after the establishment of, and therefore was not prevented by, ptyalism. In three cases endo-carditis came on afterwards. In six cases it was followed by pericarditis. In one case, in which mercury was given for nineteen days, ptyalism could not be produced, and yet the pericarditis went on favourably. In two cases ptyalism was followed by extensive pleuritis. In

one case by erysipelas and inflammation of the larynx. In two cases rheumatism continued long after pytalism was produced. These propositions show very clearly that current opinions on the powers of mercury require revision.

Enlargement of the Ovary from Inflammatory Action.—In the early stages (Dr. Lee observes) the enlarged ovary can be distinctly felt between the vagina and rectum, as a tumour very painful on pressure. Under these circumstances local bloodletting is very important; this is to be effected, not as is usually prescribed—viz., by cupping the loins, or by application of leeches to the vulva—but by the actual application of leeches to the tumour itself through the rectum. The bowel is to be washed out by a copious enema; then, by placing the leeches in a long tube, the upper end of which is perforated by a number of holes, the mucous membrane bulges through these perforations on introducing it into the bowel, and the leeches usually fix themselves to it; and, when it arrives at the diseased ovary, it produces pain, and ought not to be pushed further. Large quantities of blood may be taken in this way, and the application ought to be repeated every fourth day. This local depletion is to be further assisted by calomel, and opium, and salines. Blisters and leeches ought to be applied to the tumour when above the pubis, when pain and uneasiness are felt.

Follicular Disease of the Tonsils, and Phthisis Pulmonalis.—Dr. Horace Green, of New York, in his work on the diseases of the air-passages, &c., says that phthisis is often complicated with follicular disease; when coexisting, the cough, dyspnoea, and all the characteristic symptoms of the former disease are greatly aggravated, and the affection passes through its stages and reaches its fatal termination much sooner ordinarily than when its progress is unattended with follicular disease of the pharyngo-laryngeal membrane. Although little can be expected from any attempt made to prevent the final *dénouement* in those cases where disorganization of the lungs has occurred, yet in many instances the harassing cough, the difficulty of deglutition, and the dyspnoea, which are often present in this combination of disease, are signally relieved, and the sufferings of the patient greatly mitigated, by the employment of topical medication upon the diseased laryngeal surface. So marked, indeed, has this relief been in some cases which have fallen under my observation, even when tubercular cavities have been present, as to awaken in the minds of the patients and their friends strong hopes of their final recovery. In other instances—not a few—when follicular laryngitis has preceded thoracic disease, the symptoms of incipient pulmonary affection have rapidly disappeared after the removal by topical medication of the primary follicular disease. The treatment recommended is cauterization of the fauces, glottis, and cavity of the larynx, every day, or every alternate day, for some time.

A New Deodoriser.—This deodoriser, discovered by Mr. Young, of Manchester, who has not patented it, is a waste product from the manufacture of chlorine. It consists principally of a solution of chloride of manganese with a variable quantity of chloride of iron, and generally a little hydrochloric acid and free chlorine. It is produced in large quantities; one house throws away thirty-six tons of the solution daily, and the total quantity is believed to exceed one hundred and fifty tons a day, not any of which is at present usefully employed. Experiments have been made, which have satisfied Mr. Young that this solution has in a high degree the property of preventing decomposition in organic matter; cesspools, and other places giving out the most offensive odour, have been immediately sweetened by it. The immediate effect of adding this substance to offensive matter is, the conversion of the hydrosulphuret of ammonia, which is the most offensive of the gases of decomposition, into the sulphurate of manganese and muriate of ammonia, or, as it is often called, chloride of ammonia. The latter is a valuable manure, and the former, though of less value,

is not injurious to vegetation. Manganese, like iron, possesses no acid metallic qualities, and is, like it, used by nature as a food for plants.

Preternatural Elongation of the Cervix Uteri.—Dr. J. M. Coley, in "The Obstetric Record," says, that this disease is occasionally experienced in conjunction with the fibrous tumour of the uterus. It appears to be the same in both instances, viz., a permanent hypertrophy of the cervix, occasioned by interruption of the circulation in the walls of the uterus. The cervix is not only extended in this disease, but is also much increased in diameter, being occasionally much longer and thicker than the largest teat of a cow; which it also much resembles in shape and structure. The situation of this elongation will be found immediately beneath the urethra. It is perfectly free from all tenderness, and the only symptoms indicative of the disease are, distressing sensation of dragging, or prolapsus, accompanied with pains in the back, which continue whilst the patient preserves the erect position. Pregnancy never occurs during the continuance of this preternatural condition of the cervix. The cause of this will at once resolve itself to those who are conversant with the natural structure, the position, and the physiology of the os and cervix uteri, in connection with the process of conception. When this infirmity is connected with passive congestion of the uterus, it may be greatly relieved by the internal use of iodide of iron, or ioduret of mercury, in conjunction with rest in the horizontal position. It is to be observed, however, that in established cases this treatment only affords relief, a permanent hypertrophy remaining to a considerable and inconvenient extent. Much benefit is also derived from the introduction of a soft sponge, which must be removed at bedtime. The dragging sensation is in some cases so severe as to require the excision of the superfluous elongation; an operation perfectly safe in the absence of specific disease.

Voluminous Enterocela through the Fundus of the Uterus.—A woman, sixty years of age, had been affected with what M. Chaptois calls a vaginal hernia for a long time, for which she had never sought relief. The disease progressed, and she experienced a sensation of weight and dragging in the hypogastrium. Tenesmus and dysuria appeared, and gradually became so considerable that her body was bent forward, the head approaching the knees. M. Chaptois found, on examination, that an enormous mass of the small intestines and the colon had passed out through the uterus, which was dragged with it and torn. This organ was completely retroverted, turned inside out, and hung between the thighs. The tumour was pyriform, of a reddish-brown colour, somewhat larger than the fist. The walls of the fundus were thin, and were apparently destitute of all circulation. Towards the right Fallopian angle there existed a slit, or tear, six centimetres in length, which had given passage to the mass of intestines, the last coil of which that had been forced out was of a rose colour. The vitality, almost extinguished in the older part of the hernia, was manifested, in that most recently displaced, by distinct pulsations. The pulse was small and contracted; there were hiccup, cold sweats, and frequent syncope. The hernial mass having been washed, they were reintroduced into the pelvic cavity, where they were retained by introducing into the vagina a fine sponge, sustained by a convenient apparatus. Frequent vomitings, and horrible convulsions, became developed; but, after some abundant stools, she became tranquil. The appetite soon returned, and the convalescence proceeded regularly until the third month, when a peripneumonia caused death in fifteen days. There was no examination of the body.

Subclavian Aneurism Cured by Galvano-puncture.—The patient, a female of sixty-five years of age, had been affected with aneurism of the left subclavian artery during eighteen months previously to her being attended by Dr. Abeille, principal medical officer in the Military Hospital of Givet (Ardennes). The tumour was situated

between the scaleni muscles, and was of the size of a hen's egg. It was the source of much suffering, sleeplessness, and ringing in the ears of the patient. The difficulty and doubtful practicability of applying a ligature on the vessel between the aneurismal dilatation and the heart being evident, it was determined to try the effect of a galvanic current through the contents of the sac. As soon as the patient was rendered insensible to pain by the inhalation of ether, two pair of needles were inserted into the tumour to the depth of an inch, and a strong galvanic current was established in connection with them. At first the effect on the patient was slight, but at the end of five minutes it required four assistants to hold her. The operation was continued for twenty-eight minutes. During this time the tumour was felt becoming gradually solidified, and before the withdrawal of the needles it had become perfectly solid; and pulsation was no longer felt in it or in the brachial or radial artery below. The limb became engorged, and the patient complained of its being numb and prickling. During the operation, the artery above the tumour was partially compressed by an assistant. Afterwards this compression was continued by means of an apparatus for five or six hours. In withdrawing the needles, two of them were removed with ease, but the others required a good deal of rotary motion, and some drops of blood escaped from their punctures. The patient maintained the same position in which she had been placed during the operation for eight or ten hours afterwards. For forty-eight hours after the operation no pulsation could be detected in the arteries of the limb. No oedema, however, ensued, and sensibility remained unimpaired. At the end of this time the radial artery commenced to pulsate, and the limb gradually recovered its mental temperature. About the eighth day the tumour appeared to be diminished in size, and this diminution progressed gradually; so that, at the end of thirty-eight days, nothing but a small, oval, firm tumour could be felt on pressing strongly with the fingers in the situation of the swelling. During the first few days which followed the operation, there was some threatening of cerebral congestion, which was relieved by bloodletting. No symptom of inflammatory action manifested itself either on the surface or in the tumour. From the punctures of the two needles which were withdrawn with difficulty there was slight discharge of blood and matter for three days; but they were cicatrized a few days subsequently. Seven months after the operation there existed no trace of the aneurism; and in its place there was a hard flattened cord, to which the skin adhered. Immediately above the situation of the aneurism, two enlarged collateral branches were felt pulsating strongly. The patient was in the enjoyment of perfect health.

Utility of Microscopic Observations in the Diagnosis of Cancerous Tumours.—An officer of artillery, aged thirty-eight years, of a robust constitution, consulted M. Marmy, in January, 1846, for an orchitis, caused, as he believed, by friction against the pommel of the saddle. The left testicle was of regular form, but a third larger than the other; the cord healthy; no syphilitic affection for a long time. An antiphlogistic treatment soon restored the organ to its normal size; but, towards the end of February, the patient having again entered the service, the disease reappeared, and, although it gave way a second time to the same treatment, it again returned. This time, the treatment, assisted by the administration of the ioduret of mercury internally and externally, then the ioduret of potassium, of the oxide of gold, continued a long time, and lastly, of purgatives and diuretics, supported by a rigid diet, were all ineffectual. On the 1st of December, the tumour, which was now larger than the two fists united, presented a slight fluctuation at its inferior part. He experienced temporary pains, sometimes in the scrotum, at others in the cord, which was healthy. His general health was good. Nothing

indicated then the existence of a malignant degeneration. M. Sedillot having made an exploratory puncture, which gave issue only to a drop of blood, removed with the canula some portions of the matter; which, under the microscope, presented cancer cells, with all their characters well marked, swimming in a granular blastema, mingled with numerous drops of oil. In consequence of this examination, the operation of castration was proposed and practised. Three days after the operation, the base of the wound exhibited a tolerably large clot of blood, which in three days more appeared to be organized, and white lines circumscribing areolar spaces were seen on its surface. Whilst preparing to destroy the clot with the actual cautery the moment a cancerous reproduction should appear, M. Sedillot determined, in the first place, to assure himself of its nature. He removed a small portion of it; which he examined with the microscope, and determined that the appearance was caused by the presence of altered globules of blood, and pus corpuscles. In fifty days the patient was perfectly cured. The form of the removed sarcocele resembled that of an hypertrophied kidney. On section, its tissue presented all the characters of encephaloma, consisting of yellowish-white masses, soft, pulpy, and sprinkled over with small bloody extravasations. On a microscopic examination, there were recognised the same elements as were observed after the exploratory puncture. A microscopic examination here determined the disease. But its utility was not limited to this point. A bloody clot, appearing under the form of a fungus, caused fears that the cancer was about to be reproduced; instruments were already prepared to destroy it, when the microscope saved the patient from this painful and useless operation. The mother of the patient died a short time after of a cancerous ulcer of the breast.

Intermittent Strabismus.—Dr. Andrew Anderson relates, in "The Monthly Journal," the case of a delicate-looking child, five years old, which was placed under his care in consequence of squinting inwardly most decidedly with both eyes. Her mother stated that she had done so for about two years, during which she had once or twice had symptoms supposed to indicate irritation within the head; but that the most curious part of the malady was its being regularly intermittent, for she squinted only on alternate days; or if by chance the convergence should last, as it sometimes did, for two days, there followed other two during which the squint was absent. The story was scarcely credited at first; but soon there was ample proof of the correctness of the mother's statement. Next day the strabismus was gone, and on the following day it had returned; and the affection seemed to undergo no change for the space of two years, during which the child continued to present herself at intervals. Various treatment was had recourse to, but in vain; quinine, iodine, and other remedies, had no effect; and two years afterwards she was reported as still squinting on alternate days.

Operation for Entropion.—Instead of cutting through the entire eyelid, as in Crampton's operation, Dr. Wallace has for some years past made an incision through the entire length of the tarsus, about the eighth of an inch from, and parallel to, its margin. From this incision to the margin he cuts through the tarsus again, at each canthus; and at the middle, making the letter m; or, if the curvature is very great, he makes more perpendicular incisions. Threads are then drawn through the integuments, and fastened to the forehead, as in Crampton's operation. As the curved tarsus only is divided, the deformity occasioned by cutting through the integuments in Ware's and Crampton's operations is avoided. From the lifeless relaxed state of the eyelids, after the application of the vapour of prussic acid for opacities of the cornea, he would be inclined to try its effects in diminishing the irritability of the eyelids previous to an operation.

THE MEDICAL TIMES.

SATURDAY, JANUARY 15, 1848.

THE ROYAL SOCIETY AND DR. ROBERT LEE.

THE Council of the Royal Society having been grossly assailed in the leading article of one of our contemporaries, on the unfounded allegation that they had "blackballed" a recent paper presented to them by Dr. Robert Lee, we think it our duty to publish the following document in vindication both of the Council and of the Committee of Physiology. The assertion that the paper in question was rejected has been industriously circulated, and it has been suffered to remain uncontradicted by Dr. Lee himself; although he must have been aware of its being untrue, because it was at his own solicitation that the council permitted him to withdraw it, before they had discussed the question as to the propriety of publishing it. The Committee of Physiology have been represented in the same journal as being actuated by "spite—mean, bitter, and withal pitiful spite, which," it is said, "has been the chief element in their decisions;" and they are held up to reprobation for keeping "their proceedings and the ground of their decisions profoundly secret."

The production of the following report, which was drawn up by the eminent anatomists to whom the committee had referred the paper, will now afford our readers the means of forming their opinion of the real grounds on which the committee came to the decision of not recommending it for publication:—

"REPORT OF DR. ROBERT LEE'S PAPER, ENTITLED, 'ON THE GANGLIA AND NERVES OF THE HEART.'

"Nine pages of this paper are occupied by historical references; the remaining seven by the author's account of the nerves and ganglia of the heart, derived from dissections of a fetal heart at four months and a half, the heart of a child of six years old; that of an adult, the enlarged heart of an adult, and the heart of an ox.

"The author states that these dissections warrant the conclusions—1. That numerous ganglia and plexuses exist in the heart which have not been described or represented by preceding anatomists. 2. That these nervous structures enlarge, as the heart enlarges, up to the adult state. 3. That the ganglia and nerves of the heart enlarge in hypertrophy of the organ. 4. That the ganglia and nerves of the left ventricle are more than double the size of those of the right.

"We shall speak of these conclusions in detail:—

"1. The author says (p. 14), 'Many great branches of nerves, with ganglia formed upon them, accompany not only all the branches which pass into the muscular substance of the ventricle.' Again (p. 15); 'There are numerous branches of nerves, with ganglia distributed over both surfaces of the ventricles of the human heart, which do not accompany the blood-vessels.' 'On the portions of the ventricles which are destitute of fat these ganglia and nerves are distinctly visible to the naked eye through the cardiac fascia, and present a very remarkable appearance.' Towards the left side and apex of the left ventricle they spread out into ganglionic enlargements.' Again (p. 16), 'Ganglia are formed of considerable size in these superficial nerves, where they are crossing the bloodvessels, and from these chains of ganglia over the arteries branches are sent off, &c.' 'On these superficial cardiac nerves there are numerous ganglionic enlargements observed as they

proceed from the base to the apex of the ventricle, and from these ganglia the muscular substance of the heart is supplied with innumerable branches, which pass between the fasciculi. The appearances now described,' he adds, 'have been represented in the accompanying drawings from recent dissections.'

"Only one drawing seems to have been sent in with the paper on the 15th April, 1847—viz., No. 1. No. 2 was sent in on the 20th May. This drawing, when the paper was referred to us on the 7th July, bore the following pencil note:—'The drawing is not finished in the part representing the septum of the ventricles. The other parts are completely finished. Natural size. R. L., 2nd June, 1847.' No. 3, representing the ganglia and nerves on the surface of the left ventricle of the ox, the author states, was sent in with the paper 'On the Ganglia and Nerves of the Virgin Uterus.' This, consequently, we have not seen.

"Drawing No. 1 represents about twenty-five ganglia in the course of the nerves ramifying over one surface of the heart of a child of six years old. Drawing No. 2 (the hypertrophied human heart), in that part of it which the author states to be 'completely finished,' represents nearly as many ganglia, many of which are slight fusiform swellings of the nerves; and, besides these, the delicate nervous filaments are shown as enlarging in many situations to three or four times their previous diameter, and sometimes forming a loop in this enlarged state, ere they penetrate the substance of the heart.

"Understanding it to be the author's wish that we should inspect his dissections, we devoted part of a morning to that purpose, and carefully and minutely examined all he placed before us, and particularly the specimens from which drawings Nos. 1 and 2 have been taken.

"We found these preparations to have been made with considerable devotion of time and manual skill, but in many parts the nerves were incompletely divested of the fibrous and cellular tissues. Still, on the whole, the nerves represented in the drawings could be recognised in the preparations; but we could discover none of the fifty ganglia depicted. On the contrary, the preparations left no doubts in our minds, that no such ganglia exist in the course of the cardiac nerves over the surface of the ventricles. In one part of the drawing No. 1 are represented fifteen or twenty nervous filaments, and two plump and well-marked ganglia, while in the corresponding part of the preparation, from which the drawing was made, neither nerve nor ganglion was discernible.

"With regard to the enlargements of the nervous filaments towards their terminations, we found, in like manner, that the descriptions of the author and the pencil of the artist were alike incorrect. According to drawing No. 2, one of these enlargements near the apex of the ventricle is as large as the cardiac nerves in the aortic and cardiac plexus. This, compared with the same parts in the preparation, can only be styled an extravagant misrepresentation.

"In what we have now said, we do not allude to one or two small ganglia at the base of the heart, which are well known to be occasionally present in the course of the cardiac plexuses.

"2. We inspected the heart of the fetus and of the child, with reference to the question of the enlargement of the nerves with growth. It appeared, as might have been expected, that those of the child were considerably larger than those of the fetus, though no accurate estimate of their size, relative to the whole organ, could be formed. The heart of the adult in the healthy state, the author informed us was not in a sufficiently advanced state for our inspection.

"3. For the last-mentioned reason, we could form no conclusion as to the grounds of the author's statement, that the ganglia and nerves enlarge in hypertrophy of the organ.

"4. It appeared that the nervous supply of the left ventricle was greater than that of the right.

"In reviewing this paper, it is evident that

the statement of greatest importance, if correct, is that which describes numerous ganglia and gangliform enlargements to exist on the cardiac nerves, in their course over the surface of the heart. The descriptions are very explicit as to their existence, and the illustrations sent in by the author depict these ganglia in what we might almost call a luxuriance of number and size. We were, therefore, hardly prepared to find that the preparations from which the descriptions and drawings have been taken, and to which the author refers as the basis of his communication, contain no warrant, as far as we could discover, for the statement that such structures exist in the situations ascribed to them.

"In saying this, we do not intend to throw doubt on the description of remark of microscopical ganglia with grey corpuscles on the cardiac nerves.

"We do not recommend this paper for publication in the 'Transactions.'

"Aug. 8, 1847.

MEDICAL MEN AND CORONERS' JURIES.

In considering the Croydon inquest—elsewhere reported—the preliminary inquiry offers itself, what are the duties of a medical man under sick calls? Is he everlastingly to consider himself under marching orders to every man in sickness?—to the stranger as to the customary patient?—to him that will not pay?—to him that cannot pay? This would appear to be the opinion of society in the gross. John Nokes, a journeyman shoemaker, one of fifty husbands advertised by a London parish as deserting their wives and families, after spending his week's wages on drink, finds himself struck by apoplexy at two o'clock of a winter's morning. The nearest doctor is engaged in some other case; and Mr. Sydenham the next, but situate about two miles off, is unceremoniously roused from his sleep. Before perilling what may haply be an unnecessary descent, he prudently reconnoitres his unwelcome visitors from the bedroom window, and ascertaining, by a few very natural questions, that he is asked to give his night's attendance gratis to no very worthy member of society, he declines to move. "The parish doctor should visit the case: if he do not, or cannot, the parish should provide a substitute: I live with difficulty under paid visits, and I cannot afford, in time, purse, or health, to perform gratis the heavy duties you ask from me. However useful to the parish such charities, they would be ruinous to me." The poor man dies, and an inquest is held: the visit to Mr. Sydenham and his reply are very circumstantially detailed in evidence; and the jury, horror-stricken at his barbarity, give, to the manifest exultation of the "very humane" coroner, what they call a "slashing verdict."

These sort of incidents are not very common, only because medical men do not often have the sternness to act like the one we have sketched: still they do occur at intervals, and the verdicts that accompany them generally carry with them the stamp of public approbation.

Yet, have we not grounds for saying that Mr. Sydenham's conduct is not only justifiable in ethics, but that it is civilly justified by its analogy with the whole of our social rules and habits?

If sundry expensive drugs are declared to be necessary to save the life of a certain person too poor to pay for them, will the chemist, who was one of the jury condemning Mr. Sydenham, give them? Will he not say, "If the drugs are considered so necessary, why will those about the man not pay for them? Why insist on having

them at my charge? My duty and my business is to sell, not give away wares, and I shall please myself, not take your wishes, as to the channel of any charities I may wish to circulate."

Again, how is it with the second indignant jurymen, the baker? Tell him of a starving mendicant, and what is his reply? "There is the parish, or, if he wants my loaf, who so proper to pay for it as you who recommend him?" The butcher—the shoemaker—the tailor—down to the twelfth member of the jury, would respond in similar terms to every similar application. On what grounds, then, shall an exception be made against the medical man? Is his skill more to the dying man than drugs, or than food for the starving? Is he richer? better remunerated? less tasked? less rated? less taxed? If we are to have verdicts against medical men for not giving their stock in trade gratis, why in destitution cases are we to have no "expression of marked censure of Mr. Rolls, the baker, who, on being apprised of the destitution of the deceased, inhumanly declined to furnish him with a quartern loaf daily"? or of verdicts against Mr. Grease, the butcher, who, in answer to the deceased's application for beef, "inhumanly declared that he was obliged, in the interest of his large family, to turn his sirloins to more profitable account?" It may be true that medical men are excluded from coroners' juries by the same law which composes them of worthy butchers and bakers, and that the public justice of any country is always that justice which, costing nothing in purse or feelings to its respected administrators, can be fully carried out at the expense of other people; but still the principle on which alone medical men can be immolated to public right, so necessarily carries an equal condemnation to their judges, that out of regard to a little decency, and some foreseeing power of reasoning, we would suggest to "respectable jurymen" for the future, the novelty of a little attention to what they are about when enunciating their "slashing verdicts."

We hold, then, that the gratuitous services of a medical man are as entirely a matter of private charity as the pecuniary or commodity donations of the gentleman or the tradesman, and offer no fitter subject for the public jurisprudence of the country. To give, in an eleemosynary sense, is a duty of conscience, not of law; and no one but the agent himself is a competent judge of its proper or improper exercise. It is beyond the arena of public discussion, and far, very far, beyond the functions of a coroner's jury.

With a medical man there are many considerations beyond private ones, which may not unfrequently well check the promptings of interior benevolence. The sick poor are and ought to be a national charge, the burden of which he fairly shares with every other ratepayer. But there has been for many years a growing tendency to make special the general charge, and throw by one means or another on the shoulders of medical men those responsibilities which belong to the whole public; and if doctors and the public should concur with ratepaying juries, that medical men are guilty of a social crime perilous to their reputations when they decline pauper cases without remuneration, a practice of gratuitous attending must be forced on them, which will lessen the rates in the precise proportion in which it will augment at once the dangers of the poor, and the profitless labour of the profession. As it is, one half the medical poor-law relief is withdrawn from the ratepayers of England, to be saddled on the shoulders

of medical men; and, if the plan of forcing on us gratuitous attendances through coroners' juries be persisted in, relieving-officers will soon forget to issue medical orders, that the other half may undergo a migration in the same unfortunate direction.

In the Croydon Inquest we have a capital instance of this interesting habit of saddling on the medical man alone the burdens of Society.

If there be any place where medical poor-law officers should not administer midwifery attendance gratis, it is undoubtedly Croydon. When, in consequence of the notorious inadequacy of poor-law medical remuneration, the Somerset-house authorities, with the sanction of Sir James Graham, introduced the system of extra payments for special cases, the poor-law guardians of Croydon were among the first to calculate the probable increase of payment that might thus arise, and forthwith deducted the estimated amount (about sixty pounds) from the yearly salary.

As before the extra payments were introduced no care was taken by the Board to guard off extra and unnecessary midwifery cases from the medical officer, so, after the period when the extra payments were to be made, no care was spared to contract and preclude that portion of medical relief. It is no unimportant indication of the conscientious manner in which the pauper sick are looked to, that in Croydon the midwifery aid of the parish has diminished more than twenty-five per cent. since the arrangement requiring medical men not to attend to it for nothing! The coincidence between the diminished fecundity of Croydon women and the increased liberality of the poor-law commissioners is curious.

In the special case—the subject of the inquest—the board appears to have acted with its wonted parsimony. Because the husband earned one guinea a week, the wretched wife, obliged in the last stage of pregnancy to make her petition, was rudely refused her prayer; and Mr. Berncastle—compelled to pay her three visits without the authority of an order from the proper authorities—was obliged to abandon the woman to the casual skill of the midwife attending her on the distinct and peremptory request of the relieving-officer—the mouth-piece of the board, of whom both were officers. We had, of course, the commonplace result. The parsimony of the board denied the woman those consecutive attentions, and that enlightened superintendence, the case required; and amid the mischances thus evoked—between the withdrawal of the proper attendant on one side, and the employment of a "dispensing assistant" on the other—the poor patient perished. Good men and true were of course summoned (a dozen of those bakers, and butchers, and tailors, who so often supersede the use of parochial charity by the bountiful way in which they are ever feeding the hungry and clothing the naked), and, the whole circumstances of the case being submitted to them, they are not long, under coroner-guidance, in deciding that Mr. Berncastle had committed something akin to manslaughter, because he had not disobeyed the injunctions of the relieving-officer, upset the decision of the board of guardians, and given, against their behests, and gratuitously, his time and services to a protracted labour.

WALKING THE HOSPITALS, AND MEDICAL APPRENTICESHIP.

THE gentlemen who have been examined before

the select committee of the House of Commons on the Registration Bill have unanimously condemned the system of domestic medical apprenticeship, which time has rendered venerable, and an act of Parliament imperative. Of the utility of five years' drudgery behind a counter, in order that a youth may become an adept at making pills, compounding draughts, and dusting bottles, there can be but one opinion, that it is, as Mr. Green expresses it, "a waste of five precious years of human life." During this time hardly one advance is made in the domain of thought by the majority of young men; and they too frequently rush into the world with few symptoms of mental cultivation, and ill prepared to receive the facts which ought to be presented to their notice by their teachers, whose office it is to prepare them for the future exercise of their profession.

But, while the aforesaid witnesses have been earnest in denouncing the ancient system of apprenticeship, they have been silent upon the defects which mark the next stage of medical pupilage, familiarly denominated "walking the hospitals." And this is no marvel, inasmuch as the witnessing parties have an interest, either directly or indirectly, in annihilating the one, and in maintaining the other. By the abolition of the five years' articling to a private practitioner, all medical pupils hereafter will be forced to begin, continue, and end their studies in hospitals, especially those of London; and, as a natural consequence, the incomes of physicians and surgeons attached to those institutions will be proportionably increased. The education and examination of general practitioners thus brought entirely within their grasp, "the inferior order" will become more subservient to the wants and wishes of the illustrious personages attached to the Pall-mall and Lincoln's Inn-fields establishments.

While, however, the witnessing physicians and surgeons were silent at St. Stephen's on the defects of hospital instruction, which is more particularly carried on under their superintendence, we will expose to the view of the profession a few of its defects. Mr. Green admitted in his evidence that there should be no very striking distinctions in the mode of educating medical practitioners, yet, during the lengthened period that he occupied a prominent and honourable position in the Royal Hospital of St. Thomas's, there existed, as well as in other metropolitan hospitals, three distinct orders of students, separated from each other, as regards educational privileges, by a great gulf, which could only be passed by a golden bridge. The pinions of young intellect had no power to cross this abyss, or to overtop the barriers which seemed, like Pelion upon Ossa, to reach even to the skies. A medical student, with a noble mind and a plebeian pocket, had no more chance of rising to distinction in the London hospitals than he had of obtaining possession of the throne of the Great Mogul. Our profession, confessed by all a benevolent one, is in this respect sternly uncharitable to her children, and we know of no material alterations for the better, even up to the present time.

In the first class of students we have the hospital apprentices, who are permitted to hope for professional appointments, at some future day, in the various institutions to which they belong. From three to five hundred guineas is the sum at which these privileges have been purchased, and upon the youths the greatest care is bestowed as regards their surgical education.

These have constant access to the patients of the hospital, attend on all occasions their masters, and occasionally perform some of the minor operations of surgery, such as lopping off a finger or toe of some unfortunate human being. The dressers come next in order, and these also have pretty fair opportunities of acquiring a practical knowledge of surgery; but it is purchased at the expense of fifty guineas for one year, in such institutions as St. Bartholomew's and St. Thomas's. But the pupils who pay only twenty-six guineas for the year have neither care nor attention bestowed on their education. They are mere lookers-on as the surgeon goes his rounds, trotting after him as he enters the different wards, and frequently elbowing each other most unmercifully, in order to catch a glimpse of the different patients who are examined. In the operating-theatre they occupy the back stands, where it is impossible for more than a few to obtain anything like a correct knowledge of the various proceedings of the operator while the patient is on the table. If under these circumstances a student obtains anything like sound knowledge in his profession, it is by unwearied efforts and indomitable resolution. It is utterly impossible that all medical students can receive the information which they require, with the system of instruction at present in vogue, in order to pass a respectable examination without having recourse to grinders. Walking the hospitals is a mere form of education without power; and in some metropolitan institutions a young man can as easily obtain his certificate of attendance without scarcely having entered a single ward, as if he had diligently followed the footsteps of the surgeon from the accident-ward on the ground floor to the venereal apartments under the skylights.

Now, we ask, can it be expected that the majority of students will acquire, under such a system, such an amount of practical surgical knowledge as will enable them to commence the practice of their profession with comfort to themselves? Certainly not: and the fault lies, not with the Apothecaries' Company—for requiring the pupil to devote his attention to too many scientific subjects in a brief space of time—but with hospital surgeons in authority at the College, for establishing and patronizing a mode of surgical education for pupils as defective as the apprenticeship from which they have just escaped. Nay, in many respects, the latter has its advantages, for the youth under private tuition are now and then permitted to use their hands in some professional employment; but in walking the hospital they are only suffered to exercise their eyes.

Such a system is, above all others, eminently calculated to send forth practitioners "with as small an amount of knowledge as is compatible with the safety of the public;" and no other end can those persons have in view who enforce it; and thus they think to perpetuate caste in a liberal profession. The late Mr. Dermott, whose experience of men and things in the medical profession was most extensive, says, "We have the golden bar of exclusiveness put up between the mass of pupils at large, and the favoured few. There is, in our present system, encouragement to vice and discouragement to morality; there is preferment without talent, not preferment as the result of it. Our universities and hospitals are so many rotten boroughs, where a system of favouritism and private interest is fostered. And thus are science and human life in this country made the victims of private interest and party cabal."

In no other civilized country throughout the world is such an injurious system of education adopted as in England; and if the general practitioners prove themselves in after life skilful in the treatment of disease, and in the performance of surgical operations, as vast numbers of them do, they owe no debt of gratitude to the system of education which, when pupils, they were compelled to adopt. In France there is no distinction amongst students but such as talent confers. In Germany the same principle is adopted, while all means are employed to send forth into the world a race of men well qualified in every branch of the healing art. In the Italian, as also in many of the German, hospitals, every patient is placed under the care of a student, whose attendance must be punctual twice a day. His duty is to ascertain and record the history of the case, and to note all the symptoms which present themselves, as well as the plan of treatment adopted by the hospital medical officer. If the patient should recover, before he leaves the hospital the student reads the particulars of the case to the professor, and it is then entered in the records of the clinical ward. If, however, the patient should die, then, before the autopsy takes place, the student narrates the case, with the diagnosis; afterwards other pupils examine the body, when he takes down the various appearances presented by the organs, and makes observations on the medical opinions formed during the time the patient was in the hospital. Should any pupil not attend a patient committed to him, or in any way neglect his duty, he is subjected to a severe reprimand, and is not permitted to be present at certain examinations; while diligence is noticed and rewarded.

Let something similar be adopted in England, and we should then hear no more of the prevalence of "cramming," because medical instruction would become more sound and efficient. At present walking the hospitals has very little superiority over domestic apprenticeship: they both need renovation, and the sooner the work is commenced the better.

DISINFECTING AGENTS AND THEIR VIRTUES.

THE public has for some time past been amused, if not edified, by accounts of certain disinfecting agents, said to possess the remarkable property of not only taking away the effluvia which escapes from decomposing animal matter, but also of destroying the power of miasmatic vapours. Many individuals were in consequence led to believe that henceforth their olfactory organs would no longer be offended by the disagreeable smell which naturally arises from cess-pools and sewers; but that their very bodies would be shielded from the attacks of the monster typhus. The bubble has at length burst, and all the fine promises of the patentees have proved to be empty and vain.

The *cloacal* department appeared to be at one time so promising a field of enterprise that no small number of geniuses, with a heroism becoming the votaries of science, were found in daily and nightly contact with matter of the most offensive description, studying its chemical composition, and the changes resulting from its exposure to that all-powerful principle, oxygen. One after another of these illustrious students was absolutely in danger of being taken by storm by the crowd of applicants who sought to obtain patents for infallible de-odorizing compounds.

Scarcely was there a large city within the boundaries of the three kingdoms which was not visited by some one of these apostles of health and science. The mania for disinfectants even reached as far as Canada, and the men of science there resolved to test most severely the claims of two distinguished patentees, and to award the palm to the more worthy.

Accordingly, a day was appointed for the investigation to take place, and ten wise men chosen, with noses as sharp-scented as any of those illustrious quadrupeds immortalized in Latin verse by the elegant Ovid. The candidates for fame were Sir William Burnett and M. Ledoyen; and the following articles were unanimously agreed upon:—

"1. That each operator should take a basin one-third filled with feces taken from the same pail.

"2. The names of the operators to be marked, one on the bottom of each basin.

"3. An equal quantity of disinfecting fluid, and also of the same strength, to be put into each basin.

"4. Both basins to be stirred for the same length of time.

"5. The gentlemen of the hospital to be requested to point out the one which gives out the least smell.

"6. And, for the removal of any partiality, those giving their opinion not to know until the opinion is given to whom such or such a basin belongs.

"7. A written deposition to be made out and signed by those giving their opinion.

"And it having further been proposed by Dr. Stratton, R.N., that, as one of the fluids changed feculent matter to a whitish colour, it would better secure an impartial opinion if the judges would blindfold themselves; this was also agreed to, and, in the presence of witnesses, Dr. Stratton and M. Ledoyen each put in equal quantities of the fluids, and in fifteen minutes after the basins were examined by the umpires; the basins were placed, one on the right hand the other on the left, and some distance apart. If the umpire thought the basin on the right had least smell, he called out 'right,' and so on. All the medical gentlemen in the hospital at the time, except Dr. Stratton, gave their opinion."

It must have been a rich treat to see the gentlemen, with blinded eyes and expanded nostrils, each with a couple of basins filled with the most villanous compounds kept in a state of continual agitation by stirring. According to the intensity of the odour emitted was their judgment to be pronounced; and, upon an examination of the votes, Sir Wm. Burnett was declared worthy of all honour, the majority in his favour being as seven to three.

It would have been well if this species of sanitary quackery had ended here, as the public might have indulged in a hearty laugh at the simplicity of the Government and the ten scientific jurymen. Since then, however, Col. Calvert, whose faith in a solution of nitrate of lead as a disinfecting agent was boundless, has sickened and died of typhus fever. M. Ledoyen also has had an attack of the same disease, and from the testimony of an American journal we learn that he has left Canada for this country. These two gentlemen were both sent out to test the efficacy of certain fluids in destroying infection, and there is no need of the survivor furnishing the Home Government with any elaborate details of the experiments instituted, and of the results which followed. The fate of his fellow-commissioner and his own illness are sufficient proofs of the utter worthlessness of chemical substances in destroying the invisible sources of disease.

The fluids may be useful in mitigating the foul smells which escape from the holds of ships, or from drains and sewers, but they have no power in arresting and preventing disease.

AUTHORITATIVE RECOGNITION OF ADVERTISING QUACKERY.

Our readers have met in one or other of the public journals, in close proximity to some similar announcement of Mr. Morison or Professor Holloway, the following advertisement:—

(Advertisement.)—"OPERATIVE SURGERY.—Amputation at the shoulder-joint in a patient, aged seventy-one, successfully performed under the influence of ether by Thomas Wakley, Esq., surgeon to the Royal Free Hospital; also amputation of the arm in a man, aged seventy-five, under the influence of ether, successfully performed by Thomas Wakley, Esq.; perfect recovery of both patients. These cases exhibit the most extraordinary proofs of the safety and value of the use of ether vapour in operative surgery."

This advertisement, as our readers know, appeared for successive days in the daily *Times* and other popular journals, just about the period when the public was lamenting the loss of that distinguished "operating" surgeon, Mr. Liston.

In the *Lancet* of last week the editor avows, with "pleasure and pride, his connection" with that singular document. Medical men, therefore, are authorized to deduce the following:—To get up a surgical practice for a son, the entire agencies and influence of a medical journal may be legitimately and properly exercised by a member of the profession extending and propounding a system of exaggerated eulogistic advertisements. We can conceive no better test of the power of medical men's endurance.

"THE BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW" AND MR. MARKWICK.

[To the Editor of the Medical Times.]
Sir,—I have just seen a review of my work "On the Urine," in the above-named journal, which I think it necessary to notice, as I consider the critic to have been unnecessarily severe, and, indeed, unjust, in his remarks, as he himself will, I am sure, conspicuously acknowledge. I, therefore, Sir, appeal to your well-known sense of justice to allow me a short space in your valuable and widely circulated journal for that purpose.

The charges against me are—errors in judgment, an error in chemistry, and errors in typography. The errors in judgment consist in giving six instead of four processes for the detection of bile; and "a notice of the formulae for calculating the amount of sugar by means of Biot's polarizing apparatus," after having previously given an unfavourable opinion of this mode of analysis. My reply to this is, that my object was to render the "Manual" as perfect and complete as possible, in order that the student might make himself acquainted with all the analytical proceedings that have been recommended; at the same time I took care to distinguish those that are little to be relied on.

The error in chemistry is not mine, the paragraph in question being a quotation, and therefore the critic (he will excuse me for saying this), before he ventured to accuse me, should have first satisfied himself that he was justified in doing so. I admit that the error ought to have been corrected, and it was my intention to have done so in the following manner:—"Ammonia, q. ammonium. Still, however careless this neglect may have been on my part, I think the reviewer must admit that it is much less excusable on his to alter my words, or rather the words of the quotation, as he has done by substituting *organic acid* for *cyanic acid*; and "I trust he will accept my assurance that I could not have acted otherwise" than allude to it.

As regards the errors in typography, they are owing, in a very great measure, to the carelessness of the printer, who did not pay that attention to my corrected proof sheets which he ought to have done; but I may mention, in extenuation of this fault, that it is not *always* possible to avoid them, as proved by the following, which I have met with in the *Journal itself*! in a cursory perusal of a portion of its contents. Thus: *Blenorrhagia*, pp. 38, 39; *hemorrhoids*, p. 38; *chymico* in one line, and *chemico* in another,

p. 34; *hematuria*, p. 123; *hemorrhage*, p. 164, &c.; *assert* for *assert*, p. 251; *inflammation*, p. 181, "strike the eye of the reader somewhat unpleasantly, and are errors which might have been avoided by a very little care."

In conclusion, I may observe that it is somewhat surprising that in an article in which so much unnecessary fault, as I think, is found, and that in matters of such trivial importance, an error in grammar should have occurred; and yet such is the case, the word *doubt* having been used instead of *doubted*.

Considering, then, that notwithstanding the severity of the criticism to which my work has been submitted, and the errors which, it is alleged, I have committed in it, namely, errors in judgment (disproved), an error in chemistry (disproved), and errors in typography (admitted), not a single important mistake has been discovered in it, I think I may venture to assert that my object in publishing it ("to present the student with a manual or pocket companion on the examination of the urine that may be useful to him while prosecuting his hospital studies") has been fully realized, as proved by the subjoined "notices" from other reviews. (a)

I am, Sir, yours very obediently,
Jan. 3. A. MARKWICK.

QUACKERY, AND IMPROPER USE OF CHLOROFORM.

[To the Editor of the Medical Times.]
Sir,—I have no doubt that you and every honourable member of our profession must feel disgusted with the all but universal system of quackery, in one form or other, which has for the last several years stained the fair page of medical literature. But the most degrading of all is that which we see daily exemplified in the metropolitan and provincial newspapers by the numerous puffings sent forth for the benefit of the non-professional reader.

The past history of ether furnishes innumerable examples of the abuses to which I allude; but, as its use is likely to be superseded by that of chloroform, I would earnestly call upon you, and all honest men, to save the latter from oblivion.

In a late number of the *Edinburgh Advertiser* we are gravely informed that a "Dr. Fowler succeeded in reducing a dislocation of the shoulder-joint of twelve hours' standing, while the patient, a healthy labourer, was under the influence of chloroform." Oh, ye tyros in surgery, read and admire! Did the learned brotherhood keep to surgery we might almost pardon their vanity—a natural one—to see their names in print; but when these worthies announce their success in midwifery in terms somewhat too professional for the modesty of the fair sex, they are unpardonable. And yet this species of quackery is an every-day occurrence in the *Edinburgh papers*.

Another equally disreputable practice has assumed the form of a mania in Edinburgh, certainly not less exciting than the late railway mania. It consists in converting fashionable evening parties into a species of pharmaceutical association for experimenting on the effects of chloroform, and other substances of similar properties. One of these exhibitions is worthy of notice.

A number of ladies and gentlemen were invited to an evening party in the house of a respectable medical practitioner. At ten o'clock, instead of

(a) "Mr. Markwick's little work appears to us to be very well calculated to fulfil the object for which it was published. It contains, in a concise form, a description of every substance that has been discovered in the urine; the mode of detecting and distinguishing each is detailed in clear and unambiguous language; and, although addressed especially to students, it contains almost all the information upon these matters which the practitioner requires."—*Dublin Medical Press*.

"The chemical processes recommended are simple, yet scientific; and the work will be very useful to the medical student, for whom it is intended; and not to them only, but to those practitioners in the country who have not had those opportunities of cultivating chemical pathology which their more favoured brethren of the metropolis enjoy."—*Medical Times*.

"We have the opportunity of calling the attention of our readers to a small work recently published by Mr. Markwick, intended as a manual for the use of students in urinary diseases. * * * The author must be admitted to have attained his object in presenting a convenient bedside companion."—*Dr. Ranking's Abstract*.

music and dancing, the learned doctor entered with flask and sponge, and every guest was treated to a trip to the realms of insensibility. Some of the ladies were foolish enough, while there, to utter such speeches as, "Oh! my beloved Charles, come to my arms," at the same time unwittingly extending them to receive the dear creature. Some of the gentlemen, not having taken the precaution to swallow a selditz or a carminative previous to their first appearance, committed slight breaches of etiquette not very amiable; but enough on this head.

Dr. Simpson has done much for our profession, he has done more for suffering humanity; and the ladies must feel grateful for his unceasing exertions to render their travail pleasant, and their burden light. To him I would also appeal for the protection of his valuable discovery, that its use be not subverted, its usefulness destroyed, and its anæsthetic virtues prostituted to the vilest of purposes. For, most assuredly, the very properties which constitute its superiority over ether are those which make it more dangerous in the hands of unprincipled and non-professional individuals. Its use will not now be confined to the operating-theatre, or large parties, or the chamber of suffering. It will, in all probability, take its place on the toilet table between sal volatile and eau de Cologne, and, in consequence, the most ruinous effects both to health and character are to be dreaded.

Should you consider this letter of sufficient importance to occupy a place in your journal, it is entirely at your service.

I am, Sir, your obedient servant,

A HATER OF HUMBUG.

COMMENTS ON MR. GREEN'S EVIDENCE BEFORE THE SELECT COMMITTEE.

[To the Editor of the Medical Times]

SIR,—Mr. Green's evidence before the parliamentary committee exhibits the most remarkable inconsistencies. This is a matter of course, when a man is trying to prop up a vicious system; but, in the present instance, these inconsistencies are so glaring as to be positively ludicrous.

He suggests four examining boards, and yet says that "care must be taken not to render the education of general practitioners too expensive."

He says that the establishment of a low standard would be "dangerous to the public," and yet he thinks that a low standard ought to be established for the education of the general practitioners, who have the medical care of ninety-nine hundredths of the public. He considers it an evil that a variety of subjects should be required by the Society of Apothecaries, because it prevents the students from attending to surgery exclusively, as if pure surgery was the only requirement; whereas, for one surgical case in general practice we have twenty medical ones.

Now, Mr. Green's pretended reason for a cheap and inferior education is, that the public want cheap physic. Is it true that professional profit is, as a general rule, in direct proportion to the amount of education? Mr. Green can hardly be so green as to think so. Let him look at the hundreds and thousands of poor clergy dotted all over the country—Oxford and Cambridge B.A.'s and M.A.'s, "Passing rich with fifty pounds a year."

And, in our own profession, I verily believe that as "qualifications" increase, profits diminish. My predecessor in this place saved £4000 in sixteen years, and he had no "qualification." I am a legally qualified man, and after fourteen years' practice have not saved a penny, though I am sure I work as hard as he did. And my neighbour, the butcher, with ten children, is laying by £100 a year, though he cannot spell beef-steaks; yet he never works on Sundays, and is never called up o' nights like poor me.

This is an absurd fallacy on the part of these big-wigs. The profits of labour depend more on the supply of labourers than on the amount of their education. Your readers will admit that I am entitled to speak feelingly on this subject, when I say that I have a brother, who, though an Oxford M.A., was for years obliged to be content with less than £100 a year, and that I have myself the misfortune to be obliged to offshoot as

A UNION MEDICAL OFFICER.

Scrubbington, Lincolnshire, Jan. 10.

INFLUENZA.—This epidemic is rapidly diminishing at Inverness, but typhus has become prevalent, some having already fallen victims to its ravages.

EVIDENCE TAKEN BEFORE THE SELECT COMMITTEE ON MEDICAL LEGISLATION.

(Continued from page 246.)

FRENCH MEDICAL EDUCATION.—I do not object to cheap medical education if that medical education be good, but you cannot have good medical education except at considerable expense. I do not know very well the system in France, but I have some general notion with respect to it; but I take it that that is not exactly the one we should imitate; the medical profession in France does not seem to hold a very high grade of respectability. You may have men of science here, and men of science are very highly esteemed; and so it is in Germany, you have many as professors very highly esteemed; but I speak with respect to practitioners who are employed by people in general; they have cheap doctors on the Continent, and, as far as I have seen, they are not much regarded; I do not mean the *Officiers de Santé*, but the physicians. I am aware that there is a proposition now before the French Chambers for getting rid of the *Officiers de Santé*, and for requiring that they should all take out degrees in medicine or surgery before they are licensed to practise. I do not see any objection to such a plan; the *Officiers de Santé* were very badly educated. You must have a certain amount of qualifications, in order that the public may be treated with safety.

A SINGLE FACULTY INJURIOUS.—I said that by the single-faculty system the education of all would be reduced to the lowest. The College of Surgeons was originally on one system, all, in fact, were members of the college. Under that system men attained as high distinction and as high repute as it was possible for them to reach in the surgical profession. That was not exactly the one-faculty system with regard to surgery; practically there was a great distinction. You will recollect that only those who had been hospital apprentices were elected to be surgeons of hospitals, and only hospital surgeons were elected into the council. That was not under the operation of the charter; in the charter there was no provision of that kind, but it was merely an arrangement which was adopted by the council; the council being at that time chiefly themselves hospital surgeons. Sir Astley Cooper was never higher in rank than member of the college. Nor was Mr. Abernethy. Nor was John Hunter; but when I say that the one-faculty system would lower the profession, I mean that it tends to lower it; but you will always have individuals who, from natural capacity, genius, and particular opportunities, will distinguish themselves. I say that all would fall to the lowest standard; yet I find that a totally different effect from that is produced in the college by the creation of the fellowship; it has produced emulation, and many are seeking to attain that distinction. It is not true that all are anxious to keep at the lowest level. I am speaking here of the tendency of a system; I am not speaking of individuals. Perhaps I should better explain my meaning if I were to state, that in my opinion, even if you were to do away with all laws upon the subject, things would remain precisely as they are; that is, the grades and distinctions in the profession would remain practically the same. I mean that if all the acts of Parliament on the subject were repealed, and all the charters abrogated, things would remain precisely as they are; the needs of society and individual exertion would supply their place. I do not mean that apprenticeship would go on, if the Apothecaries Act were abolished. If there were no legislative interference, practically you would find the profession very much in the same state as it is; you would find persons devoting themselves to physic, others devoting themselves to surgery, and you would have general practitioners and apothecaries, druggists, and so on.

MEDICAL LEGISLATION REQUISITE.—I do not object to legislation on the subject of the practice of medicine; I believe that many evils may

be corrected, but that you would have very much the same results if there were no legislation whatever. The present state of the medical law I deem in many respects to be defective. We have to correct evils that legislation has introduced, and to organize a system which cannot work harmoniously without legislative interference. The effect of this bill, which has a tendency to create a single faculty, would be to lower the status of the profession, and it would have the effect of lowering medical education to the qualification of the general practitioner. But the experience which I have had in my own college, where there is one standard of education adopted for members and another standard of education adopted for fellows, convinces me that some practitioners of ambitious minds and considerable acquirements would not be content with the lowest position in the profession. If the bill which has been introduced into Parliament in the present session were to be enacted into a law, I do not consider that the present arrangements of the College of Surgeons would be disturbed by its operation, except it were thought necessary to send the inspector to us. I do not know of any other interference that there would be with our arrangements.

EFFECTS OF THE BILL.—We should still examine for members, and still examine for fellows, and the two parties would hold their respective ranks. I do not know that whatever emulation now exists with reference to obtaining a higher position would not be disturbed or lessened in any degree by the operation of this bill. I should say that the tendency of this bill is to destroy the desire to become members, still more to become fellows; but it would not prevent persons if they chose to come, and if they thought it an advantage they would come; they are not forced to come now. It is voluntary at the present time. But they apply for the diploma of the college in consequence of the high distinction which it confers upon them. I should think, from what I have read in that bill, that that inducement would be lessened or weakened. I conceive that no one would seek a distinction which is expensive or troublesome, when he can obtain the same advantages without it. Now, the principle of this bill is to effect a registration, and a party can be put upon that register without any such means of distinction, and he gets that distinction, which his diploma would otherwise give him, in a cheaper and easier way; another thing is, that by the law at present certain persons are obliged to come to the college, who mean to be surgeons of unions or of prisons, but the bill repeals all previous acts of Parliament: the registered practitioner is qualified, under this bill, to practise in any department of his profession. I object to that arrangement; and my objection lies not in the registry, but in the want of any provision for ensuring an adequate qualification in those licensed to practise. I approve entirely of the principle of registration, as being most beneficial to the public. I am aware that the bill provides that all the *curricula* of education of candidates shall be submitted to one authority, and that none of them shall have any force in any institutions until they have been approved by that authority. I consider that there ought to be a central control of that kind with reference to medical institutions, those especially which are empowered to grant medical degrees and licences; it would be highly beneficial; but with regard to the provision in the bill, I object that that authority should be the Queen in Council or the Secretary of State. I approve of the power being bestowed on a Council of Health, consisting partly of medical persons and partly of non-medical persons. I would confer the power of appointing such a council upon the Queen in Council and the Secretary of State. I stated before that the inspectors under this bill would not be proper persons, inasmuch as they would be appointed by the Secretary of State. I saw the last bill which was introduced by Sir James Graham, in July, 1845; I read the bills over at the time, and considered them at the time, but I did not know

that I was to be examined on this point, and therefore I have not read them since.

(Joseph Henry Green, Esq., F.R.S., called in and further Examined.)

SIR J. GRAHAM'S BILL OF 1845.—When I was examined on a former occasion, I stated, in reply to the last question which was put to me, that I had read over the bills which had been introduced into Parliament at the time when they were introduced, but that, not knowing that I should be examined on the subjects of them, I had not read them lately. I have read them since I was examined. I have referred particularly to the bill of July, 1845. I have a copy of that bill with me. I find in clauses 2 and 3, page 3, that a Council of Health was to be constituted, consisting of thirteen persons, one of them being one of the Principal Secretaries of State, and twelve to be appointed by her Majesty with the advice of her Privy Council. I remember that the bill containing that proposal was before the council of the College of Surgeons. It was not altogether approved by the college. Those clauses were approved of, to the best of my recollection. Previously there had been much discussion on the proposition for giving to the Crown the entire appointment of the Council of Health, there being no person in that council chosen by any of the colleges. In the previous bill, or in the one before it, the constitution of the Council of Health had been different. There were *ex-officio* members from different universities and colleges. And that arrangement in the last bill was altered. To the best of my recollection, it was entirely approved of by the council of the College of Surgeons, leaving the appointment entirely with the Crown; there being no provision whatever in those clauses for there being an *ex-officio* member from any medical body, or any elected member from any medical body.

SIR JAMES GRAHAM'S BILL OF 1845, COMPARED WITH THE MEDICAL REGISTRATION BILL.—Previously there had been discussions upon the subject, but I do not recollect, when this bill was read before the council, and gone over clause by clause, that any discussion arose upon the subject at that time. In the bill which was introduced into Parliament in the last session, the supervision of the colleges with regard to the curricula was to be confided to the Queen in Council, and I objected to that arrangement. I now see that there is some apparent incongruity in my answers to the questions on those points certainly, but the principle seems to be different. In the first place, that is to say in the bill of July 1845, persons were appointed who would be known to the country, and for the appointment of whom the Secretary of State would be at once responsible in his place in the House of Commons; whereas, under the provisions of the last Medical Registration Bill nobody would know who was to be sent as an inspector. The Secretary of State might send his family medical attendant, or somebody who was not at all known or responsible, and might immediately, from the account and report of an unknown person, adopt measures which would be perhaps very disagreeable to the council, and perhaps not very just. But supposing the Secretary of State, under the operation of the bill of 1845, were to receive reports from his inspectors, he would then refer those reports entirely to a board of his own choosing, and there is no provision in the bill, certainly, for the appointment of any medical men; but at the same time one cannot suppose that, where the names of the persons are known to the whole country, the Secretary of State could appoint persons who were unfit for the trust. I would not have any security for knowing the names until they were appointed; but being appointed they would be known, and, therefore, any objections to them might be stated as to their unfitness. What I fear then is, that under the operation of the last bill which was introduced into the House the Secretary of State, on receiving the reports of the visitors, might be influenced by private advice insidiously, and sometimes with a sinister object; and that we would have

no security that the advice received by the Secretary of State, he not being himself acquainted with medical subjects, would refer to persons of competent authority and judgment on such occasions. I prefer for such arrangements the constitution of a Council of Health. But I think it advisable that security should be taken in any measure that might be introduced into Parliament for providing that that Council of Health should consist of competent medical men. It would be very desirable, but the difficulty is to know how to appoint by any other mode than by nomination by the Secretary of State, or by the Crown, persons who would be fit, without involving great difficulties, as was seen in the appointment of *ex-officio* members. Election by the different medical authorities of the universities and the colleges was considered, but there is very great difficulty in the way of it, as I think you will see when you come to consider it. In London you have a College of Physicians and a College of Surgeons. Then there was proposed by the bill, what I did not at all approve of, a College of General Practitioners. Then there are the Universities of Oxford and Cambridge, the colleges in Edinburgh, and the colleges in Dublin, which already make up a very considerable number, without mentioning other parties, who would claim a share in the election. My objection was chiefly directed against the *ex-officio* members, because you will admit that a man might be a very good regius professor of medicine, but he might be very incompetent to act in the Council of Health as one of a government for medical education, but there are difficulties likewise with respect to the election of others. But supposing a law were to be enacted, empowering the different colleges and universities to select a person whom they deemed to be competent to represent them in such a council, we, not looking to other institutions, could satisfactorily conduct such an election or choice in our own institution; but I am afraid, in order to satisfy all parties, we would have very unwieldy board. My answer would depend very much upon the number that you propose for the constitution of the Council of Health. I think it would be difficult to balance the powers with regard to the conflicting interests. I cannot say that there has not been some discussion, with reference to the possibility of reconciling those conflicting interests in the governing bodies of the profession, but I do not recollect anything like a resolution, or any opinion that was given by a majority; anything that I could state to be the opinion of the council. That is a difficult question to decide, whether those conflicting interests have their foundation in reason or in prejudice? But if I were to answer, I should say in prejudice.

EDUCATION OF GENERAL PRACTITIONERS.—I do not consider that there should be very striking distinctions in the mode of educating medical practitioners. In all the elementary branches I would make no distinction. The point at which the distinction must be made, I do not say should be made, with reference to persons who are to practise as physicians, others who are to practise as surgeons, and the great body who are to practise as general practitioners, is that at which the needs of the candidates and of society point out that you must have a class of practitioners who possess only the minimum qualification which is required for their being safe practitioners, and at which it is desirable for the interests of the profession and of the public, that motives should be held out for evolving the highest attainments that you can. I think that, having secured to the public a competent number of qualified men, other inducements should be offered to push the mental acquirements of a certain class to the highest possible point.

EXPENSES OF EDUCATION.—I am not aware that the education of the general practitioner is more costly than the education of the last physicians. I have never estimated the expense. It is not a subject to which I have turned my attention; but I apprehend that it would be found that the chief expense of medical education is in

the time that it occupies, not in the expense for the actual teaching. I suppose that the whole of the education of a general practitioner in respect to the payment of fees for lectures and attendance at the hospitals would not amount to £100. Our own regulations require now a three years' residence in London. The apprenticeship clause of the Apothecaries' Act requires that a period of five years should be passed as an apprentice; and in order to be bound an apprentice the individual often pays a very high premium. And thus, according to the act of Parliament, and to the regulations which are founded upon that act, at least eight years are expended by the general practitioner before he can pass the Apothecaries' Hall; and then he also has to comply with our regulations with reference to becoming a member of the College of Surgeons, that is, if he is to hold the joint qualification. I am not aware of any expenditure equal to what must be incurred by the occupation of such a period of time in medical study which is incurred by the mass of physicians who are graduates of medicine in universities generally. I have not entered into any calculation of that kind, therefore my evidence would be, I apprehend, of very little value upon the point. When I stated that the arrangements must be regulated by the needs of the practitioners and the wants of society, I was chiefly pointing to the pecuniary means of persons who were engaged in medical studies. I really have not given my mind to the point so as to be able to say whether the expenditure incurred by the great body of the graduates of medicine exceeds that which is incurred by the great body of those who become general practitioners; but certainly I am surprised at what has been now stated.

(To be continued.)

ALLEGED NEGLECT OF A MEDICAL OFFICER.

An inquest was held at Croydon, on the 3rd inst., on the body of a woman, who died on the 30th ult. The features of the case will be at once perceived in the following evidence:—

The witnesses were the deceased's husband or paramour, and her sister. Their evidence proved that Mr. Berncastle (who, in conjunction with his partner, Mr. Bottomley, fills the situation of medical officer to the Croydon Union), when first requested to attend the deceased, asked if she had an order? The reply being in the negative, he said one must be procured, but meantime he consented to visit the deceased. He did so thrice, on that and the succeeding day, as it appeared, on the supposition that an order would be procured. On each occasion of Mr. Berncastle's visit he found the labour had made but little progress; in consequence he ordered the *secale cornutum*. The last time of his visit the labour had slightly progressed; and he remained with the patient nearly two hours. Up to this time he had considered the case a parochial one, but being afterwards informed to the contrary, by the relieving officer, he recommended the husband of the woman to seek some other medical man, and he named four. Mr. Berncastle heard shortly after that Mr. Dale, assistant to Messrs. Fletcher and Neville, was in attendance on the patient, and he considered, therefore, that his responsibility had now ceased. On the morning of the 29th, about three o'clock, the woman was delivered of a dead child. Mr. Dale left her tolerably composed. Mr. Neville visited her the same afternoon, about five o'clock, when she was worse, and the woman, gradually sinking, died on the morning of the 30th ult.

Mr. Neville appeared with the result of his examination:—The heart and lungs were perfectly healthy, with one exception—an adhesion of the left lung, indicating former inflammatory mischief. The abdomen and its contents were generally healthy; the uterus of the usual size, tolerably well contracted, and presenting no remarkable appearances. Mr. Bottomley (the partner of Mr. Berncastle) and Mr. Dale (wit-

ness's assistant) were present at the examination. The examination of the head was thus described: A general fulness of the vessels of the brain and bloody points more apparent than usual; the brain itself firm, and no inflammatory action had been set up. Witness considered the condition of the brain was the natural consequence of excitement and consequent exhaustion. The deceased appeared to have been a very healthy woman, and witness found no appearance of disease which might account for death. He believed she died from exhaustion arising from protracted labour. He should not have felt himself justified in throwing up any case after having once undertaken it. Witness could not say whether the deceased might have been relieved earlier, not having seen her until after parturition had taken place. Dr. Chalmers was called in by witness in consequence of a slight dispute as to the appearance of the deceased's liver at the first examination.

In reply to Mr. Richards, solicitor for Mr. Berncastle, the witness said he did not think it would have been advisable to use instrumental aid from what he had heard of the case.

It was here proved by Mrs. Arthur, who was recalled, that Mr. Berncastle had administered to the deceased three doses of secale to force her "pains" before he finally left her.

The Coroner then asked if there were any other witnesses.

Mr. Richards said, Mr. Berncastle was ready to be examined, and to state all that he knew of the affair.

The Coroner said, he could not examine Mr. Berncastle after what had transpired. If Mr. Berncastle chose to make any statement, however, and was prepared to meet the consequences of that statement, he should not object to receive it.

Mr. Berncastle preferred giving his version of the circumstances, which was, in substance, as narrated above.

After a good deal of discussion as to whether other medical evidence should be called, Dr. Chalmers was sent for. He said that knowing the history of the case, and having been present at the *post-mortem* examination, he should say that the congestion of the brain discovered was caused by excitement arising from the protracted labour, which would also produce great debility and exhaustion. A very similar state of the brain might be produced by puerperal convulsions. Witness had been forty-six years in practice, and did not consider it either prudent or judicious to leave a patient from four to twelve o'clock in the state deceased was described to have been.

Mr. Tipple, surgeon, of Mitcham, was, at the request of Mr. Berncastle, here called. He said, he considered Mr. Berncastle fully justified in leaving the deceased as he had done, as she had no "order," and further, that he thought he had been very kind to give up so much time to her.

The Coroner charged the jury in a very clear address, pointing out the law of the case, and advising them, if they considered any legal responsibility rested upon Mr. Berncastle, to say so in their verdict.

The jury remained in deliberation from nine o'clock until half-past eleven, when the foreman announced the following as the unanimous verdict of the jury:—"That Elizabeth Hopkins *alias* Howard died from exhaustion resulting from protracted labour; and that Mr. Berncastle has shown the greatest inhumanity towards the deceased in leaving her when in labour; and that we (the jury) consider him a very unfit person to act as a parochial medical officer."

GOSSIP OF THE WEEK.

DEATHS BY FEVER.—It is our melancholy duty to record the deaths of four of our medical friends, who, within a few days, have been sacrificed to fever, with which they were afflicted during the discharge of their professional duties:—On the 23rd ult., Dr. George Seymour,

surgeon to the Kilconnel Dispensary; on the 24th ult., Dr. Charles Donnellon, of Winterfield, medical attendant to the Annadown Dispensary; on the 25th ult., Mr. Francis Bodkin, for many years apothecary to the Clifden poor-house; and on the 26th ult., Dr. Edward Lambert, of Oranmore, a gentleman much beloved, leaving a widow, with a young and interesting family, to deplore his loss. Independent of the above, we are sorry to add that serious apprehensions are entertained for the recovery of Dr. Mulville, of Gort, and Dr. Hynes, of Kinvarra.—*Galway Vindicator*.

MORTALITY OF MEDICAL MEN.—We lately felt it our duty to make some strictures on the wretched and niggardly manner in which the physicians who attend upon the poor are remunerated by the authorities for their toil, and science, and fearful exposure to danger and premature death. The subjoined paragraph from the *Shigo Journal* gives an example of the heavy mortality which prevails in the profession, especially at seasons of contagious disorder:—"We have just seen a document forwarded by Dr. Little to Drs. Cusack and Stokes, giving a statistic report on this subject. It will be seen that, since the present epidemic set in, twenty-seven medical men attending the poor within their houses, or in the different fever hospitals of this province, have been attacked with fever, that seventeen out of that number have died, leaving nine widows and thirty-five orphans. This is an awe-striking, appalling fact; nearly one half of those men, who are hourly exposed to the danger of contagion from the circumstances of their profession, taken away in the prime of life, leaving nine widows and thirty-five orphans, many of whom have been left in destitution, to lament their loss. Surely there is no profession in life to which the public owe so heavy a debt of gratitude as that whose members so humanely and deservingly continue their philanthropic labours, even in the face of such serious perils." The fate of widows and orphans left destitute by their natural guardians—by disorders caught while in the service of humanity—pleads strongly or a change in the present unjust and mean system under which those gentlemen have been paid for their valuable and onerous labours.

SANITARY REFORM.—The French Government has sent two physicians, MM. Villemain and Prat, to study the sanitary condition of Cairo and Alexandria.

DEATH OF M. JOURDAN.—M. Jourdan (Antoine Jacques Louis), doctor of medicine, &c., died at St. Maude, Jan. 2, 1848. He was an indefatigable labourer, having made a great number of translations from the German on the different subjects of medicine. Among these are the works of Sprengel, Meekel, Hufeland, Carus, Tiedeman, Burdach, Müller, and the "Encyclopédie Anatomique."

M. BERZELIUS.—From recent information we learn that the health of M. Berzelius is somewhat improved.

SMALLPOX.—This disease has manifested itself with considerable virulence at Vienna; and in the neighbourhood of Chatellenault especially, the inhabitants were suffering very severely.

INAUGURATION OF THE STATUE OF VESALIUS.—On the 31st of December the ceremony of the inauguration of the statue of Vesalius took place at Brussels, in the presence of the city authorities and a large number of persons distinguished in the scientific world, especially that of medicine. The statue was erected in the *Place du Barricades*, under the superintendence of a special committee. The Royal Academy of Medicine was represented by its president, M. Veleminckx, and by MM. Sauveur, Sentin, De Lavacherie, Lebeau, Tallois, Lombard, &c. M. Charles Rogier, Minister of the Interior, presided on the occasion, and the chairman of the central committee for the erection of the monument delivered a suitable address.

ACUTE GLANDERS.—A carrier at Dieppe had at his house a horse affected with glanders, and the man attended him for a considerable time, when, finding there was no prospect of the animal's recovery, it was determined that he should

be destroyed. Shortly afterwards the carrier himself was found to be affected with the disease, and he placed himself under the care of Dr. Legal, who very soon discovered the nature of the malady. The patient was also seen by Dr. Riolla, president of the Society of Medicine, and M. Dursaux, veterinary surgeon, and member of the same society. Under such a circumstance the Society of Medicine announced to the municipal authorities the event, and pointed out the means by which a recurrence might be prevented. The mayor, in consequence, issued an order that all the horses belonging to the inhabitants should be examined, in order to ascertain if any were affected.

CHOLERA.—From a letter dated Dec. 22 we learn that the cholera has passed the frontiers of Prussia, in spite of all the efforts of the Government to arrest its progress. The first symptoms of the disease manifested themselves in the village of Tilsett, and they are said to be rather mild in their character. The news at present wants confirmation.

REMUNERATION OF MEDICAL MEN.—The medical practitioner, particularly the country surgeon, is often very inadequately remunerated for his arduous labours. Within the last fortnight, however, we have an instance of public gratitude, rewarding the long-continued toil of a country practitioner in the district of the Rhine of Galloway. Dr. Robert Wilson, of Stranraer, is about to be presented with a silver salver and one thousand pounds sterling, raised by the public of that district and others connected with it. Much enthusiasm has been displayed by the subscribers, rich and poor, and the money was all contributed in the course of a few weeks.

A WHOLE MEDICAL STAFF ANESTHETICISED.—At the Taunton Hospital, as a patient was undergoing amputation of a limb, while under the influence of chloroform, the nurse let fall the bottle containing the chloroform, which quickly spread its somniferous effects over the operators, and some time elapsed before they recovered from their partial insensibility.

CHAIR OF CLINICAL SURGERY, EDINBURGH.—We understand that Mr. John Lizars is a candidate for the chair of Clinical Surgery, to be vacated by the translation of Professor Syme to fill the professorship of the late Mr. Liston, in University College.

NAVAL APPOINTMENTS.—Surgeon and Agent: Thomas Massey, for Carlisleford.—Assistant-Surgeons: Thomas Littleton, to the San Josef; John E. M'Crystal, and D. W. Stephen, to the Victory; A. Watson, to the Caledonia.

APOTHECARIES' HALL.—Gentlemen admitted on Thursday, Jan. 8:—David Evans, Llanfyllen, Montgomeryshire; Walter Winter Walter, Stoke-under-Ham, Yeovil; Percival Thomas Meggs, Alverstoke, Hants; Thomas Henry Mitchell, Kingston, Herefordshire.

CLOVES, powder, six to ten grains in bolus or pill; tincture, ten to thirty drops; a very powerful stimulant, employed as a condiment in domestic economy. * * The essential oil of cloves, which is more frequently employed by perfumers than by physicians, is rubefacient and almost caustic. It is particularly used to allay the pain produced by carious teeth; a drop or two is put on a piece of cotton, and inserted into the cavity.

DROPS OF ACONITINE, five parts of aconitine, and two hundred and eighty-eight of rectified alcohol; mode of exhibition, five or six drops daily.

(FROM A CORRESPONDENT.)

DIED at Atherstone, on the 28th ult., in his, 90th year, John Power, M.D. This veteran practitioner, having been a pupil of John Hunter, and the disciple of Sydenham, Fordyce, and Cullem, during a judicious successful career of practice in the midland counties, formed a connecting link of the experience of former days, with the improvements in pathology, physiology, and surgery of the present; and which his rare longevity per-

mitted him to practise and appreciate. He was the intimate friend and contemporary of Dr. Erasmus Darwin, whose son, Charles Darwin, he aided in his experiments on pus and mucus, at Edinburgh; and this talented young man died in his arms while they were students at that university. His father, John Power, surgeon at Polesworth, near Tamworth, first introduced the use of the fermenting cataplasm, and is favourably noticed in "Bayle's Biographical Dictionary." His eldest son, Dr. John Power, of Westminster, the discoverer of the theory of menstruation, of which discovery an ungracious attempt has been made of late years to deprive him, and his two grandsons, Dr. John Arthur Power and Mr. Power, as medical teachers at Exeter-hall, are not unknown to the profession. Mr. Joseph Power, formerly tutor of Trinity-hall, and now librarian of the University of Cambridge, and Mr. Alfred Power, one of the commissioners of the poor-laws, in Ireland, and late fellow of Downing College, Cambridge, are sons of the deceased; and three of his grandsons have also taken high honours and fellowships at that university.

MORTALITY TABLE.

For the Week ending Saturday, Jan. 8, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES.....	1364	1107
SPECIFIED CAUSES...	1363	1102
Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	420	184
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	30	59
Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	164	175
Diseases of the Lungs, and of the other Organs of Respiration.....	288	225
Diseases of the Heart and Blood-vessels.....	23	39
Diseases of the Stomach, Liver, and other organs of Digestion.....	70	62
Diseases of the Kidneys, &c. Childbirth, Diseases of the Uterus, &c.....	9	13
Rheumatism, Diseases of the Bones, Joints, &c.....	8	8
Diseases of the Skin, Cellular Tissue, &c.....	3	1
Old Age.....		
Violence, Privation, Cold, and Intemperance.....	35	31

DISCOURSES ON THE HEART, BY
WARDROP.

Our number for
JANUARY 22, 1848,
will contain the first part of an elaborate
work by

MR. WARDROP;
entitled

DISCOURSES
ON THE
NATURE AND TREATMENT
OF THE
DISEASES OF THE HEART,
WITH OBSERVATIONS ON THE
ANATOMY AND PHYSIOLOGY
OF THE
ORGANS OF CIRCULATION.

This important work, on whose extreme value to science all commendation is needless, will be

published weekly, to the extent of from two to four sheets, and in such a shape that it may be readily separated from the journal and bound into a distinct volume, with its own title-page, index, and paging. It is calculated that this work alone will be worth the whole annual subscription to the journal. Gentlemen wishing to receive this work with punctuality are requested to give their orders immediately to their booksellers, or to forward their orders, with remittances, to our office.

TO SUBSCRIBERS.

The subscription for the stamped edition of the *Medical Times* is 16s. for the half-year, and 21. 6s. for the year, paid in advance. Post-office orders, or orders on parties in town, should be made out in the name of James Angerstein Carfrae.

TO CORRESPONDENTS.

"A Constant Reader, Henley-upon-Thames," should send us his address, when an answer by post will be transmitted.

"Galen."—The subject is under consideration. Probably a series of papers will appear in reference to it; of this, however, due notice will be given if such should be the case.

"Mr. Thomas Martin."—A private communication was last week transmitted; if not received, the fault rests with the bookseller.

"S. S., Manchester."—The paper is inadmissible, not possessing all the requisites to make it interesting to the public.

"M.D. Cantab."—The subject will be again discussed at an early opportunity.

"A General Practitioner."—The suggestion on Medical Reform is under consideration.

"A Student of Trinity College, Dublin."—A reference to the "Students' Number" will afford the desired information.

"Mr. Adolphus Rose."—The paper "On the Administration of Chloroform during the Operation of amputating the Forearm," we must decline inserting, as no new facts are made known. The anæsthetic powers of the new agent are now fully established; and it would be occupying our columns for no useful purpose merely to record operations of daily occurrence.

"Argus."—There is no school that we know of for the education of the orphans of medical practitioners. The founding of such an institution would be honourable to the profession, as one is greatly needed.

"Magister."—The lectures will be received both by the College and Hall, and the apprenticeship indentures will not be objected to by the Company.

"A Surgeon in General Practice."—The debt cannot be recovered without the possession of the Apothecaries' licence. Many cases have been tried in the new county courts, and every medical plaintiff has been nonsuited who did not prove that he was a licentiate of the Company.

"Edinburgensis."—Noad's Lectures on Electricity.

"A Medical Assistant" writes us that he is engaged in a respectable establishment at the West End at a salary of £25 per annum; and that for this sum he has to attend the poorer class of midwifery patients; to dispense for from forty to fifty prescriptions daily, and is only permitted to have half a day's holiday once a month. Our correspondent is certainly to be pitied, and we would recommend him, if he cannot make better terms with his employers, to try his fortune in another situation.

"A Member of the College, Birmingham."—The Apothecaries' Company will not prosecute any qualified practitioner; but a private informer can lay an information, and the Society has promised to assist such by giving advice, &c., if required.

"Amicus."—A medical practitioner possessing only a single diploma is entitled to give evidence in a court of justice.

"N. B."—We do not know what examination is referred to. Gregory and Celsus are the Latin authors used at the Hall. Candidates for membership at the College are only required to have a knowledge of their mother tongue.

"Mr. Wm. Smith, King-street, Belper."—From a press of matter we shall be unable for the present to insert the communication on Lunatic Asylums.

"Mr. J. Clarke Lynton."—The case of compound fracture has been received, and will probably appear next week.

"A Medico-Chirurgical Pupil, Bath."—Quest. 1. In the *Medical Times*. 2. No. 5. Yes.

"A Student and Subscriber."—The diplomas referred to will not confer a right to practise medicine and surgery in France or Spain.

"D.D.D., M.R.C.S., A Subscriber," writes, "Will you be kind enough to give me an idea of the ordinary amount of charges made by legal practitioners in medicine; as in my neighbourhood there are as many modes as doctors?" We cannot; perhaps some of our readers can.

"Rusticus," informs us that "Within the last few days almost all of a family I attend have been affected with a singular kind of eruption, somewhat resembling porrigo serpiginosa, and which appears to me to have been produced by actual contact with a diseased calf belonging to the establishment, with the younger brisches. It spreads most rapidly, usually commencing on the scalp, and then appearing indiscriminately on all parts of the body; but in no instance has it appeared in any but those who have actually handled the affected quadruped, not even in the nurses, who are almost always with the children. I have treated it with lunar caustic, both in solution and in substance; ung. hyd. nit. oxid., tincture of iron; and even chloride of zinc; but all with like effect. As soon as the scab falls off the disease reappears with as much violence as ever. I send this to your widely-circulating and interesting paper, trusting that you will insert it, not doubting that some of your numerous correspondents will have met with parallel cases."

"A Student of the Hunterian School" writes, in answer to "Detector."—"I can bear witness to the truth of every word of Verrill's communication, and, if the whole of our grievances were stated, a full page of your valuable space would barely suffice to contain them. I can assure you; Sir, that up to the present time, from the commencement of the sessions in October last, we have only had one subject for dissection, and that for several days during that single dissection we had to submit to the indignity of having the billiard's man at our elbows, in place of the demonstrator. This was well known to Dr. Aldis, who refused to interfere on our behalf, although five pounds would have paid the man out. At length, after the lapse of many days (almost weeks), the students began to exhibit unmistakable symptoms of no longer submitting to be trifled with, and Dr. Aldis did step forward to offer some explanation, which, he knows well enough, was most unsatisfactory, except at the conclusion, when he made certain promises to the students, which were made but to be broken, and to allay the excitement of the well-expressed feelings of the students. 'Detector' must also be well aware of the true cause of the inspector of anatomy refusing to supply subjects to the school. Will he deny that the non-payment had much more to do with it than the room? Will he deny that most disgraceful means have been resorted to, to annoy and remove our much-respected and most efficient teacher of anatomy? Much more might be written, but I sincerely hope, with 'Verrill's,' that, before the College recognises the school, they will see that we are not, in the elegant language of one of our teachers, humbugged."

"A Subscriber and Anxious Inquirer."—No treatment but time.

"Homo."—If our correspondent has been a legal practitioner for a considerable period, as he states, and is forty years of age, the College of Physicians, London, will admit him to examination, or he may apply to the University of St. Andrew's. The German universities do not now grant the degree of M.D. without examining first the candidate.

"A Constant Subscriber, Manchester."—The amount of the bill could not be recovered at law by the Surgeon.

"Mr. C. D. Fitzpatrick, Bedford-terrace, Bootle."—Communication received.

"Mr. T. H." insists that it is contemporary in testing the profession's power of endurance, in the three short articles of "humbug, empiricism, and thorough-paced inconsistency." He appeals to a number of circumstances we need not further refer to.

"Memippus" is very obliging, but we prefer not publishing matter of so personal a character. We have no wish to injure the aspiring young "pugilist"—rather the contrary.

We have been favoured with letters for and against our expressed judgment on the wisdom of Mr. Syme's appointment. We are "of the same opinion still." The system of nepotism and spuriousness, ward-hunting intrigue, by which hospital appointments are so much governed, has been an abuse always decried by medical reformers, and requires as much condemnation now as ever. We have had our differences with Mr. Syme—and hold to them—but they will not prevent from us an honest admission, that the University School authorities have done well to look beyond the miserable circle of family patronage and office-hunting intrigue for the surgeon of their institution.

Letters and communications have also been received from Mr. Morgan, Woodford; Dr. Saunders, Southsea; Dr. Bagley, Eley; Mr. Godwin, Midhurst; Mr. Teare, Ramsey; Mr. Hodgson, Northallerton; Dr. Lee, Ashbourne; Mr. McDonald, Kippin; Dr. Woodcock, Anstruther; Mr. Schofield, Toddorden; Mr. Lawrence, Windsor; Mr. Webb, Beaminstor; Mr. Broadbent, Altrincham; Mr. Franker, Langport; Dr. Macdonnell, Drumadroit; Mr. Flockton, Lynn; Mr. Fitzpatrick, Glenville; Mr. Ross, Invergoron; Mr. Freke, Dublin; Dr. Warren, Hull; Dr. Ffiox, St. Helliers; Dr. Smith, St. Andrew's; Dr. Vereker, Limerick; Dr. O'Reilly, Cavan; Mr. Jones, Llandrino; Mr. Bickets, Droghda; Mr. Campbell, Chappelltown; Mr. Richards, Bala; Mr. Nicholson, Mauchlin; Dr. Bennett, Kells; Mr. Connor, Molra; Mr. Robertson, Farbrook; Dr. Armstrong, Castletown; Mr. Norris, South Fetherton; Dr. Shirley, Lanark; Mr. Hall, Dalton-in-Furness; Mr. Biscoe, Ralgate; Mr. Mullin, New Ross; Mr. Foss, Stockton-on-Tees; Mr. Jones, Strandlaw; Mr. Sumner, Symm; Mr. Rock, Castle Blaney; Dr. Keith, Aberdeen; A Constant Reader, Henley-upon-Thames; Galen; Mr. Thomas Martin; S. S., Manchester; M. D. Cantab.; A General Practitioner; A Student of Trinity College, Dublin; Mr. Adolphus Rose; Argus; Magister; A Surgeon in General Practice; Edinburgensis; A Medical Assistant; A Member of the College, Birmingham; Apicus; N. B.; Mr. Wm. Smith, King-street, Belper; Mr. J. Clarke Lynton; A Medico-Chirurgical Pupil, Bath; A Student and Subscriber; D.D.D., M.R.C.S.; A Subscriber; Rusticus; A Student of the Hunterian School; A Subscriber and Anxious Inquirer; Homo; A Constant Subscriber, Manchester; Mr. C. D. Fitzpatrick, Bedford-terrace, Bootle; &c.

No. 434.

SUMMARY.

JAN. 22.

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ORIGINAL LECTURES.

LECTURES ON GENERAL PATHOLOGY,

DELIVERED TO THE

FACULTY OF MEDICINE

DURING THE PRESENT YEAR,

By PROFESSOR ANDRAL.

Reported for the Medical Times by D. M'CARTHY, M.D. Paris, &c.

SECOND SERIES. CHAPTER III.—(continued.)

When, during health, a stethoscope is applied upon the course of a superficial artery, a trifling concussion is felt, accompanied by a very slight sound; this sound is modified by certain pathological conditions into which we will now inquire. In the veins also a particular bruit is produced, which Hope, Ward, and others have taught us to detect. The vascular murmurs are soft or rough, they are sometimes cooing, and may be intermittent or continuous, and in this latter case they may be even, or swell at intervals; the intermittent murmurs are arterial sounds; the continuous bruit takes place in the veins.

All the arteries may be the seat of *souffle*; we occasionally meet with this symptom in disease of the heart, not often in a simple hypertrophy, but constantly in valvular insufficiency. In this disorder the *souffle* is universally heard in all the arteries. Strictures of the orifices of the heart seldom produce a real bellows-murmur in the arteries. In aneurism of these vessels, a *souffle* is produced, varying in tone and intensity according to the size of the tumour, the state of the clots which partially fill it, the energy of the impulse of the heart, and the consequent rapidity of the passage of the blood through the sac. Stricture of an artery also occasions this symptom; we again find it, and often with a sawing or rasping character, when the arterial walls have undergone a change in their structure: again it is found when a tumour presses upon an artery and diminishes the diameter of the vessel. In simple arteritis a *souffle* may be observed, resulting from the morbid roughness of the internal aspect of the vascular tube. The same sign may be detected in erectile tumours and in aneurismal varix, but it is not proved that it can be the consequence of mere spasmodic action of the arterial walls. The diminution of the average amount of globules of the blood may also occasion a *souffle* in the arteries; we find it frequently in chlorosis, and it may be accompanied by a continuous venous murmur, which is still more characteristic of anemia than the arterial bruit.

SIGNS DERIVED FROM INVESTIGATION OF THE VENOUS CIRCULATION.

We cannot think of separating the history of the signs furnished by auscultation of the veins, from those yielded by the application of the same method to the arteries. During health no sound is produced by the passage of blood through the veins. In some diseases, on the contrary, we

hear a continuous murmur due to this cause. This sound varies considerably in intensity, and may be either simply continuous, or present periodical swellings, which indicate the presence at the same time of *souffle* in the artery and in the vein: it is then called *souffle à double courant*, or *bruit de diable*. In this case, if by pressing upon the vein you arrest the continuous murmur, the intermittent arterial bruit will still be heard, and the nature of the double sound will thus be explained. A sort of cooing is also sometimes detected in the veins, or a buzzing sound; sometimes the bruit is analogous to that which is observed when the ear is brought into close apposition with a large conch or shell; a musical sound is also more frequent in the veins than in the arteries. The continuous venous murmur can be heard only in the neck, in the space circumscribed by the trapezius, scaleni, and sternocleidomastoid muscles, and in the course of the internal jugular vein. When the *souffle* is heard in the jugular veins, pressure exercised upon these vessels, above the stethoscope, instantly arrests the murmur. This sound is more frequent and more strong on the right than on the left side of the neck. If the larynx be gently pushed away while the veins are examined, the bruit will often be found to lose some of its intensity—a fact which M. Donné explains by supposing that the larynx acts as a kind of sounding-board. During effort, the *souffle* ceases; it is stronger during inspiration than expiration, and is more distinct when the patient stands or sits, than in the reclining attitude: if the head be lower than the body, the murmur often ceases; it is increased by exercise, and diminished by the causes which retard the circulation of the blood in the veins: thus the application of the cupping-boots, invented by Dr. Junod, diminishes its force. Venous murmurs are heard only in one condition of the system, viz., anemia. They are constant when the globules of the blood descend below $\frac{100}{1000}$, and never exist when they average above $\frac{108}{1000}$. In the anemia consequent upon saturnine intoxication, profuse hemorrhage, or convalescence, they may also be detected. When the fibrine or albumen of the blood only has decreased, we find no morbid sounds in the veins; in simple neurosis we do not meet with them, but we find them when neurosis is complicated, as it often is, with anemia.

For the purpose of explaining these vascular murmurs, various experiments have been instituted. Thus fluids of different density have been propelled through elastic tubes, and on applying the stethoscope no sounds were heard when the density of the injected fluid was considerable, whilst a *souffle*, more or less distinct, according to the speed of the motion, was distinguished when the density of the fluid diminished. These experiments, which have now been frequently repeated, do not explain the reason of the production of *souffle*, they merely demonstrate a fact; we must leave the solution of the problem to the further researches of natural philosophers.

Inspection of the veins informs us also of some signs of disease. In effort, and when from any cause the circulation of the heart is embarrassed, the jugular veins become distended. In diseases of the heart, or when the pulmonary functions are much disturbed, a reflux of the blood into the veins of the neck is sometimes observed. M. Martin Solon noticed this sign in animals, in the veins of the superior extremity, and also in the abdomen where the circulation was much impeded. Swelling of the veins may result from the pressure of a neighbouring tumour. Distention of the veins of the thoracic walls points to an obstacle to the circulation of the blood in the v. cava descendens, either from the presence of a tumour (usually cancer) in the mediastinum, or from aneurism of the aorta. Very lately Dr. Grisolle met with a case of obliteration of the v. cava descendens from circumscribed phlebitis, accompanied by distention of the veins of the thoracic walls. The veins of the abdominal parietes may also acquire considerable size; in simple ascitis, produced by cirrhosis, or chronic peritonitis, they are seldom much developed; but when they become greatly distended, chiefly on the right side, you may depend upon finding a tumour pressing upon the vena cava ascendens, or the v. portarum.

SIGNS DERIVED FROM THE INVESTIGATION OF THE CAPILLARIES.

The state of plenitude or of vacuity of the capillary vessels is betrayed by the appearance of the skin, which also permits us to judge of the increase and diminution of the globules of the blood. In chlorosis the skin acquires a greenish tinge, and the visible mucous membranes, the inner face of the lids, the lips, gums, and tongue are remarkably pale. In pulmonary consumption the face becomes very pale, and the red patch, so often noticed on the cheeks, is the result of feverishness. Albuminuria, or Bright's kidney, causes a particular paleness of the countenance, which is at the same time more or less puffed. Organic disease of the heart causes frequently an oedematous appearance of the face, but at the same time a certain degree of cyanosis. The face is considerably discoloured in chronic gastritis, but is extremely thin. Plethora produces an unusual redness of the skin; whenever the blood is not properly influenced by the oxygen of the air, whatever may be the cause, the skin acquires a dark, bluish tinge, of a very characteristic nature. We find this colour in diseases of the heart, on communication of the right with the left cavities, and also whenever the venous circulation is greatly embarrassed; we likewise observe it in pulmonary emphysema and in the second stage of Asiatic cholera. It is, of course, to be met with in true asphyxia caused by submersion, strangulation, &c., and in those various forms of intoxication which interfere with a proper oxidation of the blood.

In cancerous diseases, particularly in cerebiform cancer, and when the morbid product betrays a tendency to be developed in several parts of the body, a special straw-coloured hue invades

the skin, and is too different from the chlorotic tinge to be ascribed to a similar cause.

In various great classes of diseases clinical medicine will point out to you special colorations of the skin. We need only name its yellow aspect in jaundice, and its earthy hue in intermittent fever. Clinically speaking, attention to this point may often be useful: for instance, in the advanced periods of typhoid fever the appearance and colour of the face are quite characteristic; further, in delirium, a valuable sign is furnished by the inspection of the conjunctiva: it is injected in meningitis, and pale in typhoid fever. After the prolonged exhibition of nitrate of silver an indelible bronze colour shows itself upon the skin, a fact which constituted a strong objection to the alleged periodical renovation of our tissues.

SIGNS DERIVED FROM EXAMINATION OF THE SPLEEN.

The spleen is an appendix of the circulation, which will now occupy our attention. This viscus is subject to very rapid variations of size, a fact frequently observed in the early stages of diseased heart. Palpation of the left hypochondrium permits us occasionally to feel the protrusion of the enlarged spleen; but percussion is much more useful than palpation for the purpose of ascertaining its dimensions; and much gratitude is due to Professor Piorry for his able researches on this subject. Percussion shows that, when the spleen does not descend below the margin of the ribs, it still may be much enlarged. We should further be aware that the development of gas in the colon or stomach may conceal a part of the extent of the viscus. Increase of size of the spleen is seldom an idiopathic disorder; cancer of that organ is not in general a primary alteration, but appears only long after other parts have been similarly diseased. Hydatids have been met with in the spleen, and also abscesses. Enlargement of the spleen is, therefore, usually one of the symptoms of another disease. It is found in intermittent fever. Observation teaches us that, when the patients are observed in the incipient stage of the malady, the spleen often does not appear increased in size, but that this alteration occurs if the disease be prolonged. After repeated attacks of intermittent fever, the spleen may remain permanently enlarged, and on dissection it is found indurated, and resembling in colour and density a piece of ham. After pernicious intermittent fever the spleen is found in a state of enlargement, accompanied with softening.

In continuous fever the spleen may also increase in size; this is very common in typhoid fever, and coincides with softening of the organ. This is what observation teaches; but, when we attempt to explain the coincidence of enlargement of the spleen with ague or fever, we are compelled to acknowledge our ignorance. It is certainly not due only to the presence of febrile excitement, for how many febrile diseases could we mention which are unattended with hypertrophy of the spleen—pneumonia, pleurisy, rheumatism, consumption, &c. In general, we may say that, when chemical analysis shows an increase of fibrine in the blood, the spleen is not enlarged; but when, on the contrary, the fibrine decreases, or tends to decrease, the volume of the spleen is usually augmented—*e.g.*, typhus, plague, yellow fever, and scorbutic disease.

In organic affections of the heart the spleen at first rapidly swells or diminishes under the influence of various causes; but at a later period, when the patient dies from the progress of the malady, the spleen is found small and indurated.

We have now examined the signs furnished by the heart, the vessels, and the spleen, and we should inquire into those yielded by the state of the blood contained in their cavities, had we not, during the last session, consecrated several lectures of the first series of this course to that important subject. To those lectures we must refer you, in order to avoid repetition and loss of time.

The alterations of the lymphatic glands are generally signs, and seldom idiopathic diseases,

In principle we may state that, when a mucous or cutaneous surface becomes diseased, the neighbouring lymphatic glands, traversed by the lymphatic vessels which originate in the unhealthy portion of skin, are swollen and inflamed. But the lymphatic glands being primarily affected, may still betray a general disease, and are a sign of scrofula.

In our next lecture we will begin the semeiotic history of the respiratory organs.

DUMAS ON ORGANIC CHEMISTRY.

No. XXXV.

(Continued from p. 193.)

THE FABRICATION OF MANURES—(continued).

The cubic metre of carbonized earth, on taking all the necessary charges into account, will cost somewhere about five francs. An establishment of medium size, that is to say, one destined for a city of 20,000 souls, will require, for its construction and preliminary expenses, about 20 to 25,000 francs; to wit, for its furnaces, basins, sheds, machines, and utensils. As to the general expenses of working and of labour, they average, for the entire manufacture, about one franc a year for each inhabitant, which would make an annual expenditure, for such an establishment as we are supposing, of about 20,000 francs.

A manufactory of this size would produce annually close upon 600 cubic metres of saleable manure, which, at five francs the hectolitre, which is the price of manures charged with three per cent. of nitrogen, makes 30,000 francs. At this price of four to five francs, the manure formed from animalized black might have an advantage over that prepared from dung, for both theory and practice accord in fixing the quantity of black required at twenty to twenty-five hectolitres the *hectare* of land, which would create an expense of 100 to 125 francs; whilst 10,000 kilogrammes of dung would cost 180 francs, and, moreover, would be much more difficult and tedious of transport.

If the animalized black is not, therefore, as perfect a manure as could be wished, yet it forms one of the best modes of turning to account the products of our sewers, and, further, it offers great advantages in regard to its salubrity and readiness of application.

It would be desirable were the municipal authorities, or even the Government, to take decisive measures to compel the owners to construct perfectly water-tight pits, which would allow of no filtration and would keep the contents free from the access of the rain. Their bottom should be made somewhat in the form of a tail-piece. We should thus prevent the great frequency of deaths among the workmen employed in emptying these pits. Were such a plan generally adopted, the vegetable richness of the soil would, in a short time, be completely restored. The immense quantity of concentrated manures, which it would receive, would soon re-establish its fecundity. Both agriculture and hygiene are consequently equally interested in the success of this scheme.

The value of a manure can be decided by one means alone, *viz.*, agricultural experience: this is its final judge; but chemistry may furnish us with useful data, and thus guide us in our application of it to the soil. In fact, the chemist, by an accurate analysis, will determine the nature and quantity of the mineral and organic materials which a given crop shall have abstracted from the land. Should such examination prove a removal of the earthy phosphates, of the alkaline salts, the potash, or the sulphur, it will be necessary to replenish the soil with these products by means of the manure, lest the earth should altogether lose its fecundity. Chemical researches have fully evidenced the part borne by ammonia in manures, and that of azotized matters in general. No doubt can remain on the mind upon this subject; the manures should always contain either ammonia or azotized matters capable of producing it.

But, having got together those vegetable or

animal debris which, on incineration, are found to contain the salts required by vegetation or the azotized matters of which it has need, should we, or should we not, submit them to prolonged fermentation? In other words, is the manure of more avail than the litter which produces it? On this point I entertain not the slightest doubt, and I believe all agriculturists are of the same opinion. The manure is much more efficacious than those materials which have furnished it would be in their natural state.

Two causes contribute to this special efficacy. The first is due to the formation of the ammonia, which is generated during the fermentation of the dung, and which results from the reciprocal action of the hydrogen of the water and of the nitrogen of the air. The manure will, therefore, be richer in nitrogen than are its materials, provided the fermentation be carefully directed.

The second circumstance which influences the special activity of the manure, consists in the presence of certain acids which are found there, and which evidently have a great aptitude to seize upon the oxygen of the air existing in the water, and to convert it into carbonic acid. Should the liquid of the manure hold in solution any ammoniacal salts formed by such acids, they tend to give up carbonate of ammonia under the action of the oxygen of the air.

Now, any one may understand that it would be a very different thing for a plant to absorb through its roots aerated water holding carbonate of ammonia in solution, or water deprived of air yet containing carbonic acid and carbonate of ammonia. Such appears to me to be the purport of the manure. It is a product which furnishes, little by little, to the water materials of a very combustible nature, capable of seizing on the oxygen of the air and transforming it into carbonic acid, and which, moreover, contains ammonia and some alkaline or earthy salts.

The manure would render to the earth all that it had lost, provided the agriculturist exported neither corn nor meat. But the earthy or alkaline salts, as well as the phosphates, which the corn or the meat abstracts, must of necessity be renewed. Thus, we are obliged to restore them to the soil by means of bones, urine, or analogous products, which give back to it its fecundity.

Ultimate of ammonia, as a source of carbonates, and perhaps also under other aspects, has been of late years too much neglected; it is certainly deserving of especial attention on the part of agriculturists. Its constant presence in manures is an index which ought to be taken into serious consideration, and which demonstrates the great utility of the previous fermentation of the materials of the manure,—a plan which M. Jauffret so assiduously forced on the notice of agriculturists.

M. Jacquemart, to whom I previously referred, has favoured me with the following remarks on the subject of ammoniacal salts employed as manures:—

"In 1832 and 1833, I was much engaged with the means of extracting ammoniacal salts from matters which were capable of furnishing them in considerable quantity. It appeared to me that there would be great utility in examining whether salts so rich in nitrogen, and which can be procured in such abundance, would not exercise a very beneficial influence over vegetation. To enlighten myself as to the nature of the salt most suitable for this purpose, I analyzed the powdered manure. I discovered that a hectolitre of this powder, weighing 66 kilogrammes, contained in nitrogen equivalent to 4.69 kilogrammes of crystallized sulphate of ammonia; that 53 per cent. of this nitrogen were in the state of ready-formed carbonate of ammonia, and that 47 per cent. were represented by organic matters. This result, and the promptitude with which the action of the powder was propagated through the plants, led me to think that carbonate of ammonia must be very favourable to their development, and that we ought principally to attribute to the presence of this salt the energy of the powdered, as well as that of the Flemish, manure. In fact, in the form in which

this manure is employed, all the urea of the urine is transformed into carbonate of ammonia, this salt being found there in greater quantity than all others. Circumstances did not allow of my continuing these researches. I proved only that the subcarbonate of ammonia had a very favourable influence over vegetation; but it was not till April, 1843, that I was enabled to make any exact experiments on the employment of ammoniacal salts in agriculture. The objects to which they were directed, were:—

"1. To establish the value, as a manure or stimulant, of subcarbonate, carbonate, and sulphate of ammonia, by taking the powdered manure as a point of comparison. 2. To employ these matters under a small volume and in a convenient form. The powder was employed in the proportion of 20 hectogrammes (2000 litres) the hectare. As we have already stated, a hectolitre of powder represents, in its nitrogen, 4.57 kilogrammes of crystallized sulphate of ammonia; 20 hectolitres, therefore, represent 92 kilogrammes of the sulphate. The proportions of ammoniacal salts were determined in such manner that they contained as much nitrogen as the powder. They were, to the hectare:—

680 litres of subcarbonate in liquor, formed of one equivalent acid, and two equivalents ammonia, re- presenting	92
680 litres of carbonate in liquor, formed of two equivalents acid, and two equivalents ammonia ..	92
92 kils. of sulphate in liquor ..	92

"With the view of transporting and readily applying the solutions of the ammoniacal carbonate, they were caused to be absorbed by dry and porous matters, such as pulverized charcoal or powdered turf. We shall see, when we come to the experiments of October, 1843, that the solution of carbonate may be employed in much less quantity by increasing the richness of the liquor; the volume of this manure can thus be reduced to that of the powder itself.

"The sulphate of ammonia was employed under two states:—1. Dissolved in six times its weight of water, which solution was then absorbed by some dry chalky substance in powder. 2. As a pulverized salt, which was sown like the smaller seeds. Chalk moistened with the solution of the sulphate was employed, from its being previously discovered that, under similar circumstances, a formation of carbonate of ammonia took place. In fact, if we place in a flask some chalk moistened with sulphate of ammonia, we shall have emitted an ammoniacal odour, and litmus-paper, previously reddened by an acid and suspended over the flask, passes to a perfectly blue colour; this reaction is, however, slow. We may then anticipate the best results from a mixture, in which carbonate of ammonia, formed and disengaged slowly, shall present itself to the plant in a nascent state. With a first crop, the result is almost null, but, on the second, it is much more marked. Unfortunately, we were not able to make any observation on the third year.

"Finally, to bring it as nearly as possible to the composition of the powdered manure, which contains a portion of its ammonia in the state of carbonate, and part in an elementary state, we made a mixed solution of sulphate and of carbonate of ammonia, in the proportion of 40 kilogrammes of the former and 60 kilogrammes of the latter, to the hectare. This solution was absorbed by powdered turf.

"All the matters employed in this experiment were sown on the same day—the 29th of April, 1843, at the same time as some oat-seed, and the ground was turned over by the same stroke of the harrow. The spot selected was a piece of wood that had been cleared, it having already borne two crops, and having been previously manured with lime and marl. Each experiment was performed on 250 superficial metres, and these plots were separated one from another by an interval of three metres only. The limits were bounded by a line or cord. The crop was collected with the greatest care, and the products accurately weighed:—

Results obtained with the following matters.	Straw, when thrashed, per hectare.	Oats, per hectare.	Proportion of grain, that given by powdered manure being 100.	Relation of grain to straw, the latter being set down at 100.
1. Carbonate of ammonia and charcoal	4300	3900	90.3 p. ct.	75 p. ct.
2. Subcarbonate of ammonia and charcoal	4640	3120	94	69
3. Carbonate and turf	4190	3160	95	77
4. Subcarbonate and turf	4580	3190	94	69
5. Carbonate, sulphate, and turf	3990	3750	88	69
6. Powdered manure ..	5129	3394	100	65
7. Subcarbonate, sulphate, and turf	4354	2790	84	64
8. Sulphate and chalk ..	4060	2634	79.2	66
9. Sulphate in the state of salt	3725	2410	73.5	61
10. No manure at all ..	3999	2465	71	69

"From these experiments it results—1. That the carbonate and subcarbonate of ammonia, when employed with charcoal, or with turf, give 94 per cent. of product (that from the powdered manure being 100) containing a quantity of nitrogen corresponding to 92 kils. of crystallized sulphate of ammonia, per hectare. 2. That the degree of saturation of the ammonia by carbonic acid has no influence whatever. 3. That the sulphate of ammonia, in the state of salt, yields no perceptible result. 4. That the mixture of carbonate and of sulphate of ammonia gives 84 per cent. as compared to the powdered dung. This figure was deduced pretty accurately beforehand (85 per cent.), from the constitution of the salts entering into the mixture. 5. That chalky matters, moistened with a solution of sulphate of ammonia, yield but 79 per cent.—that is to say, 8 per cent. more than where no manure at all has been employed; this result, so far from the expectations that might have been formed, must probably be attributed to the slowness of decomposition of the sulphate, and to the little time during which the plant covers the soil, a period which is limited to four months and a half.

"The following experiments, however, seem to show that there is some reason for persisting in our trials with this matter. They were made in the autumn of 1843 (October) upon a crop of wheat, and on the same ground as in the foregoing case. Having learned, from our previous trials, that the carbonate and subcarbonate of ammonia gave similar results, we here operated with the subcarbonate alone, but employed a liquor double the strength of the former, so as to lessen the bulk both of the turf and of the mixture itself. As a term of comparison, we took the powdered manure, employed in the proportion of 2240 litres per hectare, and representing in its nitrogen 103 kils. of crystallized sulphate of ammonia. The ammoniacal salts were employed in the proportion of 108 kils. of the sulphate to the hectare—that is to say, they contained 5 per cent. of nitrogen more than the powdered manure. These experiments were performed on the same spot as in the foregoing case; the same marks were made to correspond to the same places; and, in all respects, a similar course was pursued up to the moment of sowing the ground (October):—(Table in opposite col.)

"From these experiments it results, as with the foregoing:—

"1. That the subcarbonate of ammonia gives 94 per cent. of product, as compared with the powdered dung: this is shown by the experiments marked 1, 2, 3, and 6. The excess of five per cent. of nitrogen, which we employed, had no additional efficacy; probably because it served, by reason of the duration of the experiment (nine months), merely to compensate the difference of fixity between the principles of the two substances.

"2. The third experiment indicates that the

Results obtained with the following matters.	Straw, thrashed, per hectare.	Corn, per hectare.	Proportion of grain, that given by powdered manure being 100.	Relation of grain to straw, the latter being set down at 100.
1. Subcarbonate and turf	2837	1875	94.5 p. ct.	65 p. ct.
2. Powdered manure ..	3350	2000	100	69
3. Concentrated subcarbonate & turf	3150	1875	94.5	69
4. Five-tenths subcarbonate, five-tenths powdered manure, and turf	3350	1967	100	69
5. No manure at all ..	3363	1485	73	62
6. Powdered manure ..	3375	1970	100	69
7. Half concentrated subcarbonate, half powdered manure, and turf ..	2975	1750	88 (?)	57
8. Sulphate and chalky matter ..	3112	1787	90	57
9. Sulphate in the state of salt	2675	1412	71	53
10. No manure at all ..	2700	1400	70	53

concentrated carbonate (400 litres to the hectare) acts in the same manner as that which is more feeble.

"3. The fourth would seem to show that a mixture of equal parts of powdered dung and of turf, saturated with a solution of subcarbonate, should have an equal value with powdered manure. The seventh experiment, however, does not confirm this result; but it is possible that some error may have crept into this latter calculation, for, in the first table, the fourth and seventh do not present any anomaly.

"4. In the eighth experiment, we see that chalk, moistened with the solution of sulphate of ammonia, has given 90 per cent. as compared with the powdered manure, whilst in the first table it yielded but 79 per cent. We must, without doubt, attribute this difference to the fact that, in the one experiment, the matter was made to act upon the plant during a space of nine months, instead of four and a half. It is difficult to say whether the manure, laid down in the spring, could have added any action to that used in the autumn, for it had been buried by the tilling which had succeeded the collection of the first crop. It would have been very interesting to examine the products of a third crop, but we had not the opportunity of so doing.

"5. The sulphate, in the state of salt, as we have seen above, gave no result whatever.

"6. Lastly, if we compare the fourth experiment, in which, in the spring time, the ground was manured with turf saturated with the solution of subcarbonate, and where no manure was applied in the autumn, with the tenth experiment, where no manure at all was employed, either in spring or in autumn, we see that the two products are very nearly identical. Hence, we must conclude, either that the effect of the subcarbonate of ammonia is not felt beyond the first crop, or else that that substance, which was at the surface, had been buried too deeply by the tilling which preceded the sowing of the wheat.

"In fine, it appears to be demonstrated, by the experiments of the spring, and by those of the autumn, that the carbonates of ammonia have a very marked and beneficial influence over the production of the cerealia. That the sulphate of ammonia, in the state of salt, has no action over the same plants, at least under the conditions indicated; probably we might obtain better results by sowing it in the spring time over the cerealia whilst covering the ground, in the same way that it is used with meadow lands—a subject to which we shall shortly refer. That a solution of sulphate of ammonia, absorbed by some chalky matter, conduces to very favourable results, especially when the plant remains a long time in the ground; its action should be studied during several con-

secutive crops. It is easy to see that the foregoing facts have considerable importance, in an agricultural point of view, and that, even under present circumstances, we may employ the ammoniacal salts with great advantage.

"In the year 1843, wishing to study the action of the ammoniacal salts upon meadow lands, I made use of some solutions of carbonate and of sulphate of ammonia, with which I watered several rectangular spaces marked out on a grass plot. I also sowed some sulphate of ammonia, reduced into powder, in such manner that two equal surfaces, the one watered with a solution of the sulphate, the other sprinkled with the salt, should represent the same quantity of ammonia. The parts watered with the carbonate or with the sulphate acquired, after the space of thirty-six hours, a deep green tint, and became marked out in a very decided manner from the rest of the field. This effect must be attributed solely to the salts, and not to the moisture, for the parts sprinkled with pure water presented no change. After the first shower the parts sprinkled with the sulphate, in powder, became altogether similar to the others. This latter result led me to give up the employment of saline solutions, which present considerable difficulties in application. I therefore propose to experiment solely with the sulphate of ammonia in powder, which should be sown in the same way as the finer kinds of seeds. I have observed that, when the lawn has been mown, and the grass has commenced to shoot up again, it is impossible to distinguish between the parts which have received the salt and those which have been watered with the saline solution; the action of these salts would appear then to be exercised on the one crop only.

"In 1844, I caused to be sown on some meadow land (between the 20th and the 30th of March) some sulphate of ammonia in powder, in the proportion of 90 to 100 kilogrammes to the hectare. Each experiment occupied a space of about one-third of a hectare. After the first shower, the parts thus treated were distinguished from the remainder of the plot by their deep green colour; subsequently, the grass appeared more abundant, but circumstances did not allow of my making exact observations on the products.

"In 1845, these experiments were repeated, the places being marked out by stakes. At the time of the crop I measured to the right and to the left of each spot a surface equal to that experimented on, that is to say, the third of a hectare, and I compared the products of the manured parts with those of the non-manured:—

	Excess of Product with the Sulphate.
First Experiment.—Per hectare, sulphate 100 kils., hay 8-746 kils.	839 kils., or 29 per cent.
Soft and good earth, hay 2-907 kils.	
Second Experiment.—Per hectare, sulphate 100 kils., hay 4-956 kils.	1-064 kils., or 80 per cent.
Very good soft earth, hay 3-892 kils.	
Third Experiment.—Per hectare, sulphate 100 kils., hay 2-970 kils.	590 kils., or 15 per cent.
Hard ground, hay 3-450 kils.	

"We here remark that the sulphate appears to have so much more action as the earth is of a better description, that is to say, as it is less hard or clayey, but without being of too light a nature. It remains for us, however, to determine if, with a less quantity than the 100 kilogrammes to the hectare, we cannot obtain equally good results; if, with a larger amount, we cannot obtain better; and, lastly, whether the action of the salt cannot be made to extend beyond the period of a year, especially in argillaceous soils. These are questions that can be resolved only by future experiments."

Another point also left for our consideration is, whether an earth, which is annually manured with ammoniacal salts, would give, during a

succession of years, abundant harvests; if its fertility would be sustained; or whether, on the other hand, exhausted by the abundance of its early crops, and not receiving fresh principles, its productiveness would not decline every year.

ORIGINAL CONTRIBUTIONS.

REPORTS ON THE DISEASES OF FEMALES.

By EDWARD RIGBY, M.D.,

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In proceeding with the subject of organic sterility, I come next to consider those cases which are of a less aggravated sort, viz., where the os and cervix uteri are well formed, but so contracted as to prevent the occurrence of conception. This condition is occasionally attended with a swollen state of the anterior lip, and disposition to congestion of the part; the cervix feels hard and tense, and the mucous membrane covering the os is considerably gorged, and more or less studded with granulations, which soon lead to ulceration. The patient complains of pain in the back and loins, sense of bearing down, and many of the symptoms which characterize slight inflammatory action of the cervix uteri and ovary. She has pain on suddenly sitting down upon a hard seat, and on the passage of solid feces, occasionally darting pains; frequent and sometimes severe pain in one or other ovarian regions, usually the left, and more or less leucorrhoea; with these local annoyances there is considerable derangement of the stomach, liver, and bowels; the tongue is dry and rough, being covered with that peculiar short-napped fur (if I may so express myself) which indicates a state of irritation, especially of the uterine system, in the female; the secretions are faulty; the pulse is weak; the catamenia irregular in time, quantity, and quality, and generally preceded by much suffering. Mere dilatation of the os and cervical canal will frequently produce much relief to all the local symptoms, and as the general irritation resulting from their presence subsides, the health and strength improve rapidly. If, however, the contraction of these parts be very considerable, the dilatation produced by a tent is but of temporary effect; even wearing a metallic plug in the canal for some weeks does not always succeed in producing a dilatation of any permanence, and after a short interval the parts are found as contracted as ever; under such circumstances the division of the anterior lip of the os uteri and corresponding portion of the cervical canal becomes necessary, and is of course a very effective measure. The following case ought, perhaps (from the patient being a single woman), to come rather under the head of dysmenorrhoea than that of sterility, but, being a good illustration of the foregoing observations, I will venture to introduce it here.

S. K., aged twenty-three, unmarried, delicately formed.

June 20, 1846. Complains of dragging pain in the loins, and pain of a lancinating character in the hypogastrium, extending to the thighs. Bowels costive; appetite bad; tongue furred and rough; has pain in the direction of the rectum.

Exam. per Vaginem.—Os uteri low down and tender; uterine sound passed two inches and three quarters towards the left side; menstruated at seventeen, and has continued to do so regularly ever since, except after the first appearance, when it was entirely absent for ten months. She has always suffered severe pain for several days before each period, which is relieved by the appearance of the discharge; the discharge is quite natural.

Hirudines vj. ano; confect. sulphuris co. o.m. R. Antic nitrici diluti, m. xv.; ex infus. gentianæ co., ʒjss. ter die.

Aug. 22. Has made but little progress; leeches

produced only temporary relief. The os uteri was examined a fortnight ago with the speculum: the cervix was found to be congested, and the os uteri closed; it was again examined to-day: the cervix forms a small conical protuberance, which is greatly inclined to the left side; a small circular depression at its apex marks the os; the mucous membrane is much congested, and somewhat granular; tongue streaky; bowels irritable. Some argent. nit. was applied to the os.

R. Extr. taraxaci, ʒjss. ter die; ex liq. calcis, ʒjss.

R. Ext. gentianæ, extr. hyosc., aa. gr. v. o.n. Pt. confect. sulphuris co. o.m.

Sept. 19. Not much improved; asked to have the argenti nitrat. applied, as it relieved her very much; the os uteri, being found much congested, was scarified and bled freely. Contin. med.

26. Was very much relieved by the scarification. She is now half way between the catamenial periods; the discharge last time was very dark, thick, and scanty, preceded and attended by much pain. Tongue still red, glazed, and fissured; bowels more natural. Pt.

Oct. 3. Constant pain in the lower part of abdomen and both groins; darting pains through the pelvis; less pain about the rectum; os uteri was scarified, which was much congested. Pil. hydr. c. coloc., gr. x. o.n. Pt. mist. et confect. sulph. co.

17. Felt much relieved after the scarification, but still has the darting pains, although not so severely; much pain of abdomen when the bowels are moved; bowels open three times daily; tongue better. Rep. mist. confectio et lotio. Applic. argent. nit. ori uteri.

Oct. 24. Feels better in general health; has a thick albuminous discharge; anterior lip of os uteri much swollen and congested; it was scarified, and bled freely. Pt. med.

31. Was much relieved by the scarification; has still shooting pains in the lower part of abdomen. Catamenia came on to-day with less pain than usual, of a much brighter colour, and without exudations; bowels regular. Pt.

Nov. 7. Still complains of shooting pains in the lower part of abdomen, although she feels better in point of general health; tongue better; bowels regular; has much less pain when the bowels are moved. Pt.

14. Complains of great pain in passing water, with frequent desire to do so; urine much loaded with lithates; bowels are confined; tongue tolerably clean; orifice of urethra much congested.

R. Potassii iodidi, gr. ij.; liq. potassæ, m. x.; decoct. sarzæ co., ʒjss. ter die. Pt. confect. et lotio. Applic. arg. nit. orif. urethræ.

21. Has still darting pains about the orifice of the urethra, although they are less since the application of the nitrate; general health improved; bowels confined. Pil. aloes c. sapone, gr. v. o.n. Pt. alia. I passed a medium-sized metallic tent through the os uteri, which she is to retain for a while.

28. Tent caused much pain for the first few days, but it was near the time of the catamenial period; the catamenia appeared a day sooner in consequence, and rather less in quantity; since then has felt easier, and fewer lancinating pains; slight leucorrhoea; bowels open. Rep. med.

Dec. 19. Has worn the tent a month; general health better, but still has a few lancinating pains; catamenia appeared yesterday, with very little pain, more freely, and of a better colour. Rep. med.

Jan. 16, 1847. Has worn the tent two months; feels little or no pain in the uterus, but complains of much irritability of the bladder, apparently from the loaded and acid state of the urine; bowels natural; frequent cough. Haust. sodæ tartrates t. d.; magnes. carb., ʒj. o.n. Rep. pil. aloes c. sapone. Removed the tent.

23. Catamenia appeared this week, more healthy in quantity and appearance, and with less pain; still complains of darting pains, and much tenderness of the cervix; the irritability of the bladder is less. Rep.

30. The symptoms of inflammation of the

cervix have increased. Applic. hirud. iv. ano. Rep.

Feb. 18. Complaints of much pain; fancies that it is produced by the effervescing medicine; is by no means so well. Pil. hydr. c. coloc., gr. x. o.n.

R. Potassi iodidi, gr. ij.; liq. calcis et decoct. sarsae co. aa. 3vj., bis die.

20. Catamenia appeared on the 15th, attended with much pain, as also preceded by considerable pain in the loins and back; the discharge stopped yesterday; feels better; has still a sense of throbbing about the anus, and pain on sitting down. Hirud., iv. ano.; decoct. papav. in vaginam injiciend. Rep. alia.

March 13. Complaints still of much irritability of bladder and pain in the pelvis.

Exam. per Vag.—Os uteri quite closed; cervix taper and hard; dilator would scarcely pass; I gradually dilated and passed it through the os uteri internum; passed a middle-sized metallic tent without much difficulty, but it caused great pain and faintness; urine still thick.

Rep. pil. alternis noctibus; pt. mistura; sodæ potass. tart. o.m.

20. Feels better; still much pain of back and pelvis; bowels open. Rep. med.; empl. opii lumbis.

27. Catamenia have appeared since last report, with some pain, very dark, but not more profuse than usual; tongue clean; looks better. Rep. mist. et decoct. papav.; extr. taraxaci, 3ij. o.n.

April 17. Has worn the metallic tent five weeks; catamenia appeared three days ago; they came on with much pain, but freely, and of a good colour, and still continue; general health much better. Pt.

May 16. Has continued to wear the tent; catamenia appeared on the 11th, with little or no pain; the discharge was much more natural in colour; general health greatly improved. Pt.

22. Feels better; the tent came out yesterday, having been in ten weeks. Pt.

June 5. Feels much better; bowels more regular; has some cough. Rep. sodæ potass. tart. linotus; extr. taraxaci, 3jss.; ex. liq. calcis. f.d.

12. Catamenia have appeared since, with scarcely any pain, and of a much better colour; health much improved; cough much better. Pt.

26. Feels perfectly well, but has a slight degree of bearing down. Pt.

July 3. Feels in better health, but still complains of great bearing down. Pt.

31. Has been at Carshalton since last report, and has returned greatly improved; tongue pale, and slightly fissured. Rep. mist.

R. Ferri sulph., zingiberis, aa, gr. j.; extr. gentianæ, gr. ij.; extr. hyosc., gr. v. ft. pil. ij. o.n.s.

Aug. 7. Feels well. Pt.

28. Feels well, with the exception of a bearing down, but has no pain; bowels open. Pt.

Sept. 19. The two last catamenial periods have been more sparing; complains of sense of weight and bearing down; motions are taper, as if the rectum were compressed, and attended with a sensation of obstruction; bowels more confined than usual; feels swelled. Rep. mist.; magnes. carb. ʒj. o.m.

25. Much pain and bearing down about the pelvis, increased by walking; is feverish, with much headache. Pt.

Finding that her former symptoms were fast returning, and that the relief obtained by the metallic tent was but temporary, I admitted her into the hospital for women in Red Lion-square, and divided the anterior wall of the cervix and lip of the os uteri; a metallic tent of the same size as before was introduced whilst the wound healed, so as to render the canal permanently open; and, after remaining in the hospital a fortnight, she left, being anxious to resume her work, on which she is entirely dependent.

Jan. 10, 1848. Has worn the tent until now, which is very much longer than I had intended her to do; is well in health; has lost the bearing down, and the catamenia have appeared healthily, and without pain.

15. Has worn the tent ten weeks; is much improved in health; the tent was removed.

In reviewing the history of this case, we find that its prominent features are those which indicate subacute inflammatory action of the os and cervix uteri, producing considerable irritation of the neighbouring viscera, derangement of the digestive organs, and much disturbance of the general health. Dysmenorrhœa to a severe extent also existed, and evidently resulted from the very narrow canal of the cervix and small os uteri obstructing the discharge of the catamenia from the cavity of the uterus. The cavity itself had become enlarged by frequent distention at the catamenial periods, as indicated by the measurement of the sound—viz., two inches and three-quarters instead of two inches and a half; to which circumstance may also be attributed the inclination which it manifested towards the left side. I at first treated her merely for the prominent symptoms, hoping that, if I relieved the inflamed condition of the os and cervix, and attended to the general health, she would soon improve; and, being unmarried, I was unwilling to subject her to any local treatment beyond the application of leeches to the anus; these relieved her only for a while, and I soon found that I was making but little progress. The condition of the os uteri was, therefore, examined more accurately, and, being ascertained to be congested and granular, it was touched with nitrate of silver. The tongue and state of the bowels indicated also so much irritation of the intestinal mucous membrane that I was unwilling to give mercury, although the liver was inactive, and hoped to relieve the one and rouse the other by the combination of lime-water and taraxacum. I know of few medicinal agents to equal these in such cases, for there can be little doubt that mercury frequently increases the irritable state of the mucous membrane, and, if carried far enough, will even pave the way to actual ulceration. The caustic produced considerable relief for a while; but at a subsequent examination the os uteri was found so congested as to require scarification, which produced a free discharge of blood, and was followed by a greater degree of relief than she had yet experienced; still, however, the state of the tongue was far from satisfactory, and after a time her former pains returned. The scarification was repeated twice more, and with great relief; the general health improved, the catamenial periods became more healthy; still, however, some symptoms (lancinating pains, for instance) continued unremoved, even when the effects of the treatment were most successful; and feeling that I could only bring her up to a certain degree of health, and with difficulty keep her there, and having on many occasions found that I could stop the inflammatory action, which so frequently accompanies these cases of contracted os and cervix uteri in irritable habits, by temporary dilatation, I passed a smooth metallic tent into the canal of the cervix; the introduction was attended with considerable pain; but this abated quickly, and she then felt a more complete and lasting relief than she had hitherto experienced. The general health improved, the catamenia came without the usual precursory suffering, and I felt convinced that in removing the contracted state of the os and cervix uteri I had removed one, if not the great, cause of irritation upon which her symptoms depended. Still the disposition to inflammatory action in these parts was evidently not entirely subdued; the former symptoms began gradually to return, the health to suffer, and in the course of two months the os uteri was found as contracted as at first. A metallic tent was again introduced, and this, as on the former occasion, was attended with the same general relief and improvement of health. After wearing it ten weeks it was removed, and she continued to enjoy good health for four months, although it was too evident that some of her old symptoms were beginning to return; in about a month more they had rapidly increased, and, feeling more than ever convinced from this second trial that permanent dilatation

would be the only chance of permanent cure, I determined to divide the anterior wall of the cervix. It might have been more prudent to have waited a little longer to see the results, but, as I propose to lay before your readers some similar cases of much longer standing in my next report, I have detailed this one first, as it appeared best fitted for illustrating my subject.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFÉ (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

(Continued from page 466.)

ALPHABET OF AUSCULTATION.

Two Dry Sounds.—Rhonchus; Sibilus.

Two Moist Sounds.—Small Crepitation; Large Crepitation.

Three Vocal Sounds.—Bronchophony; Egophony; Pectoriloquy.

Thus:—

Two Dry Sounds.

Rhonchus.—Rhonchus, or snoring, heard in the larger bronchi, is produced by an intumescence or œdema of the mucous membrane of the bronchi, on which phlegm impinges. This sound occurs especially at the bifurcation of the bronchi, where the membrane is bevelled off, and is called by the French physiologists the "eperons," or spurs of the bronchi. When the fingers are spread out, the reflected skin from the base of one finger to that of the other, represents a magnified form of this reflection of the bronchial mucous membrane. The sound denotes the existence of bronchitis. The pathological change above described is well exhibited, in other respects, in conjunctivitis, when effusion exists beneath this membrane.

Sibilus.—Sibilus; wheezing, whistling, or cooing. Produced by the same cause as above described, with the exception that it originates in the smaller bronchi, so that the grave sounds of a bassoon, and the shrill sounds of a piccolo, or the air drawn through the semi-closed lips well moistened with saliva, and through the larynx as in snoring, afford a tolerably accurate representation of these two bronchial sounds.

Two Moist Sounds.

Small Crepitation.—Small crepitation is the invariable symptom of the first stage of pneumonia, and is produced by the inspired columns of air passing through a series of inflamed pulmonary cells, which are partially clogged with sero-sanguinolent secretion. The act of rubbing the hair between the fingers gives some notion of this important diagnostic symptom. I need scarcely say that emphysema from fractured ribs and wounded lung will cause this sound also; but, as I do not wish to confuse the student by describing those morbid changes produced by traumatic causes, I shall omit any further notice of them now.

Large Crepitation is similar to the breaking of large soap bubbles, and is heard over the lower lobes behind, in cases of advanced or chronic bronchitis, the third stage of pneumonia, and in emphysema with œdema pulmonum.

Three Vocal Sounds.

Bronchophony, or increased resonance of the voice, is produced by a solid portion of lung acting as a better conductor of sounds than a vesicular or healthy portion; so that the voice of the patient rings under the ear of the auscultator. This solidification is either the result of pneumonia, or of a mass of aggregated tubercles in the upper lobes. In the latter case it is heard under the clavicles; in the former it is usually detected over the lower lobes behind.

Egophony, or bleating of the goat. A sound peculiar only to the presence of a small portion of effused lymph between the surfaces of the costal and pulmonary pleura, the result of

pleuritis. It is not heard when the effusion is copious, but it is again heard when the effusion is in the course of absorption. Hence it is an unfavourable auscultatory sign in the early, and a good one in the latter, stages of pleuritis. This sound should be listened for over the lower lobes behind; the ordinary seat of the early occurrence of pleuritis. (a)

Pectoriloquy is the effect of the intonation of the voice passing up the stethoscope as though it came from within the chest rather than from the mouth of the patient. Its production is the unequivocal evidence of a cavity in the substance of the lung, which cavity is usually in the upper lobes, and therefore this vocal sound is to be sought for under the clavicles. If you place the stethoscope over the wings of the thyroid cartilage, and make the person talk, you have a fair specimen of this vocal sound in the above diseased change.

Having said thus much upon the subject of using one of the special senses for the detection of diseases of the chest, and which more properly claims the title of auscultation, I now proceed to consider that information which the eye derives from beholding a series of changes which are no less useful than are those which we obtain from the sense of hearing; and they are equally as symptomatic of thoracic disease, and should be ranked amongst the semeiotics of this department of medical study, in the same way as the auscultation of the air, voice, sounds of the heart, &c. &c.

In the first place, then, we have to notice the varied forms of disease in these viscera, ordinarily met with in the medical wards of an hospital. Thus, pneumonia, pleuro-pneumonia, tubercular deposition or phthisis, emphysema pulmonum and asthma, bronchitis, cedema pulmonum or dropsy of the lung, pleuritis and empyema; hydrothorax, or dropsy of the pleura, in one or in both sides; endo-carditis and valvular diseases, in their more advanced condition; dilatation of the cavities of the heart, with thinning of its walls; the same change with hypertrophy of its walls; contraction of the cavities without hypertrophy, and the same contraction with thickening of the walls.

In proceeding to make a hasty sketch of these diseases, it is not my intention to confine my remarks to the various complaints as they stand formally in the several divisions of this classification, but to pass from one to the other in the course of my observations, in order to compare the various shades of peculiarity which the symptoms appropriate to each one of them exhibit: so that, in the glance I am now about to take, some diseases, such as emphysema, which stands in the third division, will be touched upon in treating of those diseases which are grouped in the second division of this class; nevertheless, a more explicit description of each one of these thoracic changes will be made when the diseases in each division are treated of. This mode of proceeding is the more practical and useful one, inasmuch as the main point to which I am anxious to draw attention to in this, as in all the other classifications of diseases according to their physiognomy, is the importance of exercising and tutoring the eye, the ear, the sense of touch, and the hand, in the determination of diseases, whether they exist in the cranium, thorax, or abdomen.

In the first place, then, let us suppose that a patient presents himself with a heavy eye, knitted brows, a dusky, dirty-looking, inexpressive countenance, not livid, but similar to a man who is fagged out with a night's debauch of drinking and loss of sleep, and who has a greasy face that looks as if it had experienced no ablu-tion for forty-eight hours. Perhaps the lips are covered with "herpes labialis" (a frequent oc-

currence in the early stages of the disease I am endeavouring to paint—at least so it is in London). His breathing is wholly abdominal; you hear him give a short, dry, sharp, and bounding cough. The pulse is hard and full, the skin is hot, and the man's looks are confused. Before you put the ear to the chest, you might venture to say, "This is pneumonia."

But, as has been just remarked, we first glance at the countenance, and especially at that wonderful organ, the index of the mind—the eye. It is dull and heavy, the overhanging brows are knitted, the face reveals to the mind of the practitioner that the man is muddled. He looks stupid; there is a dusky flush over his cheeks, and the lips, especially in children, are of a dead rosy tint. The whole countenance is inanimate and expressionless, and you may read in it, oftentimes, "Imperfect oxygenization of blood."

Another patient drags forward for admission, presenting a thin face, high cheekbones, a glassy eye, dilated pupils, curved and convex nails (ungues adunci); a hacking, irritable, short cough; a raucous voice, a prominent pomum adami, and you read "phthisis" in his physiognomy.

Whilst a third, in the person of a tall, athletic Irish labourer, walks up, with a heaving chest, livid lips, a purplish, dusky countenance, raised brows, open eyes, *slae naí* acting, shoulders elevated and thrown forward, a barrelled chest, and a short, loud, deep, sonorous, and straining cough; add to these physical appearances the hints to be thrown out under the head of "Emphysema" and "Bronchitis," and you, as it were, read this disease in the man's face and deportment.

In pleuritis, on the other hand, there is a countenance lighted up with marked expressions of acute suffering; the eye is rather wild, and is carried hither and thither with anxiety and distress in its every motion; when, in an instant, perhaps, whilst the patient is giving a vivid description of his ailment, he is suddenly thrown forward or sideways by an involuntary jerk or catch in his breathing, and his respiration for a moment is suspended. You see how acute his sufferings are by the shock such a suspension of his breath produces. Unlike a pneumonic patient, he is very ready to talk and give you a graphic description of his illness and pains; the efforts of expiration in talking do not disturb him, as the lungs are now receding from the inflamed surface; but when he has exhausted all the air he inspired, and the lungs are collapsed, he involuntarily takes a deeper inspiration than he was wont to do, and the inflamed pleura is stretched; sharp pain is experienced, and he is ready to drop with its severity, and with the momentary sense of suffocation.

The action of respiration will be so far modified or altered in each of the foregoing diseases of the thoracic viscera that a well-practiced eye can oftentimes, at one glance, conjecture which organ is the seat of special disease.

In pneumonia and pleuro-pneumonia (the chest and abdomen being laid bare in the male subject) the front of the thorax, from the clavicles to the eighth or ninth rib, is quite passive in the act of respiration; the small or floating ribs, with the diaphragm, act to a certain extent only; whilst the abdominal muscles take the most active part in the office of respiration.

This is called, and rightly so, "abdominal respiration," and invariably denotes acute thoracic disease, and nearly always points to the pleura, or pleura and lung, as the immediate seat of inflammation.

In pleuritis this state of abdominal respiration is more especially marked, and is recognised immediately by a mere novice, when not pointed out to him. The intercostal muscles are immovably fixed in the acts of respiration; and, if there is any amount of effusion into the pleura on one side, some dilatation of that half may be noticed, as we pass our eye down the chest, outside the mamma, and compare it in our mind with its corresponding surface on the opposite; nay, more than this may be observed on viewing

the two sides of the thorax. On the side in which inflammatory action is going on, you may notice the passive state of the lower ribs, whilst the upper four or six act to a moderate amount. The intercostal muscles have the power, most undoubtedly, of acting in certain parts of the thorax, whilst they are quite passive in other portions: so that the whole of one side will act freely and perfectly, a greater portion of the other side will moderately rise, whilst the lower half, where pleuritis exists, will be as fixed and immovable in the acts of respiration as the spine itself. I have seen this repeatedly, in the medical and surgical wards of the hospital, in fractured ribs with pleuritis, as also in the acute stage of this disease when idiopathic in its origin.

The eye may readily discern the presence of empyema, when this organ has been somewhat experienced in its search after thoracic diseases, especially when the effused fluid in this cavity amounts to any considerable quantity: for in addition to the marked "abdominal respiration," already noticed under the head of "Pneumonia," and the passive state of the respiratory muscles of the lower half of the chest, you will find the non-inflamed side of the chest acting much more freely than the inflamed side, and there will be, perhaps, ever and anon "a jerk" or sudden "halt" of the intercostal muscles over the inflamed pleura, whilst you survey the chest of the patient as he lies in bed.

Again, if, as I have already said, there is much fluid effused in the inflamed pleura, there will be a manifest bulging of the affected side: so that, before the auscultatory talents of the pupil are called into action, the eye has pretty well satisfied the mind of the main features of the patient's disease.

In tubercular deposition (which is invariably met with in the upper lobes, and especially when that deposition has gone to such an extent as to cause inflammation of the pulmonary pleura) there is more or less adhesion of this latter membrane to the costal pleura; therefore, when these changes have taken place (and we rarely get the disease in an earlier form, except it be from a sudden outbreak of softened tubercles, producing hæmoptysis), the condition of the respiratory action is most marked, and is quite opposed to the former one, just alluded to.

In solidification of the upper lobes of the lung from tubercles, the following points are readily noticed by one who is accustomed to examine carefully the bare chest and abdomen of such patients in bed; nay, even in the erect posture, with only the chest exposed, as in our out-patient department. This state of respiration is so manifest and so decided, that a practised eye could speak positively of the stethoscopic sounds he should hear before he examines his patient through the medium of another organ of sense, that of the ear.

We may notice then, first, the freedom of action in the lower half of the thorax—all parts, in fact, below each mamma; the free expansion of the diaphragm and the abdominal muscles; but, as the eye travels up to the clavicles, we invariably find them passive, or so imperfectly acting, or raised to so trifling a height, that I have often taken a very young pupil, and have asked him to decide the question, which part of the chest exhibited the most freedom in the respiratory action, and the answer has been as ready as it was accurate.

The upper part of one side of the thorax in phthisis, generally speaking, acts in a less degree than the corresponding half, as the disease never progresses in an equal degree through the upper lobes of both lungs. There is a flaccidity as well as a flatness of the muscular front of this part, and, if a tubercular excavation has formed, the pleura (costal and pulmonary) will be adherent, and a depression over the second or third rib may be noticed corresponding to that portion of adherent lung which contains the cavity. This condition of respiration one may term "respiration by the lower ribs." If the patient is erect, and is desired to take a few deep inspirations, the passive state of the shoulders,

(a) If a bladder, half full of thin gruel, is placed over the naked chest of a healthy man, and the ear is laid on the bladder whilst the person is made to talk, the oegophonic voice may be heard.

clavicles, and upper ribs is more manifest than when he is in the recumbent posture.

I do not know whether the following curious fact has ever been published, though it may have been noticed by others besides myself. It is this: In tapping the intercostal spaces of these passive upper ribs of a phthisical patient with a sharp finger nail, there follows a curious vermicular motion of the fibres of these muscles, and the same effect is not produced in the same spaces between the lower ribs. I am not sure that the exact truth is embraced when I say that this curious wriggle of the muscle, on being so tapped, is not met with in any other disease but in that of phthisis; but, whether such is the fact or not, I believe I can assert that it is rarely, if ever, present in any other form of thoracic disease, and that it is seldom absent in this. The explanation seems simple enough: the subcutaneous adipose cushion is nearly absorbed, the intercostal muscles are much exposed, and, feeling the shock, they recoil under it. I am not, however, prepared to assert that it will not be found in emaciated persons who labour under any other attenuating disease than that of phthisis.

Many of the diseases of the chest are so painless in their nature, so rapid in their course, and so destructive in their issue, that the mere exercise of the senses of sight and of feeling is altogether futile in the detection of these formidable morbid changes. The employment of auscultation and heautophonics is alone capable of detecting the seat and the nature of these fatal diseases.

(To be continued').

REMOVAL OF A LARGE TUMOUR FROM THE NECK.

By H. HAYNES WALTON, Esq.,
Surgeon to the Central London Ophthalmic Hospital, to the
St. Pancras Royal General Dispensary, &c. &c.

A part of the following case has been related at the Pathological Society, where the morbid product was presented. At the request of many of my friends, I now publish a full account of it, together with the result, and some remarks.

The patient was a female, aged thirty-three, the mother of three children, of nervous temperament, with general health tolerably good.

The tumour was on the right side of the neck, lying directly under the horizontal portion of the jaw, extending from within half an inch of its symphysis to its angle, and passing backwards and downwards to within an inch of the clavicle. It seemed to consist of three lobes, was nearly spherical, with a well-defined outline, and stood out three inches beyond the natural contour of the neck. It was moveable on the subjacent parts, and was not adherent to the skin. There was no disturbance of the local circulation.

History.—Twelve years ago she perceived just under the centre of the jaw a little lump, which increased but slowly till within the last year, when it has rather rapidly progressed in growth. It was always devoid of pain, and had never caused any inconvenience until lately, deglutition being now slightly interrupted, especially when fluids are swallowed. About three years since she vomited a large quantity of blood; this was clearly ascertained (as the physician under whose care she was informed me) to have come from the stomach, and was attributed to a blow she received over that viscus.

As far as could be ascertained, she had not any organic disease.

After careful examination, I determined to operate. The patient was very anxious, and dreaded a fatal termination as the probable result. This was in consequence of her having applied to two surgeons, the one of whom had advised her to let it alone; the other intended to operate, and had made all necessary arrangements, but ultimately declined.

On the 2nd of December, assisted by my friend, Mr. Storks, I removed the mass by making two incisions, one a little under parallel to the jaw, and extending at each end slightly beyond the tumour; another at a right angle to that, and

carried nearly to the clavicle, and dissecting back the flaps.

There was no peculiarity about the operation worth recording. The tumour was immediately beneath a well-developed platysma, and surrounded by a dense cellular sheath. No part of it passed between any of the muscles of the neck, or of those going from the hyoid bone to the lower jaw, or to the tongue. I did not suspect an occurrence of the latter nature, since the cavity of the mouth was not encroached on; but I thought it probable that I should find an elongation of it between the styloid muscles and the pharynx.

There was little blood lost. The external jugular vein was, from its situation, necessarily wounded, and two ligatures were applied to it. Two small arteries were tied. The integuments were retained *in situ* by suture needles, and water-dressing applied.



The operation was performed under the influence of chloroform, which was given by my friend Mr. Greenhalgh. The patient, naturally irritable, would doubtless have given much trouble, and rendered the operation protracted, had she not been insensible. Again, in operations about the neck where venous hemorrhage is influenced by preternatural action of the respiratory muscles, insensibility of the patient, whereby tranquil respiration is produced, is a great desideratum.

At seven P.M. I was called, in consequence of the nurse being alarmed by bleeding from the wound. When I arrived I rather feared that I should have to remove some or all of the needles, and search for the bleeding vessels; but, as the escape of blood was not copious, I determined first to try the local application of cold by means of thin pieces of rag, dipped out of very cold water, and renewed every three or four minutes. The plan was effectual; in two hours all bleeding had ceased.

R. Tinct. hyoscyam., 3j.; spr. ammon. aromat.

3ss.; aquæ, 3ij.; M. ft. haust. to be taken at bedtime.

Dec. 3. Passed but an indifferent night; circulation tranquil; bowels regular. The parts about the wound are quite tranquil; there is no inflammation, and but the slightest swelling; union is proceeding nicely.

R. Morphiae acet., gr. ss.; acid. acet., m. v.; aquæ, ʒj. M. ft. haust., at bedtime.

4. Continues to progress favourably. At eight P.M. all the needles are removed, except where the ligatures pass out, every part is united.

9. She is moving about in her room.

17. Three of the ligatures are removed to-day.

19. The remaining ligature came away to-day.

29. *Present Condition.*—There is a little wrinkling and looseness of the skin on the side of the neck. She can move the head about in all directions without any inconvenience. There exists a partial paralysis of some of the muscles of the inferior labial group, only observable when certain words are pronounced, or when an attempt is made to place the lips in the position necessary for whistling. In a state of quietude the mouth is quite symmetrical; indeed, so slight is the occasional variation from a natural condition, that it has not been noticed by those to whom it has not been pointed out.

Examination of the Tumour.—A section of it displayed a semi-transparent jelly-like-looking substance, arranged in cells formed by fibrous tissue. It was supposed, by some who inspected it with the naked eye, to be a specimen of the gelatiniform variety of cancer.

For a microscopic examination I am indebted to Dr. Johnson, of King's College. He says:—"That it appears composed chiefly of soft yellow fibres, interspersed with which are some elongated cells, which are probably in process of development into fibres." He also adds, "I believe it to be very difficult, in many cases, to form an opinion as to the malignant or non-malignant nature of a tumour from microscopical examinations of the growth; but in the present instance I am of opinion that the tumour is of a simple non-malignant nature."

My own impression of the tumour before its removal was, that it had its origin in a lymphatic gland in which cysts had been developed. A few of my friends suspected it to be of a fibrous nature—a character common to tumours in this situation.

It may not, perhaps, be out of place to say a few words about the propriety of removing tumours from the neck. Unquestionably, a great nicety of discrimination is often required in these cases. I shall not enter into the diagnosis between aneurisms and other morbid productions, because I think I should be exceeding the proper scope of my communication. I will, however, mention, as an illustration of the difficulty of discrimination that sometimes exists, that, within the last few months, a distinguished surgeon in Edinburgh tied the common carotid for what he supposed to be an aneurism, but which afterwards proved to be nothing of the sort, but a tumour consisting of a cyst of tough consistency, containing a gruel-like fluid. (See the last number of "The Edinburgh Monthly Journal of Medical Science.") In the course of the present year, my opinion was asked by a most intelligent practitioner on a case that was considered to be a small aneurism of the external carotid. After a careful examination, I was satisfied that there was no aneurism, but a tumour, probably an enlarged lymphatic gland, over the artery.

Attention should be specially directed to their attachment to the neighbouring parts. On this point, says my friend Mr. Fergusson, "The mobility of such growths I consider the most valuable criterion of all; and, if it were evident that the part slid freely over the subjacent textures, I should not hesitate about using the knife, whatever might be the bulk of the disease, provided there was no other circumstance to contraindicate such a proceeding; but if, on the other hand, the tumour seemed fixed to the neighbouring parts—if its limits were not clearly defined, if an

attempt to move it caused pain—I should not readily be induced to use the knife, however small the mass might be."

It is also essential to ascertain that they are not intimately attached to large vessels or to nerves. In the case under consideration I had some difficulty in assuring myself that the carotid artery did not pass through the tumour. To those interested in this subject I would refer to a well-written report of a case by my friend Mr. Smith. It will be found in the *Medical Gazette* of Dec. 9, 1847.

It is a fact worth knowing that danger is avoided, and the dissection rendered easier, by seizing the tumour as soon as a portion of the skin is reflected, making tense its cellular connection, and keeping the edge of the knife well directed on it while dividing those connections.

As a general rule, whenever secondary hemorrhage ensues from a closed wound, the wound should be opened and the bleeding vessel searched for and secured, or the bleeding stopped by some other means. I am speaking with reference to secondary hemorrhage arresting union by the first intention. When, from such bleeding, clots are found in a wound and allowed to remain, reparation can scarcely be effected but by granulation on the "modelling process," as it is called by Macartney. I was well satisfied when I examined my patient that there were no clots under the flaps; had there been any I should most undoubtedly have opened the wound and removed them, and given a proper chance to union by the first intention. The blood passed away as soon as it was poured out; probably it came from a part near to the external opening.

It seemed impossible for any cut surface to have united more kindly or quickly than was the case in this instance. I tried hard to avoid cutting any nerves of consequence, by dissecting as far as was practicable parallel to the direction in which they run. With all my care the sequel shows that some of the fibres of the portio dura were divided.

The impaired deglutition before referred to has quite disappeared, and also a cough with which she had been troubled for many months. It will of course be interesting to know of the condition of the patient some years to come, and I shall not lose an opportunity of making inquiries.

13, Bernard-street, Russell-square, Jan. 3.

APPLICATION OF CHLOROFORM IN TYPHUS FEVER.

Communicated by Dr. FAIRBROTHER.

An interesting case of the successful application of chloroform has just occurred in the Bristol General Hospital. The patient, a female about eighteen years of age, exhibited all the symptoms of a bad case of typhus fever. The usual remedies were tried for a fortnight, without any beneficial effect; the unfavourable symptoms continuing, the patient being delirious, and the system worn out for want of sleep—in fact, her life was despaired of—it occurred to the physician under whose care the patient was placed, Dr. Fairbrother, that chloroform being used in operations to produce a sedative effect, if the patient could be kept in the same state continuously, it would reduce the too rapid circulation of the blood through the lungs, relieve the difficulty of breathing, and thus become efficacious in subduing the excited state of the brain and system in such cases, or in others of an inflammatory nature. He accordingly tried the experiment, commencing with ten minims, administered in a cup-shaped sponge, enclosing the mouth and nostrils, but occasionally admitting atmospheric air. About ten minutes were occupied in the inhalation. The soporific state was induced in a few seconds, and continued for about half an hour.

In about four hours the chloroform was again administered, the quantity being somewhat increased, and the inhalation was now continued for half an hour. The patient slept from this

time (twelve) till four. She took a little porter, and again slept till eight o'clock. The application was then repeated, and has been continued for several days, the quantity of chloroform being gradually increased to twenty-five minims, and the time of inhalation to forty minutes, guided in these particulars by the state of the pulse.

No other medical treatment has been adopted, the only other means used being the sponging of the body with tepid water and applying cold pads to the head, the system being supported by beef-tea, porter, wine, &c., and, to allay thirst, toast and water. The patient is now recovering. The pulse is reduced from 130 to between 70 and 80; the tongue is clean and moist; the skin cool; diarrhoea has ceased; the appetite is returned; and the countenance is regaining its natural aspect.

It is a recommendation of this remedy that, so far from its being disagreeable, the patient, after it has been administered a few times, craves for it.

CHLOROFORM IN AMPUTATIONS.

Communicated by J. CLARKE, Esq., Lynton.

On Wednesday evening last, the 29th day of December, being one of the most pestiferous nights of weather I almost ever had to encounter over part of the Porlock hills, I was summoned to visit an old man, a pauper, eighty-seven years of age, being nearly seven miles distant from my own house, who was reported by the messenger to have broken his leg, though the individual who came for me could give no further information in any respect. On my arrival at a lonely cot I found the old man in bed. On putting aside the clothes, I observed the leg encompassed with several handkerchiefs and cloths, deeply saturated with blood; on removing which, as well as a thick woollen stocking, one of the worst compound fractures, extending through the ankle-joint, presented itself, several loose pieces of bone protruding in different places. Seeing no chance of saving the limb, or even the patient's life, but by its removal, I sent to Barnstaple for the assistance of Mr. Torr (the poor-law commissioners not allowing any operation to be performed without the aid and consent of a member of one of the colleges), a distance of twenty miles, who arrived on Friday; and, after seeing the patient, and examining the parts, we at once determined, as the only course we could adopt, to amputate below the knee. Being provided with some chloroform, which Mr. Torr brought with him, having received it from London through Mr. Cotton only the night before, we commenced the inhaling from a pocket-handkerchief, with an enclosed piece of sponge, as recommended by Dr. Simpson. In seven minutes the twitching of the body and limbs took place; he almost immediately fell into a state of stupor, in which he was removed from his bed into the adjoining room, placed on a table, the limb removed, and the stump dressed; having once or twice reapplied the handkerchief, he was carried back again to his bed without one single symptom of pain or feeling; indeed, as soon as he was in bed he commenced singing part of a favourite song, after which a little talking took place; he then fell into an apparent sound sleep, in which state we left him. On visiting him the next day, Saturday, I found he had passed a quiet night, and slept well; had felt no pain, and appeared cheerful and comfortable. At nine p.m. he complained of a little pain, and never spoke after. He died the following Sunday morning about ten o'clock.

We never entertained any hopes of the man's recovery, from the nature of the accident, &c., which happened from an immense stone falling on his leg, and no one near the spot to extricate him for nearly two hours). The loss of blood must have been very great, the bloodvessels being ruptured; and we found almost complete ossification, not only of the tibial and peroneal arteries, but also the branches. This, coupled

with his great age, will easily account for the fatal termination.

As this is the first case in which the chloroform has been tried, as far as I am aware of, in this part of the country, the success it met with in the above case will most assuredly require no further comment from me. I hope no needless operations will ever be had recourse to merely to exhibit its wonderful and powerful effects; and I trust all those who may hereafter offer it for sale will be very cautious to restrict it to the medical profession.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Jan. 10; M. BRONGNIART in the Chair.

CHLOROFORM.—M. Sédillot forwarded another paper on the effects of this substance. They are, says M. Sédillot, very variable apparently, but in reality submitted to rules of some precision. When the insensibility has been slow in its production it disappears rapidly, and, on the contrary, when unconsciousness is rapidly produced, it is not so readily dispelled. The advantages possessed by chloroform over ether are, according to M. Sédillot, compensated by dangers which should be pointed out to the profession. Thus, when, for instance, anaesthesia has been produced by ether, if the inhalation be suspended, insensibility may continue for some time, but does not become more complete; on the contrary, with chloroform, the pallor, smallness of the pulse, weakness of respiration, and coldness of the skin sometimes increase, after the inhaler has been removed, in an alarming manner. Twice M. Sédillot seriously feared the consequences of this incessant annihilation of the vital functions. Therefore, the professor of Strasbourg thinks it advisable that the surgeon be not guided, as in the administration of the vapour of ether, by the state of the respiration, but that he should suspend the inhalation of chloroform when muscular relaxation has taken place.

COMPOSITION OF THE BLOOD.

M. Millon read a paper on a new mode of analysis of the blood, by which metals are detected in it with great facility. This method consists in receiving the blood, after venesection, in three times its volume of water, and then introducing it into a phial containing chlorine in a gaseous state. The blood coagulates, acquires a brownish colour, and soon forms an amorphous, greyish, and pulsatious mass, which, being thrown upon a filtering paper, exudes a transparent fluid. This method permits the chemist to ascertain constantly in human blood the presence of silicic acid, of manganese, lead, and copper. M. Millon endeavoured further to ascertain if the lead and copper were disseminated in the blood, or if, like iron, these metals were assembled exclusively in the globules. One kilogramme of coagulum yielded 0.083 of lead and copper; one kilogramme of serum separated from that coagulum contained only 0.003 of both metals. These three milligrammes of lead and copper found in the serum were attributed entirely to the few globules dissolved or suspended in the lymph.

Copper and lead are not, therefore, diffused in the blood, but are, with iron, fixed in the globules; as to their influence upon health, and the diseases perhaps produced by the increase or diminution of their proportions, these are questions which remain unanswered, and which must find their solution in further experiments.

ACADEMY OF MEDICINE.

Meeting of Jan. 11; M. ROSTER-CHÉLARD in the Chair.

LOCALIZATION OF SPEECH IN THE ANTERIOR LOBES OF THE BRAIN.—A MEMOIR, BY DR. BALFOUR.

A report upon this memoir was read by M. Ferrus; the paper itself did not contain any conclusions on the subject.

M. Balfour remarked that in general the

cases of general paralysis presented symptoms favourable to the doctrine of Professor Bouillaud, who considered that the function allotted to the anterior cerebral lobes was that of language. It was, however, necessary to distinguish these cases into two classes—viz., those in which the progress of disease of the brain had been acute, and those in which it had been chronic. Some of the latter gave rise to an objection not hitherto taken into account; a patient, for instance, was affected with hemiplegia, in consequence of cerebral hemorrhage. After one or more months' motion gradually returned in the paralysed extremities, when suddenly memory ceased, the excretion of urine and fecal matter became involuntary, and general paralysis took place. Here a general alteration of the brain, often so slight as to be scarcely appreciable on dissection, had complicated a local lesion. If the patient had presented great embarrassment in his utterance, it was necessary to analyse the case most carefully, in order to ascertain to which of the two lesions of the brain it was due. Now, general paralysis was usually attended with more or less difficulty of utterance, and therefore a local alteration of the posterior cerebral lobes might be attended with loss of speech, if the disease had terminated by general paralysis, without the case proving anything against M. Bouillaud's theory. Also, amongst the cases brought forward in support of this gentleman's opinion, there were some which, for the same reason, should be set aside.

M. Rochoux said that all uncertainty would cease if facts were properly interpreted; for instance, a woman was affected with apoplexy, and lost the faculty of speech. During the last hours of life a loquacious delirium took place. On *post-mortem* examination, hemorrhage was found to have occurred in the anterior lobes of the brain. Even if the case was a solitary one, it would be sufficient for M. Rochoux to assert that the anterior lobes of the brain were not the seat of the faculty of language. If M. Rochoux was shown a single individual who could see without eyes, he would also assert that the eyes were not the organs of vision.

M. Ferrus said that in all double organs the preservation of one was sufficient to account for the continuance of the function. If M. Rochoux could bring forward a single case of disease of both the anterior lobes, in which the faculty of language was not impaired, he would render to science a signal service. But, if one lobe only was affected, the other remaining healthy was perfectly sufficient for the accomplishment of the function.

A report was then read by M. Girardin, on a paper by Dr. Toulmonde, relative to the sanitary condition of the men employed in cloth manufactories. The paper not containing any facts with which our readers are unacquainted, it is unnecessary to enter into any detail on the subject.

FISTULA LACHRYMALIS CAUSED BY SYPHILIS.—

For the January number of the "Journal des Connaissances Médico-Chirurgicales," Dr. Tavignot sketches a rapid history of this form of fistula: it is the tertiary form of syphilis, which occasions the disease of the lachrymal sac; the ascending branch of the superior maxillary having been invaded by osteitis or periostitis. The diagnosis reposes upon three orders of signs:—1. The succession of previous symptoms, the appreciation of which is not always an easy matter, particularly if mercury, having been exhibited, has interfered with the regular succession of morbid manifestations; the recollections of the patient, and the various stains which the disease may have left upon the body, will, however, in most cases, powerfully assist the diagnosis. 2. The local symptoms of the fistula; and, 3. The concomitant syphilitic manifestations. When the latter are present, the task of the surgeon is greatly simplified; but in some cases it is not so, and, the fistula lachrymalis being the only symptom observable, it becomes necessary to examine if, under the influence of syphilis, it may not present some characteristic

local appearances. In simple fistula, when the contents of the sac have been removed, the bony structure of the diseased region is found in a state of perfect regularity—a fact which is easily ascertained by comparison with the healthy side. When syphilis has produced the deformity, on the contrary, in most cases a hard swelling may be felt on the side of the nose, in the region corresponding to the nasal duct. The os unguis, the nasal bones, or the angular prominence of the os frontis, may also be affected with osteitis, and betray the nature of the case by their tumefaction. Often, in these cases, the superior maxillary being also diseased, the incisor teeth are moveable not in their alveoli, but with them, showing that a portion of the bone is loosened. The treatment recommended is, in the first place, that which experience has proved to be most efficient in tertiary syphilis, namely, hydriodate of potash, in doses of from ten grains to 3j. daily. When the swelling of the bones has subsided, if the symptoms of fistula lachrymalis have not disappeared, the usual treatment of this affection should be resorted to, the specific character of the malady having been removed, but its consequences still persisting.

INHALATION OF AMMONIA is used by M. Bouchardat, for the purpose of removing rapidly the effects of intoxication, in the drunkards who are so frequently brought to the Hôtel Dieu, particularly on Sundays, in a state of insensibility.

D. MCCARTHY, D.M.P.

Prurigo Scabialis.—Dr. Bellingham, of Dublin, remarks that constitutional remedies appear to have but little effect on this disease, and that the principal reliance in its treatment must be upon local measures. The application found most useful, both in relieving the intolerable itching and in curing the disease, is creasote either in the form of ointment or lotion, usually the former. The ointment may be made with from ten to twenty drops of creasote to an ounce of lard; the lotion with from twenty to thirty drops of creasote to half a pint of water, a little spirit of wine or acetic acid being added to render it more soluble. The ointment, to be useful, should be well rubbed into the parts every night, and a very few applications will, in general, relieve the itching, prevent the development of fresh papules, while the old ones will gradually desquamate. If the application of the ointment is premised by the warm bath, and if the patient attends to personal cleanliness, the remedy will be more likely to prove quickly successful.

Singular Case in Midwifery.—Dr. Oldham, of Guy's Hospital, in the "Reports," states the case of a woman, forty-one years of age, who had had several children, and many miscarriages, and who was again become pregnant, and at her full time, in June, 1845. On the 26th she had flooding to the amount of a quart, without much pain, and the os uteri was closed. On the 30th she complained of diffused tenderness over the abdomen; the uterus was then found properly developed, and the cervix short; the os admitted the finger, and the head, covered by the membranes, could be felt through them. The mammae had now become swollen and hard, and had all the appearance of those glands on the third day after parturition, and milk could be freely pressed from them. From the history of the case, it was thought that there was extra-uterine conception, which the last-mentioned symptoms tended to confirm; but, on a careful examination of the abdomen, the uterus seemed not only gravid, but normally developed. By auscultation neither the fetal heart, uterine sound, nor active fetal movement, could be detected, and the death of the foetus was hence inferred. It was determined to wait for the period when uterine action would be developed; the breasts were ordered to be drawn, and salines with calomel and Dover's powder were internally administered. On the 12th of July it was found that, during ten days, there had been fetid discharges, with occasional escapes of gas; the patient became weaker, and, on examination, the os was sufficiently dilated

to admit two fingers, and the bones of the head of a decomposing fetus could be felt. There had been no uterine action. A decoction of the ergot of rye, with sub-borate of soda, was now given, and occasional friction made over the abdomen in order to excite the womb to action; the efforts, however, were unsuccessful. An attempt was now made to artificially dilate the uterus, in order to excite action by pressure on the cervix, and to enlarge the orifice. The os, however, could not be further enlarged, and the tissue of the neck, when stretched, seemed to be lifeless and unyielding. Galvanism was then resorted to, and was applied for more than half an hour over the external surface of the abdomen, in an oblique and vertical direction; and other shocks were directed through the uterus, one of the conductors being placed within the vagina, on the cervix of the womb, and the other externally, near the umbilicus. These shocks were borne without complaint. A great deal of decomposing matter and gas were released from the womb by passing a small hook through the os and breaking up the brain, and injecting warm water frequently within the cavity. On July 17 a portion of the placenta was seized and detached in a loose and putrid state, with the umbilical cord. During this time a constant discharge of an olive-coloured fluid was going on, and the abdominal tumour was sensibly diminished. With this shrinking of the womb the cranial bones, which had always been felt at the os, seemed to be removed, and the fingers of one hand could be touched. They were caught with a pair of dressing forceps, and the arm was drawn into the vagina. This afforded a firm hold, and an effort was made by traction to dilate the os; this, however, was found to be impracticable. The arm was afterwards cut off. Subsequently, portions of the fetus were carefully removed with dressing forceps; the bones loosened and easily detached; and in this way the ribs, the greater part of the spine, and some bones of the other arm were drawn through the mouth of the womb. The abdomen diminished in size, the discharge lost its fetor, and became puriform. During this time her powers were sustained by ammonia and bark, with small doses of opium. She took nourishment pretty well, and it was hoped that ultimately the whole of the fetus would be removed, and the patient recover. Towards the end of September, however, she appeared emaciated and very feeble; the abdomen was tender, and she complained of severe pain in passing water. The size of the abdominal tumour was reduced to that of an orange, and it was noticed that it had become harder, more compact, more defined, and that it was to be felt close behind the abdominal parietes. She now began to sink rapidly; there was frequent vomiting; and she died on the 28th of September, three months from the time when labour should have come on. At the *post-mortem* examination the body was observed much emaciated; the small intestines were distended with flatus; and here and there were some delicate flakes of recently formed lymph, with a small quantity of serum. The abdominal viscera were generally healthy. On dividing the central line of the abdomen below the umbilicus, a cyst was opened, which contained a number of bones, closely set together, with a quantity of thick, dark-coloured putrilage. The cyst, which accurately covered the mass of bones, was formed in front by the lower part of the abdominal walls and the bladder; it was covered in above by the small intestines and omentum, which adhered slightly together; whilst the back part of the cyst was formed by the posterior wall of the cavity of the uterus. This organ was reduced, when measured behind, to about four inches in length. The body was bent back, and muffled by false membranes, and the os uteri was large enough to admit the fore finger. The whole anterior wall of the uterus was absent, leaving only the front lip of the cervix to complete the os, and thus it formed the outlet of the sac which contained the bones. The bladder was so thinned in one part as to be quite translucent, and all but perforated. The

left ovary was healthy, but the appendages on the right side were so matted together as to prevent their being separated. The bones, which were those of a full-grown fœtus, were quite clear of soft parts, and formed a dense, compact oval body.

Chloroform in Midwifery.—Mr. J. Brown related to the Westminster Medical Society a case of protracted labour, in which, the pains having ceased and the os uteri being extremely rigid, he administered a drachm of ergot of rye without any effect. Having waited an hour, he made her inhale chloroform; pains almost immediately came on; the os uteri relaxed, and the labour was quickly terminated. He has always found chloroform produce expulsive efforts of the uterus.

Diagnostic Sign of Disorder of the Digestive Functions.—M. Beau, physician (Annexé) to the Hôtel Dieu, says this sign consists in a transverse furrow across the thumb-nails, resulting from the thinning of the substance of the nail, and indicating an interference with its formation. It may be occasionally wanting, but when it does exist, it is characteristic of a disease with the following phenomena:—Diminution of appetite, of strength, or of the ability to labour; at a later period, paleness, emaciation, palpitations; and all these with or without epigastric pain, but no intercostal neuralgia. By this it can be understood how, by knowing the rapidity of the growth of the nail, the date of the disorder may be approximately obtained by measuring the distance which separates the furrow from the root of the nail. The general growth of the nail is at the rate of one millimetre (1-26th of an inch) in the course of a week. But this furrow is not confined to the thumb-nails, although it is more marked in them than elsewhere, for it has been noticed upon all the finger-nails, and especially on those of persons working in lead, whose nutrition is much impaired.

Menstrual Periods and Parturition.—M. Leray has arrived at the following conclusions in reference to the time of parturition:—1. The time of natural, as well as of premature, delivery is directly referable to menstrual periods. 2. The return of these periods, throughout the course of pregnancy, is in relation to the date of the month corresponding to that of the day when the menses began, at their last occurrence, to appear, whatever may be the number of days reckoned in each month. 3. The premonitory signs of labour at full term, and of premature delivery, occur, in the greater number of women, on the day of the month pointed out, or during the seven following days. 4. Nevertheless, the commencement of the expulsive pains may date, in a normal manner, but much less frequently, from the fifteenth day of the tenth month. 5. Every delivery at full term, or premature, which is accomplished before the right period of the month, may be considered as being in advance. 6. Every accouchement which is effected after the seventh day of the same period may be considered as delayed. 7. The preoccurrence of labour is much less common than its delay, and most frequently they do not precede the due time more than five days. 8. Delays, on the other hand, have not such limitations. 9. Lastly, in either case, the causes of advance or delay are very appreciable, although there are cases which it is impossible to fix with certainty.

Aneurism of the Left Coronary Artery.—Dr. Peacock exhibited a specimen to the Pathological Society, removed from the body of a man who died in the Royal Free Hospital. It was ascertained that the man had been a butcher in Leadenhall-market, and, although always a spare person, used to boast of the weights he was capable of lifting. He had never had rheumatic fever; his habits were very intemperate. The illness of which he died was of about a month's duration, but he had suffered from transient rheumatic pains, cough, and difficulty of breathing, for some time previously. During the ten days he was in the hospital, he laboured under symptoms of bronchitis, was in a semicomatose state, and so extremely prostrated as to be

almost incapable of being moved in bed. There was no material difficulty of breathing, or lividity of the face or extremities, and he constantly occupied the recumbent position. He had only a slight cough, and expectorated scanty mucopurulent sputa. The pulse was not much accelerated, but was extremely feeble and unequal both in force and frequency. There was no increased extent of dulness in the præcordial region, but the sounds of the heart were nearly inaudible, from the sonorous and mucous râles which accompanied the respiration. No suspicion of any cardiac disease was excited, notwithstanding that he was several times examined, till the day before his death, when he complained of pain in the præcordia; and a peculiar flapping sound accompanying the action of the heart, but distinct from the ordinary cardiac sounds, was loudly audible along the course of the sternum and towards its left side. On the following morning, several hours before his death, no other physical sign was detected than extreme feebleness of the two sounds of the heart. Death occurred somewhat suddenly with tracheal rattles. On examination, the brain, though somewhat small, was found free from disease, but the arachnoid membrane, covering the surface of the hemispheres, was thickened and opaque, and adhered in places to the pia mater; some fluid was contained in the ventricles, and a considerable quantity at the base; both lungs, but especially the right, were emphysematous in front, so as to overlap the pericardium; posteriorly they were engorged, and very sparingly crepitant; the bronchial tubes contained much secretion, and the mucous membrane was intensely congested, more particularly in the smaller tubes. The pericardium was distended with pale yellow-coloured sero-purulent fluid, and lymph of soft consistence covered the serous surfaces. On the auricles the exudation was of a peculiarly delicate lace-like character, but on the surface of the ventricles it was more continuous and laminated; the sub-serous cellular tissue was infiltrated with pus and serum, so as to form in places a diffuent pulp. At the outer part of the base of the left ventricle there existed a protuberance about the size of a pigeon's egg, covered externally by a soft layer of lymph, and beneath this by a white patch of older date. On incising the walls of the ventricle, so as to divide the centre of this swelling, it was found to be formed by an aneurism of the left coronary artery. This aneurism arose from the anterior branch of that vessel at a distance of thirteen French lines from its origin, and ten lines from its point of division into the anterior and left branches. It was nearly spherical in form, and had a diameter of eight and half French lines. The sac was partly embedded in the substance of the ventricle, and contained laminated coagula partly decolorized, and so intimately adherent to the lining membrane as to be inseparable from it. The portion of the artery between the sinus of Valsalva and the aneurism was somewhat dilated and converted into a complete cylinder of bone, but was entirely pervious, so as to allow a probe to enter the centre of the sac which arose from its anterior surface. Distal to the aneurismal sac the artery was less extensively ossified, and a probe could be passed near to the aneurism, but was then arrested, apparently from the vessel being curved, by the pressure of the sac which overlapped it. The right coronary artery was somewhat large, and its coats in places ossified; the heart weighed 13 oz. avoirdupois, and its substance was very soft; the right ventricle was covered by a slight deposit of fat; its cavity was large and the walls thicker than usual; the walls of the left ventricle were unusually thin, and its cavity was dilated more especially towards the apex, where there existed an adherent and partly decolorized clot. The mitral and aortic valves were slightly thickened and opaque; the aorta was of somewhat large capacity, and its coats thick; the lining membrane was dyed of a deep red colour, and displayed in places a thin membrane on its surface. Some atheromatous deposit existed throughout

the course of the aorta, and especially around the origins of the coronary arteries. The liver was much enlarged, coarsely granular, and indurated; the spleen large, and studded with nodules of fibro-cartilaginous deposit on its convex surface; the kidneys were solid and engorged, but otherwise healthy.

Naphtha in Consumption.—Dr. Theophilus Thompson has arrived at the following conclusions in reference to the administration of this drug in phthisis:—In the third stage of consumption it did positive mischief. In a few cases, when the bronchial tubes were affected, and there was much expectoration, it seemed to arrest the secretion to some extent, lessen the night perspiration, make the pulse fuller and slower, and somewhat relieve the cough; the appetite also improved. In all the stages of consumption, and under other circumstances in the disease, except those mentioned, the naphtha did positive harm. It had no effect whatever on the tubercular disease.

Nerves of Bone.—M. Gros has obtained some particulars regarding the distribution of nerves to the long bones. Taking the femur of the horse, he finds at least three nerves to approach the nutrient foramen,—two of them in company with the branch of the femoral artery, called "diaphysal," and the third, occasionally double, by piercing the vastus internus muscle. All of these are branches of the crural nerve; but there is in man, it seems, a branch of the sciatic in addition. Arrived at the nutrient foramen, the nerves are disposed differently in some subjects, but commonly a ganglion is developed, which receives the nervous branch which came through the muscle at one end, and one of the satellites of the artery at an interval. One portion of the ganglion is somewhat distinct, and is situated within the foramen; it gives two branches which receive the other arterial satellite (which is distinct from the ganglion), and then penetrates the medullary canal. The rest of the ganglion lies beneath the periosteal artery, which, it is to be noted, is a branch of the diaphysal, whose other branch is medullary, and supplies two satellite nerves to it. Variety occurs in the ganglion as to situation, it being near to, or more remote from, the foramen; and, as to form, it being occasionally double. The branches, both medullary and periosteal, follow, and ramify with the arteries, forming a network correspondent to the vascular; and the purpose of the ganglia appears to be to assemble, previous to this distribution, the nerves from several sources.

Ossification of the Cartilages of the Larynx.—M. Segond has stated the following facts in reference to this abnormal condition of the larynx:—1. The epoch of life at which ossification of the laryngeal cartilages commences is variable. 2. When this change takes place, it commences constantly at particular points, which, for the most part, correspond to the insertions of the laryngeal muscles. 3. Ossification commences in the cricoid cartilages, and terminates with the arytenoid. 4. 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. 5. 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. 6. There is a change, independent of ossification, which may embarrass the movements of the cricoid cartilage, viz., a prolongation of the inferior cornu of the thyroid. 7. Two portions of the arytenoid cartilages resist the process of ossification for a long period, these are the superior internal apophyses. The *corpora triticea*, when ossified, become amalgamated with the great cornu of the thyroid cartilage.

NAVAL APPOINTMENTS.—Assistant-Surgeons: D. W. Stephen, to the Victory; A. Watson, to the Caledonia; R. P. Chapman, to the Torch; John C. Inglis (acting), to the Jamaica Hospital.

REVIEWS.

Deafness Practically Illustrated; being an Exposition of Original Views as to the Causes and Treatment of Diseases of the Ear. By JAMES YEARSLEY, M.R.C.S.E., &c. 8vo., pp. 181. London: John Churchill. 1847.

Aural surgery is a branch of the profession which has of all others been neglected by legitimate practitioners, and, as a natural consequence, the treatment of diseases of the ear has too frequently fallen into the hands of empirics, whose large promises have been generally bitterly deceptive to those who have put any faith in them. Into such neglect had aural surgery fallen, that Mr. Yearsley tells us, when he first began to study the science, there was not a single regularly educated practitioner in the metropolis specially engaged in this department. Even Sir Astley Cooper, who in his early professional life gave especial attention to ear diseases, was, according to the testimony of our author, afraid to be thought an aurist; and the odium of a name was sufficient to deter him from applying his master-mind to this particular branch of his profession. Mr. Yearsley's courage, however, enabled him to despise the frightful epithet, and he tells us with much self-satisfaction, that he believes he has assisted in changing the modes of practice formerly in vogue, and in rendering it impossible for any man, by ordinary or extraordinary means, to gain in future a reputation in aural medicine and surgery, or to acquire in any degree the confidence of the medical profession, without the possession of a competent knowledge of the subject.

Mr. Yearsley's work is divided into ten chapters. The first contains a brief sketch of the anatomy of the ear. 2. An outline of the diseases of the ear which produce deafness. 3. Catheterism of the Eustachian passages. 4. Deafness from derangements of the stomach (stomach deafness). 5. Deafness from morbid condition of the mucous membrane of the throat and ear (guttural deafness). 6. Obstruction of the nose in connection with deafness (nasal-guttural deafness). 7. Statistics of deafness. 8. On the best means of compensating for incurable deafness. 9. Ear-trumpets. 10. Concluding remarks.

In his preface the author says that he has "attempted to prove that, in nine-tenths of the cases which come before the practitioner, deafness will be found to have originated in a morbid affection of the mucous membrane lining the throat, nose, and ear. The latter is reached through the medium of the Eustachian tube; and according as the disease terminates in simple thickening of the mucous membrane, in adhesions, in partial or total loss of the membrana tympani, in disorganization of the whole mucous lining, in loss of the ossicula, or of the inner membranes of the fenestra, so is the deafness more or less intense and confirmed." Those who have had any experience in the treatment of diseases of the ear will readily admit the truth of these remarks; though the author seems to entertain doubts that practitioners in general entertain these views, as he thinks they are too prone to direct their remedies altogether to the external passages of the ear.

In the chapter on the "Principal Diseases of the Ear," before the author proceeds to notice them, he remarks—"There are certain practical truths relative to deafness which, to simplify the subject, it may be as well to enumerate; they are proved to us by daily experience, and are sufficient to guide us in the choice and application of the various therapeutic means proposed for its relief. Thus, it is known, that if, from any cause, air cannot reach the membrana tympani through the external auditory passage, the facility of hearing is nearly or quite extinguished. Again, it is known that the elasticity of the membrana tympani is essential to hearing, so that, when by disease of the membrane itself, or by an alteration of the surrounding parts, it becomes thickened, the function of hearing is impaired, and can only be restored by the restoration of

the membrane to its normal condition, or by making a passage through it for the transmission of sound. Many persons are altogether deprived of this membranous partition, and yet preserve the function of hearing in tolerable acuteness. It is also observed that, when the Eustachian passages, which serve as inlets for atmospheric air, and as outlets for the secretion of the lining membrane, are obstructed, deafness is the result; and the lost function is restored only with the re-establishment of their natural passages."

Having made these preliminary remarks, Mr. Yearsley proceeds to divide the complaints of the ear producing loss of hearing into three classes:—1. *Diseases of the External Ear*—The auricle, external auditory passage, and external surface of the membrana tympani. 2. *Diseases of the Middle Ear*—The cavity of the tympanum, the internal surface of its membrane; the small bones of the ear, with their muscles; and occlusion, stricture, or complete obliteration of the Eustachian tubes. 3. *Diseases of the Internal Ear*—The auditory nerve, and contents of the labyrinth.

Diseases of the auditory passage are of very frequent occurrence, and, from their frequent repetition and continuance, tend to weaken the power of hearing. From the curved nature of the passage, a distinct view of the tympanum is difficult to be obtained; hence the author, in order to straighten the passage, uses a speculum invented by himself, somewhat resembling the speculum of Kramer. From irritation of the external auditory passage, there is an increased secretion of ear-wax, which, being devoid of moisture from the increased heat of the parts, becomes hard, and thus produces deafness. For the removal of this, it is recommended either to syringe the passage with warm water, or to employ a small forceps. After this, if the passage and membrane should be irritable, they are to be pencilled over with a weak solution of alum, sulphate of zinc, or acetate of lead, night and morning for two or three days. If this does not restore hearing, it is likely that the inflammatory affection has extended to the tympanum and Eustachian passages, and there is an obstruction from hardened mucus. Affections of the external auditory passage produce deafness by altering its shape and calibre.

Otorrhœa occurs in strumous individuals, and during the local treatment the general health must be especially attended to. The discharge is at first generally mucous, attended with itching or tingling, rather than pain; the mucous discharge continuing, it becomes purulent; hence the lining membrane becomes thickened, and fungous growths frequently arise so large as to fill up the meatus. Before injections are used, the membrana tympani must be particularly attended to; and it must be examined by the aid of a speculum or lamp, in the absence of the direct rays of the sun, or by the injection of air through the guttural passage into the tympanum, to discover whether or not the membrane is perforated. Many cases of purulent otorrhœa have terminated fatally from the neglect of these measures; the injection passing through the perforation, and the Eustachian tube being generally obstructed, much of the solution remains within that cavity. The discharge, in consequence, is sometimes suddenly checked, and inflammation set up, which rapidly extends to the brain.

The proper treatment of otorrhœa, after it has been proved to be external, is, without losing sight of the general health, to exhibit injections, at first very feebly astringent, which may be gradually increased in strength. When the internal surface of the membrana tympani is involved, treatment by the external meatus alone will not restore hearing.

Deafness from disease of the cavity of the tympanum and of the Eustachian tube is usually the result of acute inflammation occurring in the ear, and is commonly attended by perforation of the membrana tympani, and frequently by closure of the Eustachian tube; as a consequence, a portion of pus secreted constantly remains in the tympanum. By contact with air, the matter

becomes decomposed, and hence the discharge is fetid. The decomposed pus produces caries, extensive disorganization, accompanied by dull, deep-seated pain in the ear, loss of memory and mental vigour. Deafness in this case may depend on the state of the tympanic membrane, or the morbid changes going on in the diseased structures. If injections are used they must be very mild, especially at first, and frequently used to remove the secreted matter. By these means the disease may be retarded, and the discharge may continue during the patient's life. The most efficacious mode of introducing the injection is by the Eustachian tube, and this must be done by catheterism. In deafness arising from the state of the membrana tympani, acute sounds are more readily appreciated than the graver ones. In stricture or diminution of the calibre of the canal, it is necessary to commence with very small instruments, and effect its dilatation by a gradual advance to those of larger size. When the nerve has become torpid from disease, remedial measures should be continued for some time after the freedom of the tube is effected.

Deafness from affections of the auditory nerve, and of the contents of the labyrinth, is of frequent occurrence. Paralysis of the acoustic nerve may be produced by pressure exerted on it in any part of its course between the sensorium and its expansion in the labyrinth, by tumours within the cranium; or its functions may be suddenly abolished by loud sounds. Nervous deafness may be merely symptomatic of other diseases, as dyspepsia, or intestinal irritation from worms. Sometimes it remains after an attack of apoplexy; it also arises from the convulsions of infants during dentition, and this is considered by Itard the least palliable of all kinds. Paralysis of the nerve of hearing, as a primary disease, is very rare, though it sometimes does occur. To ascertain when deafness arises from affections of the nerve, catheterism is necessary, as well as auscultation to the ear. After introducing the catheter, and ascertaining the freedom of the Eustachian tube, we may, by admission of air into the tympanum, and examination of the sounds it produces, by means of the stethoscope, diagnose the condition of the tympanic cavity with as much certainty as that of the lungs or heart. When the tube and cavity are free, the air strikes against the membrane of the tympanum. When the shock is over, a slight blowing or rustling in the ear of the patient is heard, caused by the stream of the air. Deviations from these sounds are indications of disease in the cavity of the tympanum. There are other means of diagnosis of more easy application. When deafness arises from imperfection in any of the conductors between the air and the nerve itself, there are certain conditions under which sounds continue to be recognised by the nerve of hearing. Thus, extensive disorganization of the tympanum and its contents, or of the external meatus, may exist, and yet, so long as the nerve remains uninjured, the ticking of a watch continues to be heard distinctly when held between the teeth, because sonorous vibrations are conveyed to the nerves through the medium of the teeth and bones of the cranium.

Another means of assisting the judgment in a case of deafness is the manner in which an individual hears his own voice. If deafness arises from disease of the nerve, the patient cannot hear himself speak; but if it arises from obstruction of the Eustachian tube, the voice continues to be heard. In torpor of the auditory nerve persons generally hear better after they have been exposed for some time to loud voices. Tinnitus is of small value in estimating the causes of deafness, being occasionally present in the most varied affections of the organs of hearing. The same may be said of the ticking noise so frequently heard by deaf people. In nervous deafness it is rare for one ear to suffer alone, if the hearing has been impaired for a long time. In nervous deafness catheterism of the Eustachian tube offers an important substitute for the treatment of blistering or stimulating ointments; by this means matters may be transmitted readily

and painlessly into the cavity of the tympanum.

The operation of catheterism of the Eustachian tube, as performed by the author, is described in the third chapter, and is as follows:—"The patient being seated in a chair, the operator applies the frontlet of Kramer to the head, buckling the straps behind, and taking care to adjust it, so that the extremities of the blades of the forceps shall reach to about a quarter or half an inch below the *ala nasi*, so as to admit of their being readily lifted over the catheter when inserted. Attention having been given to this precautionary measure, the forceps, which are held firmly by the ball-and-socket joint, may be turned on one side out of the way, whilst the operator proceeds to introduce the catheter into the Eustachian tube. The catheter, previously warmed (which may be readily done by running it briskly through the fingers) is laid hold of by the operator with the right hand at its socket extremity, care being taken that its concavity presents downwards. It is then introduced into the nostril corresponding to the tube into which it is to be inserted, and urged carefully and delicately along the inferior meatus and floor of the nostril until the beak strikes against the posterior surface of the pharynx. The tact and dexterity of the operator are now put to the test, to find the orifice of the Eustachian tube; in fact, at this point a dexterity analogous to the *tour de maître* of urethral catheterism is required. Up to this time the ring of the catheter, which indicates the position of the beak, presents downwards; the operator now makes a rotation of the catheter outwards and upwards, at the same moment withdrawing it slightly towards himself. In the act of doing this, he may, in most cases, detect the beak of the catheter gliding over the rounded margin of the elliptic orifice of the passage, into which, with a gentle force, it should be then guided; with the left hand the blades of the forceps are then lifted over the catheter and screwed tightly upon it. Through the catheter thus fixed in the Eustachian passage the operator may inject air, water, vapour, or other medicaments best suited to the individual case; or, supposing he has a contracted or strictured tube to contend with, he may introduce whalebone or catgut bougies, with a fair prospect of conferring benefit on his patient."

Kramer's frontlet bandage, mentioned above, consists of a middle piece of metal, formed so as to fit the arch of the forehead, and slightly padded inside; two straps are attached to this, which fasten with a buckle. To the centre of this a pair of forceps is attached which moves in a ball-and-socket joint, and the blades of which are brought together by means of a screw. Kramer's catheters, which Mr. Yearsley uses, are described as inflexible silver ones, six inches long, varying in size from a crow quill to a goose quill. The size required is sometimes very small. Their extremity is well rounded, and they are curved only to the distance of five lines from the further extremity, exactly at an angle of 144° , so as to correspond with the lateral situation of the mouth of the Eustachian tube. They are of a uniform size throughout their whole length, and provided with a funnel-shaped dilatation at the proximal extremity, six inches in length, in order to admit the pipe of the injecting syringe. To the dilated part a ring is attached, on the same level with the beak of the instrument, by means of which the situation of the beak may be ascertained when introduced into the nose and out of sight. The catheter is also graduated, according to inches, of use in repeated introduction of it. Catheterism is *safe, painless, and efficient*.

The most frequent form of stomach disorder producing nervous deafness is chronic dyspepsia. This complaint, however, does not continue long in the chronic form without producing a sub-inflammatory condition of the throat, which extends into the cavity of the ear, and even affects the external meatus. Of course in the treatment the principal attention must be paid to the stomach.

Guttural deafness generally happens in the period of youth and middle age, especially to those whose occupations expose them to inclement weather. It commonly begins with a sense of fullness and increased heat about the fauces, aggravated by taking cold. There is an increased secretion of phlegm in the throat, chiefly troublesome in the morning. The throat appears congested, on examination, and covered with bloodvessels. When this has continued for some time, it extends to the nasal cavities and guttural passages, producing a sensation of stuffing up both in the nose and ears, caused by the increased secretion of mucus and thickening of the lining membrane. In this first stage deafness makes its appearance, and, by the aid of catheterism, the progress of the morbid state may be accurately placed. The air-douche is the most valuable aid, however, in leading to accurate diagnosis. The author has a decided objection to the use of mercury in the treatment of deafness, when given, not as a purgative or alterative, but with a view to its *specific* effect.

When the tonsils are enlarged so as to produce deafness, of course Mr. Yearsley removes them; and he tells us that he has now removed "upwards of 2000 morbid growths from the throats of more than 1400 patients, variously afflicted with the ailments to which these enlargements give rise."

In the treatment of deafness from morbid conditions of the mucous membrane of the throat, &c., leeches, once or twice a week for a considerable time, are recommended either behind the ears, or within the nostrils, to the sides of the septum narium, followed, as the disordered state of the throat diminishes, by a succession of small blisters, or the moxa along the margin of the jaw, or dry cuppings behind or upon the ears. Now, mercurial aperients should be given, and a light nutritious diet adhered to. During the prosecution of the local antiphlogistic plan, catheterism should be resorted to, when it can be performed without giving pain. Emetics are sometimes useful.

When the inflammation is chronic, the membrane thickened, and its secretion in the throat, nose, and ear considerably increased, counter-irritation behind the ear and along the margin of the lower jaw must be employed, the catheter used, with the air-douche. In stomach cases the hydriodate of potash, in *small doses* of one or two grains largely diluted, may be given. The author speaks in high praise of its efficacy. Astringent gargles of alum, zinc, myrrh, &c., may be employed. When there is thickened mucus in the Eustachian tubes, injections of warm water may be employed, or compressed air: the latter Mr. Yearsley prefers.

In deafness, when the active stages of the disorder have entirely disappeared, leaving a thickened state of the mucous membrane, and an almost entire absence of the natural secretions, both in the middle ear and the external meatus, stimuli, such as electricity, galvanism, or irritant external applications, in some cases produce marked improvement; but when the excitement of the organ has passed, it invariably produces a worse state of torpidity. Air-douches possess more power over the disorder than any other remedy, accompanied by other means to invigorate the constitution when this is required.

In deafness connected with obstruction of the nose, the author has found a probe passed along the nostrils very successful in dilating the passages of sufficient size to admit air to and fro, and it also exerts a salutary influence on the tract of mucous membrane extending to the ear.

The habitual use of errhines, especially the common snuffs, is condemned.

In the chapter on ear-trumpets, Mr. Yearsley says, "It may be set down as an axiom, that the value of an ear-trumpet consists in its power of collecting, contracting, and directing to the outer passage of the ear a greater quantity of sound than could reach it without such aid." Small instruments are, therefore, considered perfectly useless. After all the inventions the simple tin trumpet is still considered the best.

The volume contains much practical information.

A Treatise on Diet and Regimen. By WILLIAM HENRY ROBERTSON, M.D., Physician to the Buxton Bath Charity. Fourth Edition, rewritten and much enlarged. Parts 1, 2, and 3. London: John Churchill, 1847.

It must be admitted that the members of the medical profession have not, till within a very short time, devoted that attention to the subject of diet and regimen which its importance demands. Many of the ailments to which the human frame is subject may oftentimes be distinctly traced to errors committed in diet, and many diseases may not unfrequently be brought to a favourable termination by simply attending to articles which are exhibited as food. The treatment of disease cannot be pursued with that measure of success which may be anticipated, when no restrictions are placed on the appetites of patients, or the mistaken kindness of their friends and nurses.

The homeopaths have acquired considerable repute in consequence of cures effected under their superintendence, and if no trickery is had recourse to by administering powerful medicinal agents in proper doses, when it is asserted that only some ten-millionth part of a grain is given, then success must be attributed to a very close attention to the sick person's food. We do not pretend to assert, however, that the physician needs not the employment of medicines in the treatment of diseases, but we know that these agents may be powerfully assisted by a strict regard to dietetics.

In the convalescent state, when the appetite is capricious, grave errors have been often committed by the medical attendant in allowing morbid fancies to be gratified, or in recommending articles of food, such as eggs, oysters, milk, &c. We have seen many cases of relapse in typhus, which have been clearly attributable to errors in diet; and it is a satisfaction to know that the subject is now undergoing a more intelligent investigation than at any former period. The ancients well understood the importance of suitable food for persons in health and sickness, hence both Hippocrates and Celsus lay down particular rules on this subject, which they consider necessary for medical practitioners especially to study. Celsus, in cap. xviii., lib. 2, has this remark, "*Hæc autem non omnium tantum morborum, sed etiam secundæ valetudinis communia præsidia sunt: pertinetque ad rem, omnium proprietates nosse; primum, ut sani sciant, quomodo his utantur; deinde, ut exsequentibus nobis morborum curationes, liceat species rerum, quæ assumendæ sunt, subjicere neque necesse sit subinde singulas eas nominare.*"

In these modern times the science of chemistry has come to our assistance, and while, perhaps, its doctrines, too rigidly followed by the physician, may be found in many instances deceptive, yet good service has been rendered by the knowledge gained of the relations of food to the nutrition of the body.

Dr. Robertson, in the work before us, has very properly blended experience with science, in arriving at conclusions on the subjects of which he treats, and with considerable labour has brought together much useful information. It must be gratifying to the author that the profession and the public appreciate his labours, for his treatise has now entered upon its fourth edition. This may almost be regarded as a new work, as it has been entirely rewritten, and the subjects are treated in accordance with the advanced state of science.

"The present edition of this work is prefaced by an introductory chapter on the origin, &c., of sporadic, endemic, and epidemic diseases; the influence of civilization on human health, and the expectation of life; the importance of information on the physical necessities of health, and the principal sources of disease; the evils which arise from the general ignorance of the public on sanitary questions, and from quackery, which is

the child of such ignorance. The body of the work contains chapters on diet, ventilation, climate, and change of air; the hygienic effects of clothing, &c., especially with reference to practical influences; the physiological effects of water on the system, when applied to the skin, and when taken into the stomach; mineral waters, sleep, influence on health and life; expectancy of the combined physical causes, with reference to employment, town or country residence, &c.; and on the effects of mental culture on health."

The first volume, which is just completed, extends no further than the subject of diet; and at its conclusion there is a "rapid summing up of some of the opinions that have been offered." Here we quote the following sensible remarks:—"The amount of every man's food, however strong and well he may be, should be measured and regulated by the expenditure and consequent wants of the system, and by the amount of exercise, whether of mind or of body. His food should be eaten at stated and regular times; and, unless during sleep, he should never fast longer than five hours. This is more important in the early than in the later parts of the day. The breakfast should be, in most cases, the principal meal. The large proportion of the day's sustenance should be taken early in the day. All the alcoholic liquids should be avoided as much as possible. As little liquid as may be should be taken at the second, or midday meal—probably, after all, the most nourishing meal eaten, and the one which taxes most his digestive powers. The food should be eaten slowly, each mouthful being well and carefully masticated, and mixed intimately with the saliva. The dinner should be confined, as much as may be, to one or two dishes. Little or no supper should be eaten; and food should seldom be eaten within two hours of the bedtime. Thus living, a man will be fulfilling his duty to his health, adding to his chances of life, and to the probabilities of his prolonged usefulness, so far as his diet is concerned; and, so far, be taking the best means of warding off disease. If already dyspeptic, more care than these rules involve will be needful to him. The effect of every article of food upon his stomach, its comparative digestibility, and consequent wholesomeness, should be observed; his diet should be strictly confined to a single dish at every meal, and that must consist of what his stomach can digest without perceptible inconvenience; if he should, to secure this end, have to be forbidden the use of animal food, &c., and be confined to the most simple and least irritating kinds of farinaceous food. And, having reached that point in the scale of comparative digestibility at which the food is found to agree with the stomach, the needfulness of restricting himself to that point should be impressed upon his mind, until, by such means of quiescence, and lessened irritation of the organs of assimilation, and such other means of health, whether hygienic or medicinal, as may be indicated, the stomach has regained its tone, the gastric secretions again become equal to their great duties, and the processes of assimilation been restored to a healthy and normal state; when the steps should be retraced with caution and judgment, until he is again entitled to live, judiciously and temperately, on the various kinds of food which civilization and commerce have brought within his reach, avoiding, as common sense directs, those irregularities or other errors which may have, in the first instance, produced or contributed to the dyspeptic symptoms."

"The adaptation of the general principles of dietetics, and all we know or have to learn of the chemistry of food, and the chemistry of the human system, to the treatment of different diseased conditions, must be regarded as no secondary duty of the medical man, and no inconsiderable and unimportant means of restoring health and preserving life. The importance and needfulness of the antiphlogistic regimen, including a diet that is principally aqueous, and containing exclusively farinaceous aliment, and

that in a minimum quantity, have always been admitted and enforced; but, more than this, assistance in the treatment of disease, and the fulfilment of its indications, may be more and more looked for from dietetic researches. The dietetic management of the scorbutic, purpuric, anæmic, cachectic, and arthritic conditions of the systems, by corresponding modifications of diet, may be already adduced as significant illustrations of the practical good that may be looked for in this direction, by further researches and a more zealous attention to this important department. Indeed, without a rational adaptation of dietetics to chronic as well as acute diseased conditions, their treatment must be rendered by so much more difficult, tedious, and uncertain, even if the chances of restoration to health be not otherwise wholly done away with. A form of modern empiricism unquestionably owes the proportion of success that has attended it to such dietetic management, and not to the infinitesimal doses of silica, and the like; and this may be fairly adduced as an illustration of how much dietetic management may effect in the cure of certain morbid states, without the assistance of any strictly medicinal treatment whatever. By simple attention to the quantity and quality of the daily rations, the number of the blood-globules may be diminished or increased, and febrile or inflammatory states moderated, or even removed, or an anæmic condition cured. By a modified vegetable diet, the scorbutic condition; by a mixed diet, the purpuric condition; by a fibrinous diet, the anæmic condition; by a milk diet, the cachectic condition; by a less azotized diet, the arthritic condition, may be respectively relieved, in an important degree, without the aid of drugs; and in many cases, it cannot be doubted, be more effectually and permanently influenced by such means."

The dietetic management of children during all the years of growth—and especially of the children born and bred in cities, exposed necessarily to the physical disadvantages of a deranged atmosphere and the like—is another great important branch of practical dietetics, and one in which greater and greater advances may be expected to be made. The avoidances of a dietary that is unduly stimulating on the one hand, or defectively nutritious on the other; the maintenance of power; the restoration of waste; the provision for the growth, with the least expense to the organs of assimilation, the least risk of irritation to the excitable mucous tissue, are obvious points to be arrived at by dietetic management, and to secure which must be a sanitary gain of no secondary importance.

"The question as to the use and abuse of the alcoholic stimulants is a third matter of much moment in the treatment of different morbid conditions, and in the management and preservation of the health of people who begin life, or who have to maintain life, under such very different circumstances—as the producing and the consuming, the thinking and the toiling, the city-pent and the rural classes. To the rational medical man, who weighs well these different conditions, who sees diseases so often proceed from, or so often aggravated by, conditions that habitual or occasional stimulants are alone able to counteract, or which may be most readily, or most surely and safely, thus antagonized and relieved, the question of teetotalism, in its attempted general application to all ranks and conditions of the people, must show itself to be unbased on sound theory or just practical inferences."

"The question as to the feeding of the indigent, the sick, the aged, and the labourer, brings the subject of dietaries within the direct influence of the Legislature, and renders its details and facts of inappreciable value. There can be no question, that by dietaries which have been unequal to the wants of the system, or have not been adapted in character to the attendant circumstances of the life, disease, in its worst and most fatal forms, has been many times induced, in places of punishment, of well-intentioned charity, of manufacture, and of education; or

that, without constant recurrence to the principles of dietetics, such occurrences may be reasonably expected to occur again. It is only a knowledge of the ordinary and extraordinary expenditure of the system, of the varying expenditure dependent on age, season, climate, toil, &c., and of the nutrential qualities of different kinds of food, that can afford a secure basis for the establishment of useful dietaries, and adjust their modification to suit the various requirements of the economy under different circumstances."

Ventilation Illustrated: A Tract for the Schools of Rich and Poor. Pp. 38. John Churchill, London. 1848.

The publication of tracts similar to the one now before us is calculated to do much good in enlightening the minds of the public on subjects connected with their health and comfort. The fact has been so often repeated that it has almost become a proverb, that deficient ventilation is one grand cause of disease. In the dwellings of the poor, however, there has been exhibited almost a total disregard of this truth; and this must be ascribed either to the cupidity of landlords or the stupidity of tenants. The committee of the Samaritan Fund of the St. George's and St. James's Dispensary has, therefore, acted wisely and soundly in diffusing information on the important subject of ventilation, in a cheap form, in order that a large number of the population may be instructed on a matter which is deeply interesting to them. While, however, the present pamphlet is a move in the right direction, we should be glad to see publications of a similar kind issued at so cheap a rate as to be procurable by the poor (who especially require information on sanitary subjects), or that benevolent individuals may, at a small expenditure, be enabled to purchase a large number for gratuitous distribution. It is well known that religious tracts have been the means of doing much good among the humbler classes. Tracts on health may be employed with an equal measure of success for the improvement of their physical condition.

The pamphlet before us is got up in a manner calculated to interest as well as instruct those for whom it is intended. The woodcuts illustrative of the mechanism of breathing, and of the way in which rooms may be properly ventilated, are very creditably executed; and the appendix contains statements in reference to consumption, scrofula, and fever which are calculated to induce all persons to prize greatly a pure and an abundant supply of fresh air.

Companion to the Barometer. By JOHN UNDERWOOD. London: Horne, Thornthwaite, and Co., Newgate-street. 1848.

Few persons of respectability consider their houses furnished without a barometer, yet the number is very small who understand how to calculate upon the state of the weather from the movements of the mercury in the instrument. The mere rising and falling of the metal does not indicate the changes which are commonly supposed to attend such movements, and there are certain collateral facts which are necessary to be known in order to form a correct judgment from the movements of the "glass." Mr. Underwood's table is intended to afford to unscientific persons the desired information, and we have no doubt such will find it very useful, as the statements are founded on observations which have been carefully made.

Tables for Students. By WILLIAM E. NOURSE; M.R.C.S. London: Churchill.

These tables will be found useful to the student, inasmuch as they present to him information in a very condensed form. One of these tables presents the simple elements, with their chemical equivalents and symbols; two are devoted to the classification of the animal, and one to the vegetable kingdom.

The influenza is still raging at Madrid.

THE MEDICAL TIMES.

SATURDAY, JANUARY 22, 1848.

THE CROYDON CASE.

Man are usually rancorous in the degree of their stupidity. Passion is a failing of little minds; it is the associate of folly, and often the evidence of wrong-doing. There is neither real force, wisdom, policy, nor virtue in it; on most occasions it fails to effect its purpose; and on all, the object could be better attained by different means. The bystander usually regards such exhibitions with pity or scorn; melo-dramatic vengeance is always received with derision. Misfortune, however, even to innocent parties, not unfrequently attends these insane ebullitions, and, while we despise the weak and guilty agent, we are constrained to lament the disastrous results.

An idiot, whose imbecile revenge all persons have for a length of years disregarded, will in a moment of exasperation raise his hand and slay his best friend. Propelled by his insane impulses, he has lost the restraint of a correcting judgment. The most savage and capricious beasts of the forest are those that, by a native deficiency of mental power, are least easily reclaimed. Everywhere we find the dogma true, that imbecility and passion are correlative manifestations.

An argument that can be proved true of individuals will equally apply to associated bodies, and with pre-eminent justice to boards of guardians, coroners' juries, and, "*id genus omne*," of public functionaries. The public board in the one case, and the legal tribunal in the other, exercise the most important duties that can possibly be committed to the members of a state—the sustentation of life, and the initiation of a criminal process leading to the condemnation to death; and there is consequently a corresponding necessity of an enlightened, discreet, and impartial judgment being exercised in the performance of functions so grave and sacred.

We will dismiss, for the present, the conduct both of coroner and jury at the recent inquest at Croydon, and confine ourselves to the proceedings of the board of guardians in reference to the case. It is now well known that the board of guardians, on the application of a member of the family for an order on the attendance of the union surgeon, refused to give it, and that in consequence of such refusal the medical officer, who had previously visited the patient in his official capacity, and in expectation of an order formally authorizing his attendance, declined further attendance on the case. It is unnecessary for us to pursue the case further; we mean to confine ourselves to the fact of the refusal by the board to give the order, and of the medical officer thereupon to attend the patient.

Now, it might be expected, in the delusion that the board of guardians of the Croydon Union were possessed, if not of the ordinary proportion of intelligence, at least of the ordinary amount of discretion, of other mortals—seeing what lamentable results had issued from their unfeeling cruelty or their sordid parsimony—that they would have been cautious enough to refrain from any strong expression of opinion on the matter, and allowed the public indignation to subside, or would have attempted to mollify it by a more humane and decorous course of action on future

occasions. Here silence would have been wisdom, repentance amiable, and reformation perhaps a condonation of their guilt. They have not thus been guided by the counsels of prudence; they deserve punishment, for they have invoked it; they have willfully run their heads against a wall, and they must not complain, though they entail upon themselves much suffering, severe reprehension, and bitter regrets.

These guardians have held an extraordinary meeting, and at that meeting passed the following resolutions:—

"That this board, after having taken into consideration the verdict of the coroner's jury, in the case of Elizabeth Hopkins, alias Howard, is of opinion that Mr. Berncastle can no longer be allowed to act as Mr. Bottomley's substitute for this union."

"That Mr. Bottomley has incurred the severest censure of the board, by having more than once restrained Dr. Berncastle from continuing his attendance upon the said Elizabeth Hopkins while suffering under the pains of protracted labour, and that his services, likewise, would at once have been suspended by the board, had he not been acting for so long a period as six-and-thirty years, without previous discredit, as parochial medical officer for the town and union of Croydon."

Was it within the sphere of the duty of the board, knowing that they had refused the necessary order, to take any notice of the verdict of the jury?

What right had they to pass such a condemnatory resolution on Mr. Bottomley, and by what rule of justice did they dismiss Mr. Berncastle? There was none, none—*emphatically none*. As their servants, both gentlemen acted in but too faithful conformity with the instructions of the board; as parochial officers, they did their duty: where, then, lies the wrong?—who is the criminal?

The board refused to give an order for the attendance of its officer; from that moment, in reference to this case, that gentleman ceased to be the officer of the board: the subsequent acts of the surgeon are those of a private individual, with which the board, in their official capacity, have no right to take cognizance. The medical officers have disobeyed no law, infringed no rule, neglected no ordinance of the board; there is no moral imputation upon them; on the contrary, they have shown implicit and immediate subservience to the commands of their superiors, and then, with a wonderful alacrity towards injustice, these very authorities turn round upon their servants, and reproach them for their obedience. O! what stupid, rash, meddlesome, and unjust behaviour! The folly of this step is almost incredible. Nothing but an uneasy and impatient smarting under a conviction of wrong done, with an irritating desire for self-justification, or the most stolid and besotted ignorance of their own moral obligations, amounting to an entire destitution of conscience, could have prompted this unspeakably silly procedure. The guardians are criminal, and they know it;—they, or their relieving-officer, even according to their own statement, neglected the duty of inquiring into the case, and they stand self-convicted of indolence, shabbiness, and inhumanity. They are impatient to be justified for what they know is unjustifiable, and they attempt to sacrifice for this purpose, without remorse, the character of a gentleman who has served them for thirty-six years "*without previous discredit*." What malign and ungrateful conduct is not this?

But have the guardians nothing more direct and

explicit to say in defence of themselves? They have. In a resolution passed at an extraordinary meeting held on the 15th day of January, they say "that no one of the guardians at the board on the same day (the 28th of December last) understood that the deceased was in labour at the time, or that Mr. Berncastle had been in attendance previously." The board of guardians are truly very innocent gentlemen, or very crafty. We opine the latter; but their craft this time has overreached itself.

Following the resolution in which it is stated that no one of the guardians understood that the deceased was in labour at the time, they publish a minute of the said meeting of the 28th of December, when the board was distinguished by such felicitous ignorance. It runs thus:—

"At this meeting Mr. Smith, the relieving-officer for Croydon, reported that last evening the daughter of John Howard, of Croydon, a girl about twelve years of age, had applied to him for a midwifery order, for her mother, and that he had directed her to send her father to him, but that the father did not come. The relieving-officer also reported that the girl had again made an application this morning, and was now present, whereupon she was admitted to the board and reported her application; when it having been ascertained that Howard," &c. &c.

Now, can any person, not an idiot, believe that, three applications having been made within eighteen hours, of which the guardians were cognizant, they were ignorant of the woman's extremity? It is not common sense to suppose it; and, if they were, it is not common care or humanity not to have inquired for the fact? We believe that scarcely a man will be found who will give credit to this shuffling resolution. It does not look honest; it has the aspect of a dirty, felonious fabrication—dirty as it regards their own character, felonious as it reflects undeserved odium upon the character of others. Is there no censure ready for the lazy official, who, having been twice applied to for a midwifery order, failed to do his duty by inquiring into the facts of the case? No; he who is equally guilty with his masters is, of course, allowed to escape with impunity. The defence is cleverly trumped up for the nonce, and we do not attach to it the slightest credit.

A question occurs to us—embracing a subject of considerable importance to Mr. Bottomley—as to what would be the most becoming conduct for that gentleman to pursue upon the publication of this resolution? Many gentlemen would, perhaps, take no notice of the censure, trust to the chapter of accidents, and continue in the conscientious discharge of their duties until another occasion should occur which, however unjustly, would necessitate resignation or dismissal. Some, perhaps, would resign at once; others, probably, would take an intermediate, but not less spirited, course—hold their office, and challenge an investigation by the poor-law commissioners into their character and conduct. We think thirty-six years of unimpeachable observance of duty, and of honourable public service, would be an important recommendation. We, however, offer no opinion. Each man is the best judge in his own case. To counsel a private individual is an impertinence of which we do not intend to be guilty.

We think, however, that this case will form a powerful argument for the revision of the whole system of medical relief. There must be some well-defined regulations passed, by which the

health and life of those living on the disputed territory—between pauperism and independence—may be secured, as far as medical science will admit, and the duties required from union surgeons more clearly denoted. This is a subject to which the attention of the Poor-law Convention will doubtless be directed; and we trust that their labours will obtain for the profession and the public a great improvement upon the present system of poor-law medical relief.

AN ADEQUATE SUPPLY OF WATER ESSENTIAL TO PUBLIC HEALTH.

It has been generally acknowledged that the *avant courriers* of sanitary reform have always been the members of the medical profession; and they have proved themselves to be not only public benefactors in checking the progress of disease when manifested, but in suggesting the use of such means as are eminently calculated to prevent its development. No class of men deserves a higher meed of praise than the medical, as its efforts to promote the physical well-being of society directly militates against the worldly interests of those who have the care of the sick. The sources of wealth to them are the diseases which afflict their fellow-creatures; and yet, with a strange philanthropy, no efforts have been spared to diminish the amount of sickness, and thus to bring about an era in which the services of medical practitioners will be little needed. It is to their instrumentality principally that an improved method of constructing the dwellings and sewers of large towns has been adopted, and they are still labouring with an untiring perseverance to render densely populated cities as salubrious as the most favoured village in the kingdom.

The attention of sanitary reformers has been especially directed to the improvement of the metropolis, not only because it is entitled to especial consideration from the number of its inhabitants, but because whatever beneficial changes are here brought about will, in consequence of its high position, be more speedily adopted by other large towns. In this modern Babylon there are causes in operation which are effectual in producing the most disastrous results; into many streets and alleys the light of day scarcely finds admittance; there the air is impregnated with deleterious inhalations, and there the inhabitants live in the midst of filth, without any adequate supply of water to accomplish the cleanliness of their persons and of their habitations.

There is no doubt whatever that a deficient or an inferior supply of water to the inhabitants of any locality must eventually be injurious to their health; and it is equally certain that London, though possessing many companies established for the express purpose of supplying the population with pure water, and having within itself sources from which almost any quantity can be obtained, has hitherto been doomed to suffer from a supply deficient in quantity and not very good in quality. While this fact has been adverted to by the members of the medical profession, and other sanitary reformers, it has not been brought forward with that prominence which its importance demands. We consider it, therefore, our duty to direct attention to the circumstance at the present moment, in order that some efforts may be made either to induce the present water companies to be more liberal in their supplies to their customers, or that some more efficient means may be adopted

than are at present used to afford an abundant and constant supply of water to every part of the metropolis.

It is to be lamented that so large a city as London should be dependent, for its supply of water, on nine or ten companies, who enjoy a complete monopoly, and are more concerned to benefit their own pockets than the public health. Their misdoings have, on various occasions, been the subject of parliamentary inquiry, yet no efficient means have been adopted, up to the present time, to compel the monopolists to do justice to those who are dependent on them. So far back as 1821, a committee of the House of Commons, which was especially appointed to investigate the conduct of these water companies, concluded its report with the following remarks:—"The public is at present without any protection. In case of a dispute there is no tribunal, but the boards of the companies themselves, to which individuals can appeal; there are no regulations, but such as the companies may have voluntarily imposed upon themselves, and may therefore at any time revoke, for the continuance of the supply in its present state, or for defining the cases in which it may be withdrawn from the householder. All these points, and others of the same nature, indispensably require legislative regulation where the subject-matter is an article of the first necessity; and the supply has, from peculiar circumstances, got into such a course, that it is not under the operation of those principles which govern supply and demand in other cases; and your committee are of opinion that, as it cannot be precisely foreseen how the rules which they are prepared to suggest for these purposes may work, it would be expedient that they should be enacted, in the first instance, only for a short period."

These companies, while they profess to supply the inhabitants with water, do it only at stated intervals—about three or four times a week—and then only for about an hour, so that many persons who pay a high price are often without it. Amongst the poor, butts, tubs, pans, and earthen vessels are employed to catch the *precious* fluid when it comes; and these receptacles, being uncovered, add to the impurities of the water. Mr. Toynbee informs us that "The butts are made of wood, from which the paint has often decayed; sometimes the wood itself is decayed; they have commonly no cover on the top, and a film of blacks and dust forms on the surface of the water." The scanty nature of the present supply induces the poor to be very sparing in the use of it; hence they neglect cleanliness in their persons, in their houses, and in their food; and who can be surprised that diseases should be rife amongst them, and exercise such a fatal influence as they do?

It must be remembered also that the water supplied is from the Thames, into which the sewage of more than 2,000,000 inhabitants is constantly poured, in conjunction with the filth from slaughter-houses and stables; and it is possible that a portion of the water which passes from the dwelling-houses one day, after having been cleared of its insoluble impurities, may be supplied again as an article of drink, or to be employed in cooking.

An ingenious and, in all probability, a practicable method has been suggested to break up the existing monopoly of the water companies, and to supply the inhabitants with a pure and an abundant quantity of this all-important fluid, viz., that of boring artesian wells. A

number of these have been already sunk, and are in successful operation; and it appears from geological investigation, that the London chalk basin contains an inexhaustible quantity of water. In a pamphlet recently published by Mr. J. L. Taberner on this subject, the author makes the following remarks:—"The chalk formation, which lies next to the sandbed, extends in its area, under the superficial and tertiary deposits, between 3000 and 4000 square miles. Of this area from 1000 to 1200 square miles crop out to the surface immediately around London; which fact a reference to any of our geological maps will evince. It is from this exposed surface (open to receive the rain) that the innumerable fissures of the chalk, which are scattered throughout the whole formation, receive their constant supply of water. The incessant repletion of that supply is verified from the quantity of rain falling upon the exposed surface of the chalk, which is taken at twenty-one inches per annum; and, allowing one-third of the gross quantity to be taken away by evaporation, the quantity penetrating the chalk upon every square mile of its surface is equal to about 3,208,228 hogsheads, or on every one hundred square miles 320,822,800 hogsheads, or on a thousand square miles 3,208,228,000 hogsheads—adequate to an annual supply of 1604 hogsheads to every individual of a population of 2,000,000 inhabitants, or a daily supply of 274 gallons to every individual."

In every instance in which a well has been sunk in the chalk an abundant supply of water has always been obtained, and when the pumping is stopped the water speedily rises to the same level in the well as it stood at first. At the Government artesian works in Orange-street, Trafalgar-square, nearly 400 gallons per minute have been raised for from twelve to sixteen hours daily; and during the dry weather of last summer, though the works were in operation night and day, the water sunk only on an average thirteen feet, at which level the spring constantly supplied the quantity withdrawn.

If, when further experiments have been tried, it shall be found that the boring of artesian wells will be the means of affording to the inhabitants of London a good supply of wholesome water, and that the undertaking will afford a fair profit for capital expended, there is no doubt but enterprising individuals will speedily engage in the work. While these sources of supply will not supersede altogether the old water companies, they will be the means at least of bringing them to their senses, so that they will afford their commodity at a moderate charge constantly, and at such a pressure that every apartment in a building may be supplied. It is high time that something was accomplished, for in vain will other measures of sanitary reform be adopted if the water monopoly is to remain intact. The subject is worthy the close attention of the members of the medical profession; and their opinions will not fail to exercise a powerful influence upon the Government and the public. A threatened danger will now add weight to their arguments; and we hope the time is not far distant when every house in this great city will have a supply of water adequate to all the requirements of comfort, cleanliness, and health.

SURGERY AT THE GLOUCESTER INFIRMARY.

THE case of Henry Ridler, the young man who was admitted into the Gloucester Infirmary with a compound dislocation of the ankle-joint, and

who was afterwards removed in consequence of alleged neglect, has not yet been finally disposed of to the satisfaction of all parties. On the 6th of this month a quarterly meeting of the governors was held, and the matter was again brought forward in the reading of the minutes, when the chairman stated that it was the general feeling of the weekly board that no further notice should be taken of the subject. No doubt the members of this official body thought that they had done wonders in taking up the matter at all, and their notions of justice are perfectly in accordance with what might be expected from non-medical hospital functionaries. These gentlemen have scarcely ever the faculty of seeing both sides of the question, and the power of action appears only to be imparted to them when the spur of public opinion is plunged pretty sharply into their sides. It is nothing singular, therefore, that, after having in a public newspaper been charged with pronouncing a verdict upon *ex parte* statements, they should wish their flat to be as the "law of the Medes and Persians, which altereth not." Mr. Purnell, however, one of the governors of the infirmary, administered to this weekly board a species of rebuke, which is commonly denominated "faint praise," in a short speech made in reference to the chairman's statement, which must have been anything but palatable to the hebdomadal officials. Mr. Purnell remarked, "he was not prepared to say that the weekly board had not taken a proper course; but at the same time he regretted that notice had not been given to the friends of the patient, that they might attend the investigation, to satisfy themselves that there had been no neglect in the case. It would have been more satisfactory to the public if such a course had been followed; the public looked with suspicion upon anything like a one-sided investigation. He did not know whether he ought to go into the matter after the full investigation which the weekly board had made."

The speaker was singularly unhappy in his endeavour to shield his friends, for in his brief speech he first says that he regretted the friends of the patient had not been requested to attend the investigation, and directly afterwards adds, that "he did not know whether he ought to go into the matter after the full investigation," &c.

Some reflections having been made at the meeting upon Mr. Batten, the surgeon who amputated the unfortunate patient's leg, that gentleman considered it necessary again to make a statement of the case in the *Gloucester Journal*; he says—

"In the first place, supposing the dislocation to have been reduced, I maintain that proper skill and attention would have enabled the surgeon to have kept the bone in its relative position; that a well-padded foot and leg splint was highly necessary, and ought to have formed part of the treatment; and that there was nothing in the case to prevent its use. Secondly, if the bone had been thus preserved *in situ*, the lips of the wound might have been to a great extent closed, the aperture into the joint lessened, and the healing process facilitated; points well known to be of the very highest importance in the early treatment of such cases. Thirdly, having omitted or failed to prevent the end of the tibia from protruding through the wound to the extent of two inches and upwards in length, and half its circumference in depth, and seeing that the death of this large portion of bone so situated was inevitable, and that the constitutional irritation, local inflammation, and suppuration would consequently be greatly increased in extent and

duration, I do say that every surgeon of ordinary intelligence will agree with me in condemning the useless and unjustifiable risk to which the patient's life was exposed by the delay in proposing amputation. I am told by Ridler that this alternative was first broached only a fortnight prior to my visit, when the surgeon intimated that it was necessary for him to 'pare off' the exposed portion of bone. Fourthly, the condition of the parts concerned in the injury strongly justifies the belief that the dislocation never was reduced. There existed not the slightest trace of an attempt at union of any kind. The cartilages of the articulating surfaces of the tibia, fibula, and astragalus, were completely ulcerated, and the latter bone wore the spongy, worm-eaten appearance of the ends of bone in the advanced stage of scrofulous disease of joints. I stated in my former letter that the projecting extremity of the tibia, forming the inner ankle, was overlapping the skin, and you shall hear what Sir Astley Cooper, in his admirable work on 'Dislocations,' says on this point:—'The integuments are sometimes nipped into the joint by the projecting bone, and then it cannot be reduced without making an incision to allow the skin to be drawn from under the bone.' Now this was not done in Ridler's case. A little further on the same author says, in describing a case that fell under his care, 'The tibia projected at the inner ankle, the fibula was broken, and the skin was tucked in under the extremity of the tibia.' 'The skin was divided, and the bone reduced, but it was much opposed by violent spasms of the muscles.'"

In addition to this, Mr. Teague, another surgeon, who saw the patient the next day after he came out of the infirmary, and sympathizing with Mr. Batten for the manner in which his name was handled by the governors, writes in the same journal—

"I cannot hesitate for a moment in seconding all you have said; indeed, I expressed an opinion then (in which Mr. Tuckwell perfectly coincided), and which I still retain, that even at first it must have been impossible to have reduced the dislocation, complicated as it was with a comminuted fracture of the fibula, and other extensive injuries of the tibia through its greater extent. But, supposing the ankle to have been put into its place, surely there was a great omission in not applying splints or some apparatus to retain it there till union had at least been partially effected.

"Then it appears that Ridler was kept ten weeks in the hospital, buoyed up by the idea that his limb would be saved at the expense of a stiff joint; for you will remember he told us that he had received a message by a pupil from his surgeon on the very morning before his departure, that if he did not leave the infirmary the limb might be saved with a stiff joint, and this in the face of the following facts:—

- "1. An extensive suppurating wound.
- "2. Two inches and better of bone exposed and dead.
- "3. Part of the integuments overlapped by the articulating extremity of the tibia.
- "4. Disorganization of the greater part of the foot. And
- "5. United fractures of the leg, which must have been broken again so as to have placed the joint in the right position."

Now, we ask, who are the gentlemen that compose the weekly board?—are they surgeons, and, therefore, competent to pass a correct opinion? If not, their "full investigation" is little better than a farce. We would advise the surgical officers of the infirmary, for their own credit's sake, forthwith to place the matter in the hands of members of their own profession, and abide by their decision; and we should think that Mr. Batten and the other two surgeons who attended with him at the operation would immediately agree to such a proposal.

PROFESSOR SYME'S APPOINTMENT.

It is quite clear that the Senatus of the London University, in electing the different officers for their establishment, have a right to choose individuals who may appear in their wisdom most competent for the purposes for which they are required; and it must be admitted that, hitherto, their selections have been judicious. That they should have filled most of their chairs by strangers, and not by "London men," has, we do believe, been very advantageous, for had teachers been elected from amongst those of the metropolis, or from amongst their *protégés*, it would, no doubt, have created all sorts of intrigue, and we should have had the chairs of the London University filled with sons, nephews, and obsequious dependants, of which system we now see too many lamentable examples in most of our London schools.

On the present occasion, when a surgeon of character and experience in "Modern Athens" has been elected to their hospital, we are quite of opinion that the Senatus has acted wisely; and we only wonder that a person filling so distinguished a place in the profession in Scotland as Mr. Syme, should have condescended to accept of the office, and associated himself with the "worthies" of the London University!

THE UNPROTECTED SURGEON.

[To the Editor of the Medical Times.]

SIR,—In my former letter I endeavoured to prove that it is a monstrous injustice to leave the surgeon in his present unprotected position against fraud and imposition.

It is perfectly ridiculous to say that a surgeon is legally qualified to practise his profession so long as he is legally disqualified to recover the just and fair rewards of his labour, and a fair remuneration for the outlay which he must make in the proper discharge of his duty to those who employ him.

I endeavoured to show that it is perfectly impossible to treat properly any surgical case without having recourse to medical treatment; and that, as the law now stands, the introduction of a single charge for anything beyond mere manual interference vitiates his right to obtain from the law any redress. This leaves the surgeon in the difficult position of being obliged to neglect medical treatment altogether, to the great disadvantage and danger of his patients, or be ready to suffer a considerable loss for an actual outlay, for it is next to an impossibility for a surgeon practising in the country, at a distance from a dispensing chemist (as these properly call themselves), to procure for his patients the means necessary for their safety except he supplies them himself; and I do not hesitate to say that the preparation of medicines would be much safer and better conducted under the superintendence of the prescriber, than entrusted to persons who are not at all, or very little, acquainted with the properties of the medicines ordered, as most of the chemists must be from their want of proper education.

I shall not here again enter into the consideration of the superior claim of the surgeon to legislative recognition above that of the apothecary; neither shall I indulge in any invidious distinctions between the comparative excellence of parties engaged in the same field of usefulness; and I ask for the surgeon no more than is enjoyed by other members of the community.

The surgeon is obliged to observe all the duties of a subject and a citizen; he is compelled by law to pay all the taxes and imposts of the state, and he is obliged to fulfil all his duties and engagements to society and the public; he should, therefore, in the discharge of his avocation, have extended to him all the privileges and protection of a subject and a citizen.

The French Government, aware of the importance of the medical profession, and of its direct relation to the national welfare, have not neglected to take it under its immediate protection and direction; and accordingly it has at all times a body of men to which it can with confidence refer whenever the public welfare and health are seriously threatened or disturbed; and I am satisfied that the medical profession in this country will never be found in its proper

place until it is placed under the protection, and control, and direction of the Legislature, nor can any real reformation be effected until it is unshackled from the contending prejudices and interests of present monopolists. Are we, indeed, too wise to learn prudence of our neighbours; too proud to adopt the judicious measures of an enlightened nation; or too indifferent to the interests of our own population to give any consideration to what has so direct a relation to the public health?

I think that one of the most important uses of any journal is to give an opportunity to the individuals of that section of society whose interests it professes to espouse, to make known their opinions, wishes, wants, and grievances; and if, in doing so, any person shall be found sufficiently courageous to come before the public, let him be answerable for the consequences: if he has, in doing so, offended against the laws, upon his own head be the penalty; or, if he should have outraged common sense, let him bear the infliction of public ridicule and general laughter; but so long as he, by giving his name, guarantees the safety of his publisher, I think he has a right to be heard.

Your obedient servant,
Bedford-terrace, Bootle. C. D. FITZPATRICK.

DR. ROBERT LEE'S CARDIAC NERVES.

SIR,—Having perused, with great satisfaction, in your valuable journal of last week, the report of the Physiological Committee of the Royal Society, I think there can now be but one opinion of the nerves of Dr. Robert Lee's heart; and as an old fellow of the Royal Society, and a member, too, of the medical profession, I do think that, in some shape or other, the nefarious attempt to impose upon the society calls for a signal mark of their disapprobation. It has often, and will often, happen, that papers are presented to them which, from want of novelty or importance, they very properly refuse to publish in their "Transactions;" but a fraudulent attempt, such as has been made on this occasion by Dr. Robert Lee, ought undoubtedly to be met with some appropriate public mark of the society's opinion of him as a man of honour and veracity, and they ought deliberately to consider how far such a man is a fit person to remain in their body.

Somerset-house, Jan. 17.

F. R. S.

ANOTHER STETHOSCOPIC BLUNDERER IN MR. LISTON'S CASE.

SIR,—In common with many of my professional brethren of this city, I am not a little surprised that, in the *exposé* which you have made of the fallacious diagnosis afforded by the stethoscope in the case of the unfortunate Liston, you should have omitted the name of STOKES in the list of eminent auscultators who had examined this patient.

Mr. Liston visited Dublin in October last, and, I believe, with no other view, and for no other purpose, than to get his chest examined by the stethoscope; and I am compelled to state that Dr. Stokes, as well as Drs. Watson, Williams, Forbes, and Latham, did not detect the aneurism of which poor Liston perished. I may also add that amongst ourselves we were rather surprised that Mr. Liston did not consult any of our most skillful surgeons; but it appears that he consulted none of the London surgeons (not even young Quackley), until the day previous to his decease, when he saw Sir Benjamin Brodie, and who at once pronounced the disease to be aneurism!

Dublin, Jan. 15.

ERINENSIS.

DR. ROBERT LEE ON THE NERVOUS SYSTEM OF THE HEART.

[To the Editor of the Medical Times.]

SIR,—I presented a paper "On the Nervous System of the Heart" to the Royal Society, which was read on the 20th of May, 1847. The following is the abstract of this paper in the printed proceedings of the society.

"The author premises a historical notice of the various opinions entertained by distinguished anatomists respecting the nerves of the heart: some having maintained that the human heart is copiously supplied with nerves, and others that it has few or none. In September, 1846, he resolved to dissect, under the microscope, (a) the nerves of the heart while covered with alcohol, as he had done those of the uterus. His examination of the fetal heart, of the heart of a child at the age of six years, of the heart of an adult in a sound state, of the human heart greatly hypertrophied, and of the heart of the ox, warrant the following conclusions: 1. That the

(a) Loupes magnifying six and twelve diameters.

bloodvessels, and the muscular structure of the auricles and ventricles, of the heart are furnished with numerous ganglia and plexuses of nerves, which have hitherto been neither described nor represented by any anatomist. 2. That these nervous structures of the heart, which are distributed over its surface, and throughout its walls, to the lining membrane and *columna carnea*, enlarge with the natural growth of the heart before birth, and during childhood and youth, until the heart has attained its full size in the adult. 3. That when the walls of the auricles and ventricles are affected with hypertrophy, the ganglia and nerves of the heart are enlarged like those of the gravid uterus. And 4. That the ganglia and nerves which supply the left auricle and ventricle in the natural state are more than double the size of the ganglia and nerves distributed to the right side of the heart.

"The author observes that the ventricles and auricles of the human heart and of those of the hearts of the larger quadrupeds are covered with two distinct membranes: the anterior is the serous membrane, connected by cellular tissue with another distinct tunic, which has scarcely, if at all, been noticed by anatomists. This second membrane is stated to have a dense fibrous structure, to be semi-transparent, and to resemble in a remarkable manner the aponeurotic expansions, or fasciæ, covering muscles in other parts of the body and, like them, it sends numerous fibres or processes between the muscular fasciculi, bloodvessels, nerves, and adipose substance of the heart. This membrane, the author thinks, may appropriately be termed the *cardiac fascia*; and he states that through this, after the removal of the serous membrane, there are numerous ganglia and plexuses of nerves visible to the naked eye. If these nerves be traced backwards towards the base of the ventricles, they are seen to terminate in a great ganglionic plexus situated between the pulmonary artery and aorta, into which plexus branches of nerves enter from the par vagum of each side, the recurrent and the sympathetic nerves. From this great ganglionic plexus, which the author considers to be the root of all the principal cardiac nerves, branches invested with a soft neurilemma proceed to the auricles and ventricles and their septa. Large flat branches of nerves pass from this ganglionic mass to the coronary arteries, the tracks of which they completely surround like a sheath, and all the ramifications of which they accompany, not only over the surface of the heart, but into the muscular substance; and they are distributed, with these arteries, throughout its walls to the lining membrane. The author also states that there are besides numerous branches of nerves from the great ganglionic plexuses, at the base of the heart, and surrounding the coronary arteries, with ganglia distributed over the surface of the ventricles, which do not accompany the bloodvessels, but run obliquely across them, and also across the fibres of the muscular coat. These superficial cardiac nerves are described as being remarkably soft, flat, of a grey colour, and somewhat transparent, as had formerly been stated by Scarpe. Towards the left side and apex of the left ventricle these nerves lie in grooves and depressions of the muscular coat, and spread out into ganglionic enlargements, from which innumerable filaments are sent off laterally to the muscular coat. There are ganglia of considerable size on these superficial nerves, where they are crossing the arteries, which send branches to the coats of the vessels, and some of which branches pass down with the vessels into the substance of the heart."

Reference is made to three drawings intended to accompany the paper, but the first of these drawings only was received with the paper.

The first of these drawings referred to was presented to the society several months before this paper; the second accompanied it; and the third was presented on the 2nd of June. These three drawings were painted by Mr. Charles West, the artist, so well known for his great talents and accuracy in delineating the nerves of the human body. Mr. West was employed about twenty years ago by Mr. Swan to illustrate his magnificent work "On the Nerves of the Human Body." Before employing Mr. West to delineate the ganglia and nerves of the virgin uterus and heart, I consulted Professor Owen as to his fitness for the task; and Mr. Owen recommended him in the highest terms, and said he was not acquainted with any artist in this country to whom the matter could be better confided. I trusted implicitly to his accuracy.

It is due to the long-established reputation of Mr. West, whose drawings of the nerves of the heart are now denounced as "misrepresentations," to state

distinctly that, since these three drawings were presented to the Royal Society, the preparations have undergone extensive alterations. All the spare time that I could command during the spring and summer months was devoted to these dissections, with the view of rendering them more complete; and the principal drawing of the hypertrophied heart was not presented till the 2nd of June, a month after the paper, and then in an unfinished state. The alterations in the preparation were made because I had sufficient reason to believe that they would never be examined by referees from the Committee of Physiology. The large drawing was delivered to the under secretary, in the presence of the Marquis of Northampton, with the express understanding that it should be returned to Mr. West to be finished. On this ground I have successfully claimed the possession of the drawing, and it is now in my possession, and Mr. West will have ample time afforded him to render it as accurate and perfect as it can possibly be made. There are, however, numerous ganglia formed both upon the uterine and cardiac nerves which no artist can possibly represent, from the depth at which they are situated. I have not counted these non-represented ganglia, but probably they do not amount to fewer than fifty, and possibly they may greatly exceed that number.

The request contained in the following letter was immediately complied with, as far as the publication of the paper was concerned.

"4, Saville-row, Nov. 1, 1848.

"Dear Sir,—Will you have the goodness to inform the Committee of Papers, at the next meeting of the Council of the Royal Society, that it is my desire that the paper 'On the Nervous System of the Heart' should not now be published in 'The Philosophical Transactions.' As the subject is one of the highest anatomical and physiological importance, and as I have expended much time and labour on its further investigation since the paper was presented to the society; and as the nervous structures of the heart are now far more completely developed than they have been represented in the drawings, which are yet in an unfinished state, I am desirous of having the drawings returned to the artist, in order that he may correct and complete them. When this has been done I shall again have the honour of presenting them to the Royal Society, and bringing the whole subject once more under their consideration."

"I am, dear Sir, most sincerely yours,

"ROBERT LEE.

"To Professor Christie, Secretary to the Royal Society."

All the preparations described or referred to in this paper "On the Nervous System of the Heart" are in my possession, and it will afford me the greatest satisfaction to submit them to the examination of every member of the medical profession. These dissections have already been examined by many distinguished anatomists, and they demonstrate the truth of the conclusions stated in the paper.

As the reports of the Committee of Physiology to the Council of the Royal Society are secret and confidential, and have never been published, when the object of the report was to recommend that a paper should not be printed, I am forced to conclude that the anonymous report published in the last number of your journal is not authentic.

I have never written one word anonymously to assail the referees on this paper, nor excited any other person to do so. The Marquis of Northampton knows that I have contradicted the statement which has been made respecting the conduct of the council in reference to this paper.

Your obedient servant,

ROBERT LEE.

THE ROYAL FREE HOSPITAL OPERATIONS.

[To the Editor of the Medical Times.]

SIR,—The editor, or proprietor, of the *Lancet* seems fixed upon the horns of a dilemma, from which he finds it rather difficult to escape. I allude to those most unusual advertisements relating to the surgical operations, or rather mutilations, at the Royal Free Hospital. The profession at large estimate these practices as they deserve, and the professional press has denounced them as the grossest and most unblushing pieces of quackery. Nor can the chief actor, the editor of the *Lancet*, be ignorant, although to a certain extent insensible to, or regardless of, the general odium in which such practices are held. The wilful prostitution of the pages and influence, even though small, of a public journal to promote in an illegitimate manner the interests of a relative, however near, is an outrage, not only upon society, but upon the press itself, and as such

has met with deserved censure, and the just reprobation of the professional portion of this powerful engine. Of this, indeed, the principal delinquent himself seems perfectly sensible, and, as he can neither justify nor palliate the exhibition of such paternal solicitude, endeavours to excuse it, till forgotten, by the extraordinary enunciation that the objectionable announcements are in perfect accordance with the ordinary and legitimate rules for the conduct of a public journal.

In the "Notices to Correspondents" in the number of the 8th inst. we are told that the questionable advertisements are nothing more than what is usual and common with public journals; that Mr. Liston's operations have been repeatedly advertised in the same way; that, had the name in the present case been any other than the obnoxious one, there would have been no complaint or remark. The first of these allegations is positively untrue. I admit that latterly it has been the practice to announce, or rather recapitulate, in the daily papers the principal contents of the weekly medical journals, and of necessity, in connection, the names of some of the principal contributors. But it has never fallen to my lot to observe an entire advertisement exclusively devoted to a detail of the wonderful performances of one single individual, and that individual a son, and as yet scarcely emerged from juvenile obscurity.

As regards Mr. Liston, his name has undoubtedly been advertised in connection with his operations. But he has not stood alone, like the hero above mentioned, but in juxtaposition with others, who, though they could not eclipse, yet shared, the credit and advantages of honourable publicity. Mr. Liston's character and reputation, and his position at University College Hospital, placed him above all apprehensions from honourable association; he did not require to stand alone, to attract notice or to enhance his reputation.

With respect to the third allegation, I cannot go the whole length of the delinquent editor, "that no other name would have caused either comment or animadversion." Under the circumstances assumed, the credit of the speculation and the odium attached to it would have been at once assigned to the individual so unwarrantably forced upon the notice of the public. No editor could be considered so insane, or idiot enough, to peril the credit of his journal by stooping to such open and fulsome quackery. If the operations of one individual—of Liston, for instance—were alone announced, it could only be with the view of enhancing the value of the matter, from the acknowledged reputation of the operator, and not as a puff for his special advantage. Not so, however, upon the present occasion: the exploits, however daring and appalling, of a lad hardly emancipated from the leading-strings of professional pupillage, are not the means for elevating the character of a professional journal, or of exciting any extraordinary *gold* for the perusal of its pages.

But now let us assume the contrast, and suppose that some "aspiring young" candidate for professional emolument, if not fame, had contrived to bring his contributions before the profession through the medium of the *Lancet*, but, dissatisfied with such obscure publicity, advertising himself and his exploits, as the only prominent and valuable ware to be found in its pages, somewhat after the manner under review. What would be the course of the *Lancet*? Bulls and anathemas, leaders, "notices to correspondents," and every other editorial missile of vituperation would be hurled at the head of the devoted victim by this immaculate journal. Nor would it stay its abuse till it had either annihilated the culprit, or, in the plenitude of its frenzy, had given utterance to some libel, to be "repudiated," swallowed again, and atoned for by contrition, and an open avowal of some "abject" and humiliating apology. Such are the conclusions to be drawn from the experience of the past.

A journal, to be respected, must be honest and just; to be efficient as a public censor it must be pure in its own principles; neither its praise nor its blame should be guided by whim or caprice; nor, whatever the prospects of private advantage, descend to indulgence in those very vices which it has condemned and so severely reprehended in others. With respect to the *Lancet*, it has lately received some wholesome lessons, from which, with prudence, it may derive some profitable instruction for its future guidance. "They will either teach it so to regulate its conduct as to be able to set the most malicious insinuations at defiance; or, if that be a last hope, they will teach it prudence enough not to attract the public attention to a character which will only pass without censure when it passes without observation."

Jan., 1848.

JUNIUS REDIVIVUS.

EVIDENCE TAKEN BEFORE THE SELECT COMMITTEE ON MEDICAL LEGISLATION.

(Continued from page 286.)

CURRICULA OF THE HALL AND COLLEGE.—There is at the present time a negotiation between the Apothecaries' Society and the College of Surgeons, for the purpose of dovetailing the curriculum, and rendering it easier to the students, but I do not think that that was attended to formerly. It has never been done; but I apprehend that our regulations had been framed when the general practitioners adopted theirs: I mean the Apothecaries' Society did not consult with us upon the subject of our regulations. There have been some alterations since then, I believe. I do not think that any consultation was adopted. I have the regulations here, which require attendance on branches of medicine which I do not call strictly surgical. This portion says, "Of having been engaged in the acquirement of professional knowledge, for not less than four years, during which period they must have studied practical pharmacy for six months, and have attended one year on the practice of physic." Attendance on lectures appears afterwards; hospital practice is required. There is another regulation as to lectures. There is practical pharmacy for six months; one year on the practice of physic—that is to say, attendance on the practical parts at the hospital or a similar institution; "one course of lectures on the practice of physic, one on chemistry, one on materia medica, and one on midwifery, with practical instruction." No medical jurisprudence; no botany. With the exception of medical jurisprudence and botany, I believe we include all the subjects of examination or of required attendance at the Apothecaries' Hall. We do not institute any examination upon those subjects which I have now read. I consider that our charter empowers us to require attendance on the practice of medicine, and upon pharmacy, and upon midwifery. I suppose that, having the power to require certificates of attendance on such subjects, we have also the power to examine on such subjects. I do not consider that there would be any valid objection to our instituting such examinations, except that it would be making it an examination for general practitioners instead of for surgeons. I object to the formation of a college of general practitioners having the power to examine on all those subjects, and to require attendance on them; the objection to our actually instituting such examinations consists in the great importance that there is in the prosecution of surgery as a science, and that if you combine it with examinations and with other means of including the general practitioners as such in that institution, making it, in fact, a college in some way of general practitioners, you will in proportion deteriorate the institution as one for the promotion of scientific surgery.

MEMBERS NOT OF THE COLLEGE.—It is not now a college of general practitioners, but of surgeons. We have more than 12,000 members in our college who are practising generally; but they are only members of our college in as far as they are surgeons. I say "only members." Inasmuch as they have challenged examination before us. If they are not scientific men—if they are men not competent as surgeons—the fault lies with us.

MR. GREEN PUZZLED.—I do not consider that it would detract from the reputation of such men if it were known that they had been examined before us on other subjects than that of surgery; I do not know that it would rather enhance their reputation than otherwise. It is most essential I conceive that the character of the College of Surgeons should be kept as strictly as possible an institution for the promotion of surgery. We require attendance upon the practice of medicine, chemistry, and the other subjects which I have named, because we think that it is very proper that they should be acquainted with those as subsidiary branches of surgical science. It is

very true that the propriety would be more strongly exhibited if we were to carry it to a still greater extent, and at once examine the candidates on those subjects, and prove their competency, and I should see no objection to appointing examiners for that purpose; but we had it fully before our eyes that those wants were already provided for, and we should as little think of examining them upon those subjects as we should upon theology, though we should think it very desirable that they should be acquainted with that subject too. Then the reason of our not examining them has been that we think that that work has been performed elsewhere. That being the case we require attendance upon the subjects which I have named, but on which subjects we do not examine, to show that we do not admit persons without the knowledge in question. There may be persons also who come up for a surgeon's diploma who are not intended for general practice. If a person brings his licence from the Apothecaries' Hall, and proves that he has undergone an examination there, it would be according to our regulations that he should produce certificates of attendance on the lectures which I have named; but certainly I very readily admit that it would be then unnecessary, in consequence of the examination of the Society of Apothecaries. When I say that I wish in a great measure to confine the College of Surgeons to the promotion of surgery as a science, I do not admit that our members are not a body of scientific men; I consider them scientific men, and that they are qualified to practise as surgeons. In my mind, the capacity for so doing is not withdrawn by the simple circumstance of a man's proving that he is competent to do something more. I am aware that the duties which often devolve upon the general practitioner occupy a very wide range, and extend, in fact, over the whole field of medical and surgical practice; but I presume that, if you wanted an operation performed, you would be more likely to select a hospital surgeon than you would a general practitioner or an apothecary from a village. But, considering that the practitioners living in remote districts are entirely relying upon their own resources, I think that it is of the utmost importance to the public that they should, as far as we can possibly make them so, be rendered competent, not only for what are called the ordinary exigencies of the profession, but also any accidents or emergencies which might arise. I would very gladly see a Sir Benjamin Brodie in every village in England. I am quite aware that, whatever the education may be, if we start upon a perfect equality with regard to their examination or education, some, in consequence of greater energy, greater industry, and greater ability, will necessarily take the first place.

ONE PORTAL FOR ALL MEDICAL PRACTITIONERS.—Still I do think it desirable that in the minimum qualification security should be had that the public are protected in having a competent body of medical practitioners; and I will add to that, that I think it would be very desirable that every one entering the profession should have a qualification in all the branches; that that should be provided for; I think the State has a right to require that, that for every one entering the profession, there should be, as it has been called, one portal. That, I apprehend, will relieve you of some trouble in examining me. I say that I think it desirable that there should be one portal, by which all parties might enter the profession of medicine; by this term I mean that all on entering the profession should be subjected to one and the same examination on anatomy, medicine, surgery, midwifery, and pharmacy. I have stated that it is my wish that there should be a Sir Benjamin Brodie in every village in the country; but I conceive it to be quite impossible that the course of education and the experience which have enabled Sir Benjamin Brodie to be what he is, could be realized in the case of each of the 13,000 or 14,000 gentlemen who compose at this moment the body of our own college, or of an equal number who are licensed under the

Apothecaries' Act. If it then be impossible that we should produce in every village in the country such an experienced practitioner as Sir Benjamin Brodie, it follows, as a matter of course, that a large number of those who practise medicine in its different branches must cease their course of education at a lower point than that at which Sir Benjamin Brodie ceased his course of education. I think I have been misunderstood, if the inference has been drawn from what I have said, that there should be one system of education carried out, because the whole tenor of my examination has been favourable to the establishment of distinctions in the profession, and though I would let them go in at one gate, yet at the same time having entered they must take different directions, and some proceed much farther than others. My object in using the term "one portal" was, because it has been made a sort of technical term. It has been objected to, I know, by some who have given their opinions upon this subject, but I think that those who have objected to it have not considered that by adopting one initial examination for all it would remove very much the invidious character of those distinctions which the opposite party repudiate. Clearly we must be all of one profession, if we have begun alike; but, at the same time, I think it essential to the welfare of the profession that motives should be held out for higher attainments, and that those who aim at higher distinctions should undergo other examinations which should give assurance of their competency, and of their having proceeded farther in their studies. In point of fact I would wish the committee to understand, that while on the one hand I would desire that there should be one general and preliminary examination for all the members of our common profession, there should be a subsequent examination of the class of medical practitioners called physicians, another for the class called surgeons, and for the class called apothecaries or general practitioners I think it would be sufficient to subject them to the trial of the first examination. But I would require a second examination for the class of practitioners to be called physicians, and another distinct examination for those who are to be called surgeons. In my previous examination, referring to what I described as the system of instruction pursued in reference to the Apothecaries' Act of 1816, I stated that "the retrograde movement" which I have observed is owing to that "system which requires attendance upon a greater number of lectures, and attention to be given to a greater number of subjects, than formerly."

CURE FOR CRAMMING.—The teacher, however, whom the young man is expected and required to attend, in a great many instances examines orally, and he requires *vide voce* answers at the close of each examination in a great many instances. That is quite sufficient, if it be diligently applied, to exclude all necessity for what is technically termed "cramming," in reference to the examination either before the Apothecaries' Society or before the Royal College of Surgeons. Wherever, therefore, that system of catechetical instruction in the subjects of the professor's teaching be carried out, the practice to which I have adverted in my former examination necessarily ceases. I have stated that the young men shall prepare themselves for examination in the practice of medicine, materia medica, medical jurisprudence, botany, chemistry, and midwifery, and I have said that these are inconsistent with the devotion of their time to the study of surgery and anatomy; assuming that this must necessarily be the case, I do not see how it could be possible to omit any one of those studies in order to qualify him by a complete and generous education for the discharge of his duties to the poor as well as to the rich of his country.

ADVANTAGES AND DISADVANTAGES OF APPRENTICESHIP.—I would not affirm that as a matter of necessity young men intended for general practice must pursue some subjects

which are inconsistent with the devotion of their time to the study of surgery and anatomy, yet I perceive that it is a very fair inference from what I have said. But much might be expected from improved methods of preparation, improved methods of instruction, and especially if the apprenticeship system were got rid of, from the devotion of time to study which otherwise I am afraid is often spent in idleness. All the leading surgeons of the present day, and all the leading surgeons of the generation before, were introduced originally into medical life under that system of apprenticeship; but the apprenticeships of surgeons at hospitals are very different apprenticeships to those which are adopted by general practitioners. The hospital apprentice is apprenticed at and to the hospital, and the whole of his time is occupied in education at the hospital. I am afraid that, as apprenticeships are generally conducted, the young men have not the advantages that one would desire in a home; but certainly, if apprenticeships were not in force, it would be most desirable that you should have collegiate institutions which should supply by their discipline the place of a home. I think one must admit that upon the whole the apprenticeship system does give a certain degree of moral control in the case of young men admitted under it to practice. So far, therefore, its effect is beneficial. It is also beneficial as introducing the young man to a knowledge of the preparation of medicines, without which he could very imperfectly exercise his future functions as a general practitioner; in that, as in other things, if the full intention of the apprenticeship were carried out, it would be a very beneficial provision. The great objection to the apprenticeship system rests upon the length of time, namely, five years, absorbed from the general education of the young man; but, in point of fact, the five years are usually not so absorbed from his general education. In St. Thomas's Hospital, with which I have been so long connected, the young men who attend my lectures, and the courses of lectures in that hospital, are in the large majority of cases young men who are nominally apprentices.

(To be continued.)

GOSSIP OF THE WEEK.

APOTHECARIES' HALL.—Gentlemen admitted members on Thursday, Jan. 13:—Thomas Carr Jackson, Clitheroe, Lancashire; William Henry Ackland, Bideford, Devon; Robert Rayner, Birstal, Yorkshire.

MEDICAL APPOINTMENT.—William Thomson Barker, Esq., M.D., has been elected one of the physicians to the Dumfries and Galloway Royal Infirmary, in room of Dr. Robert D. McLellan, deceased.

GOVERNMENT GRATUITY TO THE WIDOW OF THE LATE MR. WALKER.—We have great satisfaction in announcing that the Government have determined upon granting a gratuity of £70 to the widow of the late Mr. James Walker, surgeon, of this city, who, it will be remembered, died in the early part of the last year of fever, taken in the discharge of his duty as medical officer of the London-road district. We understand that Government has also granted similar gratuities in some cases at Liverpool and Chester. —*Manchester Guardian.*

THE HUNTERIAN ORATION.—Mr. R. D. Granger, F.R.S., the lecturer on Physiology at St. Thomas's Hospital, has been appointed by the council of the Royal College of Surgeons to deliver the annual oration on the 14th of February next.

MUNIFICENT BEQUESTS.—The late Robert Suple, Esq., of Clifton, has, by his will, bequeathed the following sums to the undermentioned charities of Bristol city:—To the Bristol Infirmary (for general purposes), £500; to the Bristol Infirmary—to be invested, and the dividends to be applied towards providing a fund for the bestowment by the committee of two annual prizes to medical students to be educated

at that institution, for the encouragement of medical and surgical science, £1000.

A service of plate, valued at 100 guineas, has been presented to Mr. Cock, surgeon to Guy's Hospital, by his friends and pupils.

SMALL DEBTS COURT.—At Wellington, Somerset, on Tuesday, the 11th, several cases were heard before the judge of this court, J. M. Carrow, Esq. The following is the only one worthy of notice:—**RANDOLPH v. EWANS.**—This was an action to recover £4. 2s. for medicine and attendance on a boy twelve years of age, who met with an accident in the employ of the defendant. It appeared in evidence that the boy was conveyed to the defendant's house, and taken from thence to a neighbour's next day, and that the plaintiff continued his services until the boy was restored. On the part of the defendant it was shown he did not send for the plaintiff; that he was not his usual medical adviser; and that he had told him he would not be answerable for the expenses, but must be paid by the parish. His honour, in giving his decision, considered the defendant had, by a conversation with the plaintiff, made himself liable for the time the boy was kept in his house, but not longer, and gave a verdict for 17s. 6d. only.

DISPENSARY FOR DISEASES OF THE EAR.—The thirty-first annual general meeting of the governors, friends, and supporters of this institution, was held on Tuesday last at the dispensary in Dean-street, Soho; Mr. Masterman, M.P., the treasurer, presided. The meeting was more numerous attended than on former occasions. The report, which spoke favourably of the progress of the dispensary, and set forth a great number of cases of patients of the poorer classes relieved, having been adopted, resolutions expressing the grateful feelings of the governors and subscribers towards Her Majesty the Queen, the Queen Dowager, Prince Albert, the Duke of Cambridge, and other members of the Royal Family, for their liberal support, were carried *nem. con.* Other resolutions connected with the details of the institution were then passed, and a vote of thank to the chairman having been passed, the meeting broke up.

THE CHOLERA.—A letter from St. Petersburg, of the 3rd inst., represents the cholera as being much less malignant than it was in 1831 and 1832, and as becoming weaker in its attacks as it advances northwards. It was expected at St. Petersburg, and every preparation was made to meet it. At Moscow, from the 5th to the 11th ult., there were 119 cases, and 54 deaths. In the eastern portion of the empire, the Governments of Kasan and Orenbourg have suffered most. The Cossacks of the Oural have also been great sufferers. After acting for some time upon the above two provinces, the malady has extended to the north and west, and gained the centre, in which last portion of the empire Toula has suffered the most, having had 782 cases and 246 deaths. At Kalouga there have been 78 cases and 37 deaths. At this time the disease is raging in the western provinces bordering upon Turkey and Galicia. It makes the same eccentric movements as in 1831. Thus, having once entirely ceased at Oral about the middle of November, it has again made its appearance there with fatal effects. Hitherto the eastern quarters have, next to the Caucasus, suffered the most cruelly. It is said that the Russian army in the Caucasus has sustained numerous losses, and even the mountaineers themselves have not been spared.

SUICIDE OF A SURGEON.—On Tuesday Mr. Wakley held an inquest on the body of Mr. Henry W. Boxhall, surgeon, aged thirty, late of 74, Upper Seymour-street, Euston-square.—Mr. Aldridge, surgeon, of Upper Seymour-street, said he had known deceased five or six years. He was formerly in practice in Melton-street, Euston-square, subsequently in the Mornington-road, and had resided a few months at Upper Seymour-street. On Friday evening a young woman, with whom deceased lived, asked him to come and see Mr. Boxhall, as he appeared ill. Next day he went to see him, and on entering

his apartment found him standing near the fireplace with his throat cut. On seeing witness, he exclaimed, "Ah, it's no use, I have done it effectually." Witness went towards him, but deceased ran round the table, and struggled with him violently, and threw witness over a box. The blood was spouting profusely all this time from his neck. It was some minutes before witness could secure him. He then tried to stop the bleeding by pressure on the vessels of the neck, and called for assistance. Deceased still struggled violently, and called out for prussic acid, to finish him. He struggled violently to the last to prevent any attempt to save his life, and died in about a quarter of an hour from the time witness first saw him. He had made a cut with a razor, which lay on the carpet, on the left side, dividing the carotid artery, and all the larger vessels. Deceased was of a nervous temperament, and drank at times. He was very strange in his manner, and had told witness that he suffered from *delirium tremens*.—The jury returned a verdict of "Insanity."

OBITUARY.—On the 4th instant, Dr. Sutherland, of Bootle, Cumberland.—On board H.M.S. *Beagle*, at Shanghai, China, 16th October, J. Park, Esq., surgeon, R.N.—At Hong-Kong, October 3, David Davidson, M.D., assistant-surgeon, R.N.—On the 18th ult., A. Jubbs, Esq., F.R.C.S., senior surgeon to the Halifax Infirmary.—On the 20th ult., at Mountmellick, of fever, Thomas Hipwell, Esq., surgeon.—On the 24th ult., of fever, Charles Donnellan, M.D., medical attendant to the Armadown Dispensary.—On the 24th ult., of fever, Francis Bodkin, Esq., apothecary to the Clifden Poorhouse.—On the 25th ult., of fever, E. Lambert, M.D., F.R.C.S.I., at Oranmore.—On the 15th instant, at Norwood, Lewis Leese, Esq., M.D., aged 82.—11th inst., at Dumfries, in his 44th year, R. D. McLellan, Esq., M.D., one of the physicians of the Dumfries and Galloway Royal Infirmary.—On the 7th inst., Dr. Finch, F.R.M.C.S., F.L.S., and proprietor of Laverstock-house Asylum, Salisbury.—On the 18th inst., at Brecon, in the 68th year of his age, Thomas Batt, Esq., late surgeon of the Royal Fusiliers, and coroner for the county of Brecon.—At Florence, on the 14th ult., Sir James Annesley, late president of the Medical Board at Madras.

MORTALITY TABLE.

For the Week ending Saturday, Jan. 15, 1847.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES.....	1457	1107
SPECIFIED CAUSES...	1453	1102
Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	388	184
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	51	59
Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	180	175
Diseases of the Lungs, and of the other Organs of Respiration.....	346	225
Diseases of the Heart and Blood-vessels.....	50	39
Diseases of the Stomach, Liver, and other organs of Digestion.....	65	62
Diseases of the Kidneys, &c. Childbirth, Diseases of the Uterus, &c.....	12	13
Rheumatism, Diseases of the Bones, Joints, &c. ...	10	8
Diseases of the Skin, Cellular Tissue, &c.	0	1
Old Age.....		
Violence, Privation, Cold, and Intemperance.....	82	31

DISCOURSES ON THE HEART, BY WARDROP.

Our next number will contain the first part of an elaborate work by

MR. WARDROP;

DISCOURSES ON THE NATURE AND TREATMENT OF THE DISEASES OF THE HEART, WITH OBSERVATIONS ON THE ANATOMY AND PHYSIOLOGY OF THE ORGANS OF CIRCULATION.

This important work, on whose extreme value to science all commendation is needless, will be published weekly, to the extent of from two to four sheets, and in such a shape that it may be readily separated from the journal and bound into a distinct volume, with its own title-page, index, and paging. It is calculated that this work alone will be worth the whole annual subscription to the journal. Gentlemen wishing to receive this work with punctuality are requested to give their orders immediately to their booksellers, or to forward their orders, with remittances, to our office.

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The subscription for the stamped edition of the *Medical Times* is 15s. for the half-year, and £1. 5s. for the year, paid in advance. Post-office orders, or orders on parties in town, should be made out in the name of James Angerstein Carfrae.

TO CORRESPONDENTS.

"Nemesis."—Dr. Maud's plan for distinguishing real from apparent death is to apply caustic. On dead tissues a blister is never raised by the application of heat; but this effect is always produced on the skin so long as life is preserved. We do not know of many experiments instituted, and it yet remains to be proved if the plan recommended will be of actual service.

"Truth-seeker."—Egypt is rarely free from plague, which is said to be produced from the following causes:—The filthy state of the villages—the decomposition of vegetable and animal substances during the hot weather—the badly constructed huts, which are very damp and poorly ventilated—the use of brackish water, insufficient and bad food, and physical and moral misery—the want of proper drainage and free ventilation in the streets—the evaporation from the salt marshes of the Lake Mareotis—and the mode of burial adopted by the Egyptians.

"T. E. B., Belfast."—The numbers required for the completion of the volume may be had on application to the office, or to any respectable bookseller.

"Philo."—The motives are good which dictated the letter, but we must decline its publication.

"Lector."—The Lectures of Dr. Willshire, Physician to the Royal Infirmary for Children, may be consulted with advantage.

"Amicus."—Müller's "splendid work" is publishing in the *Pharmaceutical Times*, and is illustrated by beautiful engravings.

"Spes."—The diploma referred to will enable the possessor to practise surgery in the British possessions, either in the East or West Indies.

"Mr. Proben."—The observations are correctly made, and the plan adopted is that which has been recommended by the best surgical authorities.

"A Metropolitan Physician."—The rapid absorption and fatality of the poison, when applied to the cuticle, forms one of the unsolved problems of medicine.

"Chemicus."—Organic substances can be preserved for a considerable time. M. Gannal's method consists in injecting a solution of alum with some preparation of arsenic.

"Alpha."—The papers are left at our office, and may be obtained on application. We do not engage, however, to preserve the manuscripts of our correspondents.

"Mr. Joshua Benton."—We shall not be able to find room for the case; it hardly possesses sufficient points of interest for medical readers.

"Ajax."—We are unable to give any information on the subject.

"Reformer."—We do not know that the Queen is about to grant a Charter of Incorporation for General Practitioners. We think it not unlikely, that in a short time this desirable circumstance will be accomplished.

"One Afloat."—The letter should be sent to "The Army and Navy Gazette."

"Dr. B. G. Daunt" makes the following remarks on the trial of E. T. Taylor, at Graham's Town, Cape of Good Hope, for *maia praxis*:—"The criminal in question, E. T. Taylor, I well recollect as an impudent and ignorant quack, who, not content with his lawful gains as a druggist, boldly announced himself as a surgeon in the public prints. During my residence in Graham's Town, in 1842, I called the attention of Government to this man, but had great reason to complain of the indifference shown by the then authorities to my representations; this is so often the case on such occasions, where no party purposes are to be served by an honest discharge of duty, that we may well wonder with Saint John Chrysostom, 'An heri possit, ut aliquis ex rectoribus sit salvas.' This trafficker in human life has now, however, met his deserts, and henceforward, I trust, better fortune will attend those regularly educated members of the profession who may visit this rich and interesting colony. The prisoner impudently and wickedly endeavours to throw a part of his guilt on the late Mr. Craig, who I know to have been far too honourable a man to have lent his authority to such a transaction, and too mindful of his rank in life to have allowed this man to have been on terms of familiar intimacy with him. How the prisoner should have been able to bring forward wealthy merchants as witnesses to his good conduct, those only can understand who are acquainted with the singular social system of the English colonies."

"A. Z. M."—The case is one which any properly-educated practitioner would be enabled to treat successfully.

"A Constant Subscriber (Student)."—The names of the successful candidates have been published. We have decided not to award any during this year.

"X. Y. X."—The two names are applied to the one acid.

"Mungo Park."—Our correspondent has mistaken our intention. We wish to see justice done to all parties.

"A Medical Officer" puts the following case:—"John Jones is destitute; he has nothing to eat; he is perishing with hunger; he applies to the relieving-officer, who gives him a bread-loaf. The board meets the next day, and refuses to allow the value of the bread-loaf in the relieving-officer's account, and orders him not to give John Jones any more bread. The man dies of hunger. What should we think of the coroner and his jury if they were to say that the relieving-officer was 'inhuman' and 'unfit for his office,' because, after having already been induced to give away one bread-loaf at his own cost, he abstained from continuing to bear all the weight of the man's destitution on his own shoulders? And yet a similar thing has just been done in the case of a medical officer."

"A Really Fair Brother" writes us, in reference to the application of chloroform in typhus fever, as used at the Bristol Hospital, as follows:—"I am not inclined to enter into or argue the point, either in principle or practice, with Dr. Fairbrother, though I cannot refrain from saying that I think his case proves simply either that the explanation of the action of ether and chloroform, as far as they are connected with the production of congestion, are false and useless, chloroform being a specific for almost anything, or else that the human frame, more particularly hospital patients, will tolerate almost any amount of experiment without palpably dying from the effects."

"Mr. Gradwell, Kirkham."—The General Medical Annuity Fund will suit our correspondent's wishes. Apply to Mr. Daniell, Newport Pagnel.

"A Constant Reader."—The wager had better be decided by actual experiment, and the folly of the proposition concerning chloroform and insensibility will at once be seen. Chloroform will keep if preserved in closely-stopped phials.

Letters and communications have also been received from Nemesis; Truth-seeker; T. E. B., Belfast; Philo; Lector; Amicus; Spes; Mr. Proben; A Metropolitan Physician; Chemicus; Alpha; Mr. Joshua Benton; One Afloat; Ajax; Medico-Chirurgus; Reformer; M. A.; Salisbury; Dr. B. G. Daunt; A. Z. M.; A Constant Subscriber (Student); X. Y. X.; Mungo Park; Q. P. B.; Rugby; A Medical Officer; A Really Fair Brother; Mr. Gradwell, Kirkham; A Constant Reader; Dr. King, Eitham; Mr. McLaren, Bedlington; Mr. Hart, Harwich; Dr. Hingston, Plymouth; Mr. Chubb, Torpoint; Mr. Sabben, Portsmouth; Dr. Burton, Walsall; Mr. Raynes, Bantry; Mr. Tomkinson, Cheshire; Mr. Barry, Cahirciveen; Mr. Hore, Shoreham; Mr. Burman, Stratford-on-Avon; Dr. Willis, Market Deeping; Mr. Leigh, Liverpool; Mr. Small, Boston; Mr. Nicholls, Basingstoke; Mr. Douglas, Bradford; Mr. Tarson, Montgomery; Mr. Bernard, Weston-super-Mare; Dr. James, Kingston; Mr. Rendell, Westbury-on-Trym; Dr. Alcock, New Ross; Mr. Thomas, Hobspoint; Mr. Bickersteth, Liverpool; Dr. Walker, Blackheath; Mr. Cryar, Boyle; Dr. Wylemans, Shepton Mallett; Mr. Hedley, Bedford; Mr. Wilks, Ashford; Dr. Wake, Southwold; Dr. Williams, Castletown; Dr. Burnett, Alton; Dr. Stephens, Ballyshannon; Dr. Jones, Ross; Mr. Pullan, Epsworth; Dr. Lukis, Guernsey; Mr. Berks, Manchester; Dr. Barker, Dumfries; Mr. Hastings, Stokenchurch; Dr. Bardley, Manchester; Mr. Jobson, Bishop's Auckland; Mr. Davies, Gateshead; Mr. Piper, Darlington; Mr. Gordon, Fort Glasgow; Dr. Anderson, Rifle Brigade, &c.

ERRATA.—Page 253, col. 1, line 31 from the top, read *on*, instead of *in*; line 51 from the top, instead of *nay*, from, read *may form*. Col. 2, line 20 from the top, instead of *deviation*, read *duration*; line 35, instead of *Thaumal ropes*, read *Thaumatrope*; line 40, instead of *Himé*, read *Aimé*; col. 3, line 3 from the top, instead of *a*, read *of*.

No. 435.

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JAN. 29.

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ORIGINAL LECTURES.

LECTURES ON GENERAL PATHOLOGY,

DELIVERED TO THE

FACULTY OF MEDICINE

DURING THE PRESENT YEAR,

By PROFESSOR ANDRAL.

Reported for the *Medical Times* by D. M'CARTHY, M.D. Paris, &c.

SECOND SERIES. CHAPTER IV.

SIGNS FURNISHED BY THE RESPIRATORY ORGANS.

The manner in which respiration is accomplished furnishes occasionally a clue to the diagnosis of disease; for instance, costal respiration is observed when the contractions of the diaphragm are attended with pain; and, on the contrary, the respiration is called abdominal when respiration is almost entirely performed with the assistance of the movements of the diaphragm, the elevation of the ribs being partial: when a stitch exists on one side of the chest, that side remains immovable during respiration.

In the healthy state, from eighteen to twenty-four inspirations may be counted in one minute. This number seldom rises to twenty-eight, or descends to twelve. But, in disease, respiration may be much accelerated or slackened. Thus, in the meningitis of children, and in some cases of hysteria, it often descends below the average. When the number of inspirations observed in one minute is above thirty, a morbid state of the system may be asserted to exist. They may rise as high as eighty, and even be more frequent than arterial pulsation in the same subject. Simple febrile excitement accelerates respiration, but never increases the number of inspirations to more than thirty-two in one minute. If thirty-six inspirations be counted, disease of the heart or respiratory organs is exceedingly probable; if more than thirty-six, it is certain that some disorder of the kind is present.

All the causes which interfere with the free introduction of air into the chest accelerate respiration, whether the obstacle be seated in the larynx, trachea, bronchi, or in the lungs. Thus, in acute pneumonia, the respiration usually rises to thirty-two or thirty-eight; if it attains fifty the case is almost invariably fatal. This happens in the adult; but in children under two years of age affected with pneumonia you will often find sixty, and even eighty, inspirations in one minute. In consumption, the respiration becomes greatly accelerated only in the last stage of the disorder; it frequently averages thirty. When, in cases of phthisis, the respiration becomes suddenly very much quickened, one of three occurrences is to be feared—viz., pneumonia, a rapidly-forming pleuritic effusion, or pneumothorax. In pleuritis, acceleration of the respiration may be due either to the intensity of the pain in the side or to the abundance of the effusion within the chest. When the morbid secretion has taken

place in both pleural cavities, the frequency of respiration is greatly increased; but, on the contrary, it has formed slowly, and only in one side, although very abundant, it causes only a very trifling increase of the number of inspirations, particularly if the patient be observed in repose. Abundant effusion in the cavity of the abdomen often augments the frequency of respiration, and the same is noticed in most diseases of the heart and of the organs of circulation. The nervous system has considerable influence over the phenomena which now occupy us; observe, for instance, the effects of mental emotion upon the respiration. In women, we should not give quite the same prognostic value to increased frequency of respiration as in men: in the female, a simply nervous disturbance, as in hysteria, may raise the respiration to sixty—a fact which we do not meet with in the male sex.

Respiration may not only be modified in its frequency, but also in its depth. The inspirations may be shorter or deeper, according to the state of the lungs; for instance, in pulmonary emphysema the respiration seems to be very deep—we say seems, because the depth is in these cases more apparent than real; the chest is elevated by a strong effort of the patient,—it is not, properly speaking, dilated, but the energy of the effort would easily lead an inattentive observer into error.

The regular succession of the respiratory movements may also be modified by disease; thus, in the convulsive period of acute meningitis, particularly in children, respiration becomes irregular and even intermittent. The passage of the air through the respiratory organs is silent during health, but in disease it may be attended with various sounds, generated in the larynx, trachea, or bronchi. In the larynx we may hear sounds during inspiration or during expiration; the rhonchus produced by oedema glottidis; accompanies expiration. These sounds are the result of a diminution in the diameter of the larynx, from hyperemia, swelling of the vocal chords, false membranes, tumours, or merely spasmodic contraction. Ulcers of the trachea, particularly if their edges be fungous, and if they are seated near the bifurcation, often give rise to morbid sounds during the passage of air through the tube; compression of the trachea by tumours, aneurism of the arch of the aorta for instance, has the same effect. Further, we may hear, without applying the ear to the thoracic walls, morbid sounds originating in the bronchi, and also friction taking place in the pleura.

When the respiration is modified in these several manners, the patient experiences a sort of uneasiness, which has received the name of dyspnoea—a symptom towards which I must now call your attention.

Dyspnoea has several degrees; it may exist only in motion, or even in ascending motion, or it may also distress the patient when he is in a state of perfect repose; it then bears the name of orthopnoea. When dyspnoea is violent, the inspiratory muscles being insufficient for the purpose of dilating the chest, many other muscles

lend their synergetic assistance, even those of the face, the contractions of which may enlighten the diagnosis, in giving to the patient a particular physiognomy, characteristic of the disease; thus the movements of the ale of the nose in the dyspnoea caused by pneumonia are most remarkable.

This symptom, being common to most diseases of the respiratory organs, cannot assist in distinguishing them from each other. We meet with it in diseases of the larynx, and it is always in proportion with the degree of obstruction existing within the air-passages. When tumours press upon the trachea, as in some aortic aneurisms, the oppression is occasionally excessive. In diseases of the bronchi we find dyspnoea again; for instance, in acute capillary bronchitis it is often more intense than in pneumonia; and in chronic capillary bronchitis it may become extreme with any temporary exacerbation of the malady. Hypersecretion from the bronchial mucous membrane also occasions much oppression, whether it occurs in acute bronchitis, or at the close of a certain number of acute or chronic disorders. Let us add that this hypersecretion may result from general debility; and, therefore, in the treatment of disease in general we should carefully abstain from lowering the vital powers of the patient beyond a certain point, as the production of this accident might thereby be facilitated. In pneumonia, dyspnoea always exists; it may be slight, as in that form of inflammation of the lungs which often intervenes during the course of typhoid fever, but may also acquire a considerable degree of intensity. Consumption causes an amount of dyspnoea, which is always proportioned to three conditions, viz., the number of the tubercles, the pulmonary alterations by which they are surrounded, and the rapidity of evolution of the morbid deposit. Sometimes, long before any permanent cough is observed, the patients complain of a sense of oppression; in most cases, on the contrary, the dyspnoea is very slight during the incipient stage of phthisis; but if the tubercles are rapidly formed, as in acute phthisis, the oppression is excessively considerable. Pulmonary emphysema is not necessarily accompanied by dyspnoea, except in its advanced stage. In a very large number of cases, patients suffer from oppression only at very distant intervals, these intermittent attacks of asthma being referable to periodical attacks of bronchitis. But when emphysema has lasted some time, and acquired a considerable development within the chest, oppression becomes intense and continuous—no fresh attacks of bronchitis being necessary for its appearance. The countenance of the patient is swollen and livid, the lips take a purple hue, and the physiognomy resembles that of persons suffering from disease of the heart. In pulmonary apoplexy, whether idiopathic or depending upon an alteration of the central organ of circulation, the degree of dyspnoea depends entirely upon the intensity of the apoplexy. In diseases of the pleura, dyspnoea may either be the result of the pain, by which the respiratory movements are im-

peded, or depend upon the pressure exercised upon the lung by effusions within the thoracic cavity. The former cause is more frequently productive of oppression than the latter; indeed, in chronic pleuritis considerable secretion may have accumulated within the chest without any perceptible difficulty of breathing. But when the effusion has taken place very rapidly, when it is extremely abundant, and not only causes dulness on percussion of the posterior parts of the chest, but also of its anterior region, or when the morbid deposits have been formed on both sides, then oppression, more or less considerable, never fails to appear. Simple pleurodynia may occasion extreme oppression. Diseases of the heart may be said, in general, to be accompanied with dyspnoea—a remark which allows, however, numerous exceptions; for instance, valvular insufficiency of the aorta seldom causes any difficulty of breathing. In acute rheumatism we sometimes hear at the first bruit a murmur indicative of endocarditis, and still no oppression is complained of. But when disease of the heart causes disturbance of the pulmonary circulation dyspnoea is a constant symptom. We should also add that towards the close of diseases of this nature the bronchial secretion is usually much increased, and oedema of the lung supervenes,—circumstances by which the tendency to dyspnoea is much augmented: ascitis, abdominal tumours, or tumours developed within the thorax, may also become mechanical causes of oppression. In plethoria and in anemia we find a certain amount of dyspnoea, and in nervous subjects it may be produced merely by emotion. In hysteria we meet with it as a very ordinary symptom. We must, however, distinguish two sorts of nervous dyspnoea: in one it is caused by a disturbance of the cerebral influence over the respiratory organs; in the other by a disease affecting the par vagum, and through that nerve the lung, to which the pneumogastric is partly distributed. Nervous dyspnoea is often very slight, occasionally violent, and frequently intermittent. We cannot, from the results of our own experience, doubt the existence of a purely nervous form of asthma, the attacks of which, often repeated, bring on readily the pulmonary alterations characteristic of emphysema.

Alterations of the voice are observed in disease, and may assist in its diagnosis. The causes of its changes may be seated above or below the larynx; we are acquainted with the special modification produced in the voice by perforations of the palate or enlargement of the tonsils; a slight alteration of the vocal chords change its tone, and bronchial or pulmonary affections also modify it. Further, we find in nervous diseases the voice changed or suppressed, whether the malady occupy the nervous centres, or merely consist in a pressure exercised upon the course of the laryngeal nerves by some tumour or morbid production. We may say that all the causes which diminish the volume of the column of air to be expelled through the larynx during expiration modify or weaken the voice, a fact often observed in the very earliest stages of pulmonary consumption. In croup we usually find the voice suppressed. The larynx may also be affected with special neurosis, a sort of chorea confined to its muscles, the chief symptoms of which is a sort of barking or involuntary emission of voice.

Cough is a symptom of great importance; we find it in diseases exclusively limited to the respiratory organs, and also in others which invade the chest only in a secondary manner. With regard to the former, we find cough with special characters in croup: it is not necessary to expatiate upon its barking sound. You are also acquainted with its tone in whooping-cough, in which a crowing inspiration is followed by several successive attempts at expiration. In bronchitis cough is also present—dry at first, loose in the second stage, and often more troublesome than inflammation of the lung. Coughs do not always precede the formation of tubercular matter in the chest. During the first periods of phthisis, patients are subject to frequent coughs, which at

last become permanent. In some cases the permanent cough is observed from the beginning. It is a prevalent opinion in the unprofessional public, that dry coughs are more characteristic of incipient phthisis than coughs attended with expectoration. We need hardly add that this is a mistake. A sense of heat and tickling in the throat is frequently complained of by patients, and some are also affected at the same time with a deep-seated pain within the chest. In pleuritis, cough is often subordinate to the existence of pain in the side: it is always a dry cough. Pulmonary emphysema is productive of a sort of cough which has the characters of that of bronchitis. We said that this symptom might be noticed also in diseases, one only of the elements of which is to be sought for in the respiratory organs. Thus, amongst pyrexia, we find that measles are always attended with more or less cough, which sometimes precedes, and always accompanies, the prodromic fever, persists throughout the eruption, and usually decreases after its cessation. If it should last any length of time after the eruptive fever, it calls for some attention on the part of the medical practitioner, as it may be the starting-point of emphysema or pulmonary consumption. On auscultation of the chest, in the bronchitis of measles, seldom are any rhonchi detected; in the bronchitis of typhoid fever, on the contrary, sonorous and sibilous râles may be almost always heard in the chest. Sympathetic coughs have also been often noticed, expressive of the participation of the nervous system of the lungs to sufferings of the liver or stomach. Tania is sometimes productive of a very troublesome nervous cough, which ceases when the worm has been expelled. In some hysterical patients we occasionally find an obstinate cough, merely produced by nervous disturbance.

Expectorated substances may vary in their nature, and in their origin. We will enumerate the various matters which may thus be rejected. Mucus, always arising from the respiratory organs; blood, which may come from the mucous membrane of the bronchi, from the pulmonary parenchyma, as in pneumonia, phthisis, pulmonary apoplexy, or gangrene of the lung; from an aneurism of the aorta, and in this latter case the blood is not always rejected at once in large quantities, but may for a certain number of days be expectorated in filaments, mixed with bronchial mucus. When the blood expelled from the lungs is rejected soon after extravasation; it is scarlet, fluid, and spumous; but, if it has remained in the bronchi some time after exhalation, it may be dark and coagulated, in a portion of this blood may also be swallowed, and afterwards vomited—a fact which may lead to some doubt as to its origin. Pus is frequently found in the expectoration; it may have been generated on the mucous surface of the bronchi, or in an accidental cavity formed in the lung after consumption or gangrene. An abscess collecting in the pleura may also be evacuated into the bronchi, and discharged by expectoration. The abscess may be seated in the neighbourhood of the respiratory organs, in the bronchial ganglions for instance, or in a distant viscus, the liver or kidney (Rayer). False membranes are sometimes expectorated. They are mostly formed in the larynx, but may have been secreted in the trachea or bronchi. Tubercular matter, originating in the lungs or in the bronchial glands, particularly in children, should not be omitted in the enumeration of expectorated substances. Melanic matter has also been found, but more frequently a dark matter, identical with charcoal in a state of extreme division, and only in persons exposed to the inhalation of this substance. Let us also mention cancerous matter; hydatids, more generally coming from the liver than from the lung; cretaceous calculi; the residue of cured tubercles; remains of pulmonary or bronchial tissue, detached in tubercular or gangrenous cavities; such are the various substances found in the expectoration. In one instance, in which the stomach communicated with the spleen and the lungs, we met with the contents of the stomach in the expelled matter.

A COURSE OF LECTURES ON SURGERY. BY SAMUEL COOPER, Esq., F.R.S.,

Professor of Surgery to University College, London;
Consulting Surgeon to London University Hospital, &c.

LECTURE XXIII.

GENTLEMEN,—The general definition and divisions of the various descriptions of wounds was the subject of our first lecture. We considered the general characteristics of incised, punctured, and contused wounds, as well as those which are produced by the bites or stings of venomous insects or reptiles. The first indication in the treatment of an incised wound is obviously to stop the hemorrhage. When there is no hemorrhage, and the wound is under a certain size, the best thing that can be done is, at once to close the wound by bringing its edges together; but after a large wound has been received, and there are no large bloodvessels opened, and the blood does not flow very freely, but only oozes, you should let the wound remain open a little while in this dripping, oozing state, because clotted blood is a disadvantage to the wound, separating the surfaces, and may be regarded for many purposes in the light of an extraneous body. The more free from clotted blood, therefore, you can keep the wound the greater chance do you give it to heal by the first intention. Hemorrhage being the first thing to which you are called to attend, it is important that you should be well furnished with good scientific as well as practical knowledge. In its full extent, hemorrhage is a wide subject, but all its divisions do not come under our notice in course of surgical lectures. It may take place from the heart, arteries, veins, and capillary vessels, arising from solution of continuity occasioned by incised wounds, puncture, laceration, &c.; and these lesions come of course within the limits of surgery. It may also follow obstructions of the natural channels for the return of venous blood to the heart, or the obstacle may be in the artery; and these cases again come under the notice of the surgeon. Other causes of hemorrhage come more properly within the province of the physician, as what is called *passive* hemorrhage, and also those which arise out of particular states of the blood, as in scurvy, typhoid fever, and debility. A division of wounds is also made into external and internal, and into active and passive; these two divisions exhaust the subject, and will appear more prominently as we proceed. You all know that when an artery is incised, blood issues *per saltum*, that is, not in a continuous stream, but in successive jets; while from the veins it flows in a regular, even discharge; the colour of the blood is also different in the two cases, arterial blood being of a scarlet, while that from the veins is darker. The points respecting the colour of blood is of practical utility, and should, therefore, be remembered; it is that the blood at the end nearest the centre of circulation is of a lighter (?) colour than at the remote extremity. I have seen great mistakes made, which a knowledge of this simple fact would have obviated.

I have, in this hospital, seen the case of a boy who had been cut deeply in the hinder part of his leg, the posterior tibial artery having been divided. When he was brought in, the house-surgeon proceeded in the usual way, and thought he had done all that was right; hemorrhage, however, came on again and again, and was stopped only to break out afresh, while the patient was fast sinking; all this while it was not suspected where the blood really came from. Upon further search it was found necessary to tie the popliteal or femoral artery, and when this was taken up the case succeeded very well. Had the house-surgeon known or remarked this particular distinction of colour, the mistake could hardly have happened. To understand the scientific method of stopping hemorrhage from arteries, you should know the powers by which nature accomplishes

the same object, and should also regard their structure. They are supplied not only with small arteries and veins, but also with absorbents and nerves; and in these respects the organisation is analogous to that of other soft parts of the body, and they are liable to every change to which living parts are subject in common; upon injury they inflame, suppurate, or mortify in the same manner as a gland or a muscle. They have three cases. The first or internal coat is very vascular, close in texture, and will bear great pressure, applied longitudinally, but any substance pressing it round will easily cut it through. The fibrous coat is elastic, and consists in a number of layers: it is the thickest of the coats. The external coat is strong and dense: it is the last to yield to disease. All of them are very susceptible of injury, and you will not be doing your duty unless everything concerning them which you think necessary to be done is performed with the greatest gentleness. Inflammation, ulceration, and sloughing are the common consequences of rough usage of these organs. It was from the roughness with which they were handled that formerly thirty cases out of forty used to terminate unfortunately. A sounder knowledge of their susceptibilities has led to a better way of treating them.

There are two kinds of hemorrhage, primary and secondary: the former is that which takes place at the time the wound is inflicted; the latter at a subsequent period. When a large artery is completely divided, an impetuous flow of blood takes place, and the artery is suddenly retracted within its sheath, and its extremity contracts at its orifice. The sheath itself does not contract, but the artery itself is drawn by its own elasticity into its sheath, and its end becomes smaller. The cellular tissue which connects the two surfaces of the artery and its sheath becomes drawn irregularly and blood is effused in it, and, passing through that canal of the sheath which has been formed by the retraction of the artery, is allowed to pass out a little at a time, or is extravasated in the cellular tissue, as the wound is more or less open. A clot is thus formed at the end of the artery, projecting beyond the end of the sheath, and coagulating till it fills it up completely, from the circumference to the centre. By the effusion of blood into the surrounding cellular tissue, and between the artery and its sheath, and also in consequence of the diminution in the velocity of the circulation caused by the bleeding, the coagulum is formed and the hemorrhage stopped. This, which is called the external clot, is the first natural impediment to the flow of blood from the end of an artery. The mouth of the artery being no longer pervious, and having no collateral branch very near it, the blood within it is at rest, and coagulates, forming a smaller conical-shaped clot, which neither fills up the canal of the artery nor adheres to its sides, except by a small portion of the circumference of its case. This is called the *internal clot*. Of course when a ligature is applied there is no external clot. When nature suppresses the hemorrhage there will be no internal clot formed. When there is a collateral artery, branching from the extremity of the large artery, the internal clot will not form, because the stream in motion in the adjacent artery keeps the blood in the wounded one from stagnating, and so forming the clot. On this fact depends the maxim universally taught in the schools of this country: never to apply a ligature to any collateral branch, because when there is no internal clot there is one protection the less against the return of hemorrhage—the external clot being the first protection, the internal the second. They are both, however, temporary in their office. I do not consider that you are sure to have hemorrhage if a ligature is so applied. I know cases where such ligatures have been applied and no secondary hemorrhage has followed, but I always thought that a great risk was run.

I have said that the protection of the clots was but of temporary duration; the cut extremity of the artery inflames, and the vasa vasorum

pour out fibrine, which the external coagulum prevents escaping. This fibrine fills up the extremity of the artery between the internal and external coagula of blood, and becomes intermingled with them, or, at least, adherent to them, and unites firmly to the internal coat of the artery. This is the great security for the permanent suppression of hemorrhage; but while fibrine is thus forming, the extremity of the artery is further secured by its gradual contraction; and by effusion of fibrine between its tunics, and in the cellular tissue surrounding it, the canal and mouth of the artery become obliterated, and blended with the surrounding parts. When the wound in the skin is not healed by the first intention, coagulating lymph exudes, covering the end of the vessel, and separating it from the cavity of the wound. The end of the artery up to its first collateral branch becomes gradually smaller till the cavity disappears. The external clot is absorbed in a few days.

If the wound be a puncture, or partially divided, a curious circumstance in the process of nature takes place, altering the relative position of the artery and its sheath. Blood is first effused in the cellular tissue, between the artery and sheath, both above and below the wounded part. On examination, a short time after the hemorrhage has ceased, a stratum of coagulated blood is found between the artery and sheath, thicker just over the wounded part than elsewhere. The space between the artery and sheath being filled with blood, and the latter part distended, the situation of the puncture in it and the artery are altered, and the coagulum, being confined by the sheath over the puncture in the artery, stops the hemorrhage. But the permanent prevention of bleeding depends on the reparation, or, perhaps, the obliteration, of the channel; in fact, if the channel is divided beyond a certain extent, obliteration is the only course open to you. Hemorrhage depends much on the possession of a sheath. Arteries destitute of a sheath, such as those of the forearm and leg, give great trouble to the surgeon in endeavouring to stop hemorrhage. One circumstance favourable to the suppression of bleeding is the tendency of the circulation to diminish in force and velocity after a certain quantity of blood has been lost. The blood then proceeds very languidly, and acquires also an increased tendency to coagulate.

ORIGINAL CONTRIBUTIONS.

CLINICAL REMARKS ON CASES OCCURRING IN OBSTETRIC PRACTICE.

By CHARLES WALLER, M.D.,
Physician-Accoucheur to St. Thomas's Hospital.

ON PLACENTA PREVIA.
(Continued from p. 257.)

CASE 29.—This was the case of a poor woman who had been bleeding for several days when I first visited her: there was not dilatation sufficient to allow of the introduction of the hand. I left her, desiring to be sent for immediately, should the hemorrhage return. I called again on the second day, not having received any message from her; to my surprise she was dressed and bustling about her room. The hemorrhage was not of an alarming character; the os uteri, on examination, was much more dilated, and the parts generally dilatable. As this patient resided at a considerable distance from my house, I was fearful that serious bleeding might occur in my absence, if she was left. The parts being favourable, I turned and brought down the child. Mother recovered.

CASE 30.—This was a patient of the late Mr. Dunn, who sent for me very early in the labour. Turning was effected, and the mother recovered very satisfactorily. I have no note respecting the child.

CASE 31.—Met Mr. Morgan Austin in consultation early in the morning. This lady had been losing blood during the night, and was be-

ginning to suffer severely from its effects. Dilatation I was informed had been very slowly going on, but, as there was at that time ample room for the introduction of the hand, delivery was effected without difficulty. Mother recovered, the child still-born.

CASE 32.—Another case of Mr. M. Austin's. I saw the female before she was at all faint from loss of blood; the presentation was partial. Turning accomplished and the child removed without even a feeling of faintness being complained of. The mother rapidly recovered. I think the child was dead, but my notes are defective. The preceding four cases are not related in the order of succession; they all occurred some time since, and my memory is insufficient to supply the hiatus in my case-book, both as regards the nature of the presentation, whether partial or complete, and also respecting the fate of the infant.

CASE 33.—The last case I have to relate occurred a few weeks since in the practice of Mr. Atkinson. Mr. Atkinson was suddenly summoned to his patient, who resides near Clapham, and found that during the night very serious hemorrhage had supervened, which had produced great depression of the vital powers. On examination he detected a complete presentation of the placenta; there was but little dilatation, and the bleeding had nearly ceased. This lady's constitution was extremely delicate, and, as I had seen her in consultation with Mr. Atkinson after her previous confinement, he requested I might again be sent for. In the interim the flooding returned with increased violence; Mr. Atkinson, therefore, very properly at once effected the delivery. The child was dead. I arrived soon afterwards; the patient was complaining of excessive faintness, dizziness of the head, accompanied with nausea and flatulence. The pulse, however, did not indicate dangerous exhaustion, although it was quick and somewhat feeble; these symptoms appeared to be dependent upon the general shock which the nervous system had undergone, rather than to the hemorrhage. The uterus was well contracted, the cooing very trifling, and the stomach retained the nourishment administered—this consisting of the yolk of egg with brandy; an occasional dose of sal volatile in milk was also administered. This state continued for some hours, but no other unfavourable symptoms occurred.

GENERAL SUMMARY AND OBSERVATIONS.

From the above it will be seen that thirty-three cases of placental presentation have occurred under my own immediate observation, and that twenty-three only of the mothers permanently recovered. It would, however, be manifestly unfair to ascribe the fatal result in all the instances recorded to the old method of treating these cases, namely, by the operation of turning. For example, there had been culpable neglect in cases 1, 8, 22, and much valuable time had been lost. In the latter case (22), the patient was nearly dead when I first saw her, no attempt having been made even to ascertain the cause of hemorrhage. In cases 10, 19, 23, and 27, the females survived for several days, but eventually sunk: one case (19), from the immediate exhaustion caused by loss of blood; the others from diseases aggravated by, if not produced in consequence of, such loss.

Making allowance, however, for the facts above mentioned, it must still be confessed that the maternal mortality bears a fearful ratio to the number of recoveries when treated by the common method; and, consequently, any proposal to remedy an apparent defect in the mode of proceeding in these alarming cases, especially when its object is to preserve the life of the mother, ought to be received with respect, and, if practicable, to be fairly subjected to the test of experiment, before an adverse opinion be pronounced. This leads me to the consideration of my first question:—

Will the bleeding be arrested by the complete removal of the placenta from its connection with the uterus?

¶ The interesting records furnished by Professor

Simpson prove that in many cases this desirable object has been accomplished by the means proposed; nevertheless, in questions so purely practical as the present, so easily answered by personal experience as opportunities may offer, I hesitate to recommend to my pupils any novel plan of proceeding, until I can strengthen my recommendation by an appeal to facts witnessed by myself. What, then, has occurred in my own practice tending to elucidate this subject? It will be noticed that in cases 5, 6, 23, 24, 27, 28, the placenta was detached before the birth of the child, and in every such instance the bleeding ceased, not for a time only, but entirely. As the fœtus had been long dead in case 6, and the placenta when examined showed no marks of recent maternal circulation, it is presumed that the vessels had been long closed, and, therefore, no inference can legitimately be drawn from it as bearing upon the point in question; but in case No. 28 the plan proposed by Dr. Simpson was exposed to as severe a test as its most determined opposers could desire; for in this instance the placenta was entirely detached from the uterus, without rupture of the membranes, for at the least fourteen hours before the birth of the child, the effect of this mode of proceeding being the entire suppression of the bleeding: this has been the uniform result in all the cases I have had an opportunity of observing; there has not been a mere temporary arrest, but a permanent stoppage of the flooding. Although it would be premature to draw a definitive conclusion from the limited number of cases which have as yet been recorded, yet I cannot help considering it highly probable that the first question will hereafter be affirmed, and it will be found that where flooding occurs in placental presentation, from a partial detachment of the organ, its complete separation will be followed by an entire cessation of the flow.

This fact, then, being allowed, is Dr. Simpson's explanation satisfactory, viz., that the blood proceeds entirely from the exposed orifices of the placental sinuses? After much reflection I cannot arrive at this conclusion; I do not think the hemorrhage occurs entirely or even principally from these vessels, although there is no reason to doubt that blood will escape from them until they are closed by the formation of a coagula around their gaping orifices, when such effusion will necessarily be prevented. It appears to me that the source of supply, "the long and slender utero-placental arteries," are insufficient to furnish the quantity of blood which so frequently bursts forth from the interior of the uterus, especially when it is remembered that such supply is partially cut off, in consequence of the placenta being already detached from its uterine connection, to a greater or less extent. Again, I cannot forget that many of the more severe cases of uterine hemorrhage which have occurred in my own practice have been those in which the hemorrhage has continued, and sometimes ended fatally, after the placenta has been expelled from the uterus, where there could consequently be no placental circulation at all; and in these cases, therefore, all the blood must flow from the uterine surface; and in the *post-mortem* examinations the patent orifices of the large veins of the uterus were obvious enough. My conviction is, that the sources from whence the blood issues in cases of placental presentation are twofold—partially from the placental caverns, but chiefly from the uterine sinuses; I apprehend that the torn arteries furnish a comparatively small quantity, certainly not sufficient to produce any alarming symptoms.

To what cause, then, is the cessation of hemorrhage to be attributed? I feel no difficulty in answering this question, for, as there is but one condition necessary for the production of the bleeding, so is there but one condition necessary for its arrest: the former consisting in a separation of the natural connection existing between the uterus and placenta; the latter in contraction of the muscular fibres surrounding the bleeding vessels. The complete separation of the placenta

in the cases above related, and in those published by Dr. Simpson, must have been followed by this contraction (for under no other circumstances could the flooding by any possibility have been arrested); and although it could not have been perfect, as the uterus still contained the fœtus in its interior, yet it was sufficient to put an end to the flow of blood. Further observations are required in order that it may be ascertained whether the same result will be attained in every instance; I entertain, however, a confident anticipation that such will be the result, and that it may be as certainly expected as that hemorrhage will cease after the evacuation of the liquor amnii, where it is of the accidental kind.

Let it not, however, be supposed that I am inclined to discard the old operation, and to adhere to the new, in every instance of placental presentation. I would rather regard the new plan as a valuable addition to our knowledge in the treatment of these formidable complications of labour, but by no means likely to supersede delivery by turning; and I entirely agree in opinion with most of my professional brethren, that the cause of the great mortality is justly attributable to injudicious delay, and that far more favourable results would be obtained by a more prompt and energetic method of proceeding; in other words, to use the language of an obstetric author, "To determine to deliver early is to determine that the patient shall not die." ("London Practice of Midwifery.")

At the same time it must be acknowledged, that circumstances may occur rendering version for a time impracticable, as in cases 7 and 17, where considerable delay was inevitable on account of the unyielding condition of the soft parts: for although, as a general rule, dilatation or, at any rate, dilatibility usually speedily takes place where there is much hemorrhage, yet we meet in practice with many exceptions. Had I been aware that the placenta might be removed without compromising the safety of my patients, I should have been relieved of some hours of great anxiety, and much maternal hemorrhage would have been prevented. The plan was adopted in cases 23, 27, and 28, with the happiest effect, so far as regards the flooding. In Mr. Austin's case (31), much blood was lost during the process of dilatation; perhaps this also might have been arrested.

There is also another class of cases, in the management of which the greatest benefit may be calculated upon; and I would particularly direct the attention of the profession to it, because, in the majority of instances, these are the very cases to which the physician-accoucheur is most frequently called—where the flooding has been going on for a considerable time; and he finds, on his arrival, that his patient is in an alarming state of exhaustion, the bleeding still continuing. Every practitioner of experience knows that the sudden emptying of the womb, under these circumstances, is attended with considerable risk: nevertheless he could not be blamed for making the attempt. He would naturally reason thus:—"My patient is in a very unfavourable state for artificial delivery, but, as hemorrhage is still going on, the longer I delay the weaker she will become, and my chance of success be proportionally diminished." He, consequently, turns the child, and in many instances the result is unfavourable. If, however, the safety of the proposed plan be established—if it should by repeated trials be proved that an entire separation of the placenta would at once put a stop to the hemorrhage—he would of course adopt this plan; and, by so doing, the immediate danger would be averted, the patient's strength might be recruited by the use of suitable nourishment, and in the further treatment of the case he would be guided by circumstances as they might arise.

I will merely add, in conclusion, that I wish not to be misunderstood. My experience does not warrant me in giving a decided opinion that the proposed plan will succeed in all cases; but I have seen enough to induce me to give it a trial, assuming that in the present state of our know-

ledge it has been attended with no increase of the dangerous symptoms, but, on the contrary, has been followed by their entire removal; and believing that, in certain cases, the adoption of the new method will be found to be practicable, at a time when recourse could not safely be had to the usual operation of turning.

Finsbury-square, Jan., 1848.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

By GEORGE CORFE (Author of "A Popular Treatise on the Kidney," &c.), of the Middlesex Hospital.

(Continued from page 276.)

As pneumonia or pleuro-pneumonia is the most important, the most common, and the most fatal form of thoracic inflammation in this country, so I would place it in the fore front, and attempt to show by one or two instances, as I have already hinted at when noticing the physiognomy of delirium masking pneumonia, that this disease often, nay, very often, exists when the practitioner, especially one who is inattentive to the science of auscultation, does not in the least suspect it. Let the following case serve to illustrate this assertion.

John Frampton, aged forty-nine, a bulky, athletic man, a butcher, and a habitual spirit-drinker, admitted June 21. Countenance heavy, and with a dusky flush; eyes glistening; conjunctiva rather yellow; lips and extremities livid; respiration 36, and wholly abdominal; pulse 100, hard and full; bowels open; no cough!! no expectoration! tongue dry and furred. Owns only to pain at the epigastrium, increased on pressure. N.B. This man, adds the note in my case-book, walked to the hospital merely to seek some advice and medicine, and was desirous of returning home to work, having only left off the preceding day; but he was detained as an in-patient, and sent to bed.

Auscultation.—Free respiration in every part of the right lung. Over the lower lobe of the left lung, behind, there was extensive small crepitation, gradually becoming less towards the axilla; there was also loud bronchophony; some small crepitation existed over the upper lobe.

The account of his illness was the following:—Six days ago he complained of general weakness, pain came on in the epigastrium, but he has never had pain or distress in his chest or breathing.

V.s. ad 3xiv. (syncope); hirt. xxx. mammae sin.; ant. pot. tart., gr. ss. 2dæ, horis duob. nausea exaltatur.

The following day the countenance was much improved, and less anxious; the respirations were more thoracic; nauseated and purged by the ant. pot. tart.; pulse 100, and hard; less crepitation over the lower left lobe.

C.o. ad 3xvj. hypoch. dextr.; hst. salin. c. vin. ant. p. t., m. xx.; vin. ipec., m. x. 6tis; hydr. chlor., gr. iij. 6tis interme diis; ung. hydr. fort. cruribus infrie.

The following diagnosis was now made:—Red hepatization, or the second stage of pneumonia, exists in the left lower lung, and the first stage, or "engorgement," is going on in the upper lobe.

He continued to go on favourably until the evening of the 27th; but, although he had taken the mercury since the 22nd, yet his gums were not in the slightest degree affected, but his pulse came down to 86. Prior to this relapse we had been informed that he was a habitual spirit-drinker. He now became suddenly delirious, noisy, and sleepless; the pulse rose to 120; the surface became moist and clammy; great agitation of the whole body when he attempted to move; tremors of the limbs and tongue, which was dry and red; but hitherto he had had no cough, and therefore no expectoration!! In this condition he lingered on, getting worse and worse, until the morning of the 29th, when, at eight A.M., he expired.

Post-mortem Examination Seven Hours after Death.—Thorax. Left pleura filled with turbid, wheylike serum, without flakes, but some thin

ones adhered to the costal pleura. Lung slightly compressed. One third of the lower lobe was in a state of grey hepatization, external to which, and around this portion, the lung presented the appearance of being mottled, from a melange of red points and grey substance, the former, it would seem, arising from the portions of unab-sorbed red particles which still remained about it, for above this spot, and in a distinct line along the edge of the lung, ran a piece of vividly red lung, sinking in water, and feeling firm.—(*Red Hepatization.*) Many portions, perhaps all, of the grey lung sank in water, and when it was squeezed, a dirty, grey, purulent fluid oozed out. The upper lobe was vascular, and some points of red hepatization were observed in it also. The lower lobe of the right lung, when cut into, was extremely red, and much frothy blood escaped on cutting it; this would seem to have been the stage of "engorgement" and red hepatization combined; but the latter was not so advanced as to influence the permeability of the organ. The heart was large, there being hypertrophy of the left ventricle. The liver was large also, and gorged with blood. An unnatural amount of fluid in the cavities of the brain.

I could adduce very many more instances of patients who have laboured under the severest form of pneumonia, but the symptoms of whose disease were so insidious, and so contradictory, that, but for auscultation and heautophones, I am convinced the pneumonia would have been wholly overlooked, and the *post-mortem* examination only would have exhibited its fatal ravages. It has, therefore, become a practice in this hospital to submit almost every patient labouring under ordinary febrile symptoms to a careful auscultation, &c.; and it would be a great and a valuable desideratum in medicine if every practitioner would follow this judicious practice: for if, as Dr. Christison justly and sensibly remarks in his work on "Granular Degeneration of the Kidneys," "the most advanced disease of the renal organs may exist, urea may be circulating in the blood, and yet it is by no means an essential feature in this disease that dropsy, either general or partial, should exist;" even so, likewise, I may observe that the most alarming inflammation may be going on in one or in both lungs, carrying on mortal destruction throughout its whole texture; yet the medical man shall not be able to find cough, expectoration, or pain amongst the varying symptoms of this disease; and if he falsely hopes that the malady does not exist, because these physical signs are absent, and if, moreover, he obstinately rejects the invaluable aid of the sense of hearing, and of seeing, &c., as already referred to, his conduct is as unprofessional as it is criminal and indefensible.

The next disease which we may now advert to is bronchitis, because it often happens that it is mistaken for pneumonia in its acute, and for phthisis in its chronic stages; but the physiognomy and the study of the assimilation of symptoms in these respective diseases will often solve this difficulty before the patient is submitted to auscultation.

In acute bronchitis, without emphysema, the countenance is lighted up with some anxiety, the chest heaves, the *alae nasi* work, the angles of the mouth are drawn up in the respiratory acts, the eye is open and bright; but not so in pneumonia: the reverse of these physical signs present themselves here. Whilst in the chronic form of bronchitis, so often mistaken for phthisis, and *vice versa*, the countenance is not wan, pallid, thin, distressed, pinched, and careworn, as in tubercular softening, there is no raucous voice or faint whisper in talking; no dyspnoea compared to that which attends a protracted conversation with a phthisical patient. In the former the chest heaves, in the latter it is passive; the lower ribs only act; the clavicles are motionless; or, if the tubercular deposition exist chiefly in one lung, as already remarked, the subclavicular region is flattened, attenuated, and even hollowed out. But, above all, the respiratory murmur improves from

above downwards in phthisis, whilst the bronchitic sounds are, for the most part, in the lower lobes. This valuable diagnostic sign has been of the utmost importance in the decision of cases in our wards. On one occasion a gentleman's coachman was brought here, labouring under hectic symptoms, blue countenance, and other evidences of rapid exhaustion; he had a severe cough, and the expectoration was moulded, globular, puriform, and sweetish to his taste. (a) We all pronounced the case to be one of tubercular softening, until the chest had been examined, when it was found that the upper lobes were tolerably free, but large, and general crepitation existed over the lower lobes. This convinced me that the disease was one of universal chronic bronchitis, and so it proved to be, for at the *post-mortem* examination there was not a vestige of pulmonary disease, but general engorgement of the bronchi, with heavy globular masses of puriform matter, which had rendered the admission of air and oxygenation of the blood impossible.

My kind friend Mr. Vickers some time ago asked me to auscult the chest of a delicate female servant, under somewhat similar circumstances. She was supposed to be labouring under tubercular softening, from the emaciation, cough, and purulent character of the expectoration; but the reverse proved to be the case on examining the upper lobes, and on comparing the sounds they elicited with the bronchitic disease manifested in the lower lobes.

(b) A relative of mine was under the care of a late physician of eminence for unequivocal symptoms of phthisis, as he believed. There was upwards of a pint of heavy, greenish, rounded masses of expectoration brought up daily; rapid emaciation, slight colligative perspirations, hectic, &c. &c. He was ordered to leave town for his health, and I went to see him at his residence in a village in Surrey. The same train of symptoms still continued, and I then ausculted his chest for the first time, fully anticipating to meet with cavernous respiration, pectoriloquy, &c., under one or both clavicles. My surprise was not little when I found neither, but healthy vesicular breathing under both. I watched the case narrowly, but he was suddenly ordered to leave this spot for Brighton, where he had not been for more than twenty-four hours when his wife placed him in a Bath chair, and he was wheeled on the Marine Parade for the air; but he soon experienced a feeling of suffocation and distress that was indescribable, and shortly afterwards he fainted away. His wife became so alarmed that she instantly ordered a postchaise and removed him back to the village, from which time he rapidly improved, and has been ever since a strong, robust, and active man. I have since examined his upper lobes, and find them permeable in every part, without the least traces of solidification.

Bronchitis presents but little to the eye of the practitioner, apart from auscultation, that needs farther notice. I would only remark that during the winter months, among the large number of applicants at this hospital with chest diseases, two-fifths of them are bronchitic connected with simple emphysema, or emphysema with cedema pulmonum; so that the first-mentioned disease is only superadded to that of an old standing, but recently revived, emphysema. But I will suppose the patient presents the following appearances:—His respiration is deep, thoracic, and free; the chest freely moves in every part; his countenance has a dusky, livid blush upon it; his eyes are clear and bright; his brows are raised; his eyelids open; his lips of a Modena red; his *alae nasi* freely working during the efforts of breathing; his thorax is sonorous all over; he has rhonchus, sibilus, and some large crepitation over

(a) We have often had occasion to notice that when flies assail such expectoration and such patient's bodies that the case is progressing towards a fatal termination; whether it is the saccharine odour of the phlegm or the effluvia of the body, or both, which attracts them, I cannot pretend to decide.

various parts of his lungs behind, especially increasing towards the lower lobes; he has a constant worrying cough, with repeated straining efforts to bring up phlegm, and after some trial (perhaps twenty or thirty efforts) he expectorates a tough, frothy mucus, with a muco-purulent sediment: then the man undoubtedly labours under bronchitis, superadded to emphysema, with antecedent cardiac disease; and this latter change probably consists in a dilatation of its cavities and a thinning of its walls.

Amongst the general remarks which were made upon the physiognomy of the diseases of the thorax, it was mentioned, that a dusky and anxious countenance, a greasy face, nostrils dilated, their *alae* waving to and fro, together with more or less swelling of the joints, invariably denoted either *endo-carditis* or *exo-carditis*, or both. I say more or less swelling, for at this moment there is a most acute form of this disease supervening upon the slightest possible rheumatism of one wrist only, in a delicate lad of nineteen. There has been "the attrition," or *exo-cardiac* sound, and now the bulging of the præcordial region, the oscillating carotids (a), the distended jugulars, a systolic murmur, and the above physiognomical characters, indelibly mark the disease on one's mind as rheumatic carditis, with a large amount of fluid in the pericardium, which may probably terminate fatally even at this period of the acute stage.

The following case is an instance of the fatal character of this insidious disease:—

RHEUMATISM; ENDO AND EXO CARDITIS; FATAL.

Ann Hunt, aged twenty-four, married, wet-nurse, admitted Nov. 21. A pale, anxious, and pointed cast of features; owns only to slight pain in the wrist and knees. Some pain on pressure in the epigastrium; vomiting; pulse 110; heart's action strong and loud, attended with a distinct mitral bruit.

Ten days ago was seized with rigors, but has only been confined to her bed three days with the arthritic swellings; does not seem to be aware of having had any sudden pain come in the epigastrium; dares not go to sleep, she says, for fear of frightful dreams.

R. V.s. ad. 3xij. (syncope); hydr. chlor., gr. v. 6tis; c. vin. sem. colch., 3ss.; inf. digital, 3j.; ex. aqu. menth. pip. in haustu.

23. Cannot lie on the left side; heart's action feeblor, and intermitting; dimness of vision; no sleep, and great restlessness; blood buffed. Omit. hat. pt. pll., ung. hydr. fort. cruribus infric. bis die.

28. This evening she was found much altered, and every appearance of approaching dissolution. The pulse and actions of the heart were scarcely perceptible; extreme restlessness; *pyalism*; (b)

(a) I should here remark, that I am induced to lay some stress upon this peculiar state of the action of these arteries in carditis, since I have repeatedly noticed it in those acute seizures of inflammation of this viscus which attend rheumatic fever. The stiffened valves on the left side of the heart, the first and early product of *endo-cardiac* inflammation, with acute pericarditis, will, I believe, produce this oscillation of the carotid arteries. These "floodgates" of the heart are, under such circumstances, unable to perform their office; not only is the rhythm of the sounds altered, but the muscular walls of the organ, and especially the *cordæ tendinæ* of the ventricle, are divested of their well-poised muscular contractility, whilst the several columns of blood are ejected from the cavity; so that not only is the full rheumatic pulse felt at the wrist, but the central organ of circulation is diverted from its natural force. I do not wish to convey the impression, however, that this oscillation is wholly the result of valvular inflammation, for it is doubtful to my mind whether it does not more commonly denote actual effusion into the pericardiac sac, and that such effusion coexists with *endo-cardiac* inflammation.

(b) This fact (the occurrence of *pyalism*, during the unabated violence of the inflam-

frequent sighing; bruit heard behind; constant sickness; some crepitation over the lower lobe of the left lung, with extensive dullness on percussion. The following diagnosis was entered in the case-book.

"Partial adhesion of the pericardium; serum in considerable quantity still within it; pleuritic effusion on the left side."

She lingered on a few days, when the palpitation became more severe, and she gradually sunk, the pulse not being felt for fifteen hours before death.

Post-mortem Examination Twenty Hours after Death.—Pericardium distended with dark-coloured serum; a shred of lymph seen floating in it; three or four distinct patches of thickened and adherent membrane on the surface of the heart, having loose edges, but unattached to the pericardium; the corresponding portion of this membrane was dotted, for the same space, with a series of red puncta; other parts of the heart exhibited the same red appearances, but without any corresponding redness of the pericardium; the vessels of the heart turgid with blood; the mitral valve was thicker than parchment; close to it, and in the auricle, the lining membrane was mammillated, from a deposit of recent lymph which was firmly adherent; hypertrophy of the left ventricle; water passed *guttatim* from the aorta into the ventricle; the valves of the former were rigid at their bases only; the lower lobe of the left lung was in a state of red hepatization, with serum in the pleuræ.

The mother stated that her son, eighteen years of age, died under the care of Dr. Hue, in St. Bartholomew's Hospital, from diseased heart after rheumatism; and that another son is now (Feb. 4) under Dr. Latham, in the same hospital, who is seriously ill with rheumatic fever, which has "flowed" to the heart.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of Jan. 17; M. POUILLLET in the Chair.

EXPERIMENTAL RESEARCHES ON THE BLOOD CONTAINED IN THE SPLEEN AND VENA PORTARUM, BY DR. BÉCLARD.

This paper was founded upon the comparative analysis of the blood in the veins and in other vessels. In a first series of experiments, Dr. Bédard ascertained that the blood had evidently the same composition throughout the whole arterial system; this was to be expected *a priori*: arterial blood being generated in one organ, the lung, and propelled by one effort of the heart in all directions. The venous blood, on the contrary, proceeding from the organs to the lungs, has different origins, and therefore a different composition. Comparative analysis of the blood in the carotid with that furnished, by the femoral and jugular veins, showed that the

matory action, in serous inflammation, but especially in pericarditis) it has been my lot to observe so repeatedly, during twenty years' hospital practice, that I cannot accede to the proposition which is laid down by some eminent authorities, that mercury is alone to be trusted to in this form of inflammation. Nay, farther, I have witnessed several instances where calomel and opium have been administered at the onset of acute fibrous rheumatism, and whilst there was no appreciable alteration in the sounds of the heart, and where, too, the gums have become touched, and yet, at a subsequent period of two or four days, a "bruit" has arisen, or an attrition sound has been detected, for the first time, although prior to such an occurrence, the cardiac region was explored in vain for these auscultatory symptoms. The combination of the above medicines with a grain of the acetous extract of colchicum, administered every six hours, with a drink composed of potas. nit. 3j. dec. hordei oj., has certainly proved the most efficient means in the treatment of the disease in the wards of this hospital, apart from bloodletting, &c.

venous blood contained less globules and rather more fibrine than the arterial. Having determined these first data, the author endeavoured to establish a comparison between the blood contained in the various parts of the venous system. Thirty-two chemical analyses were performed, of the blood extracted from sixteen animals, at the same time from the spleen and jugular vein, and the result of these researches was the discovery that the splenic blood contained less globules and more fibrine than that coming from the jugular vein; hence the spleen would seem to be the agent of the destruction, instead of being the instrument of formation, of the globules.

With regard to the composition of the blood contained in the vena portarum, it would appear that its constitutive elements varied considerably according to the period of digestion at which the blood was analyzed. At the beginning of digestive absorption, the quantity of albumen was greatly increased, and during the second stage of this absorption the globules augmented. In animals submitted to prolonged abstinence, the blood of the vena portarum had the same composition as the blood of the jugular vein and other parts of the venous system. The contents of the vena portæ not presenting a larger proportion of fatty matter than the blood of other parts of the venous system, and, on the other hand, chyle differing principally from lymph by the presence of fatty matter, the author concluded it was very probable that albumen penetrated the circulation only through the agency of the vena portarum. Further, the transformation of albumen into globules, taking place in the vena portæ, and requiring some time for its accomplishment, explained satisfactorily why a special circulation, independent in a great measure from the laws which regulate the general venous system, had been granted to the liver.

A paper "On the Physiological Presence of Copper in the Organs of Plants and Animals" was forwarded by M. Deschamps; and also an account, by Dr. Ploviey, of Lille, of some experiments made upon animals with chloroform. In these experiments, asphyxia was produced by the inhalation, and dispelled rapidly by insufflation of air into the lungs.

ACADEMY OF MEDICINE.

Meeting of Jan. 18; M. ROYER-COLLARD in the Chair.

CHLOROFORM.—Two cases of painless parturition, under the influence of this agent, were forwarded by Dr. Mordret (of Le Mans): in the first, the application of the forceps was necessary; in the second, the inhalation of chloroform was indicated by the unusual violence of the pains.

TREATMENT OF SYPHILIS BY PREPARATIONS OF IODINE.—M. Rensudin read a report on a volume consecrated to this subject, by Dr. Mojsisovics, surgeon of the Hospital General of Vienna. The author recommended the exhibition of iodine in all stages of syphilis: his doctrines did not differ from those generally adopted.

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 diarrhoea at first of a mild, but afterwards of an incoercible, 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 diarrhoea, at first lienteric—i. e., consisting of the passage with the faeces 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 diarrhoea 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 diarrhoea 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. (66° 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:—*Rx.* Aq. menth. pip., 3j.; syrapi etheris, and syr. corticis aurant., aa. 3ij. Sumat. cocthd. j. amplum q. horâ. When the reaction is fully established, these measures should be suspended and antiphlogistic remedies put in requisition.

DELIRIUM IN PNEUMONIA.—CLINICAL LECTURE BY M. GRISOLLE.—Delirium is one of the most frequent and most severe cerebral accidents by which pneumonia can be complicated. One third of the cases in which this complication is observed refer to habitual drunkards; the seat of inflammation in the summit of the lung has also been considered as having considerable influence upon the production of delirium; but recent observation has not fully confirmed this very generally adopted opinion. Out of twenty-seven delirious cases of pneumonia, observed by Dr. Grisolles, in nine only was the summit affected; the basis was inflamed fourteen times, and the middle lobe only in four patients. Professor Andral and M. Briquet had come to the same conclusion. It is, however, quite correct to say that, when both lungs are affected, delirium is more frequent. It is more common in men than in women in the proportion of twenty-one to six; and it is more usual between fifty and sixty years of age than at any other period of life. Drs. Hourmann and Dechambre state that delirium usually accompanies pneumonia in the aged pensioners of La Salpêtrière. The delirium makes its appearance at the end of the first week, or the beginning of the second, after the outset of the disease, and varies in its intensity from quiet divagations to the most violent sort of furious raving. The appearance of delirium during the progress of pneumonia increases the severity of the prognosis; when the delirium is a predominant symptom, particularly if the pulse be quick and small, or slow and soft—in a word, if absence of harmony is observed between the extent of the local damage going on within the chest, and the amount of vascular reaction—much, recommended by Dr. Récamier, should be employed in doses of 10 to 15 grains daily, in pills. When the patient is a person addicted to fermented liquors, art possesses a greater number of resources: opium should be first employed, and is generally successful; it should be exhibited until sleep has been procured; when the patient wakes, the delirium has usually departed. A little wine, particularly at the beginning of the

delirium, will sometimes suddenly arrest its progress; and the presence of this accident should not prevent the physician from having recourse to venesection, if required by the other symptoms.

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

Scrofulous disease of the glands of the neck. Dr. William King, in a paper read before the Brighton and Sussex Medico-Chirurgical Society, says, "When the glands of the neck are diseased they begin with small oval tumours, which gradually increase in number till they form one large tumour. At first they are not tender. They are moveable under the skin, and sometimes extremely hard, but gradually soften as they approach suppuration. They have been known to be so large as to produce suffocation by pressing upon the trachea. As suppuration takes place they soften and inflame till the skin ulcerates, and a thin fluid is discharged with flakes of tubercle. Sometimes, instead of suppurating, they become obstinately indurated. Formerly scrofula was supposed to be a poison which concentrated itself from the whole body into the gland, and suppuration was encouraged in order to get rid of the poison, or the gland was extirpated: a different theory has led to a different practice. The constitution is strengthened and the tumour is dispersed if possible by absorption, i. e., the disease is considered to be constitutional, and to consist with a morbid state of the blood and of the absorbents, with great debility as the consequence. The blood is therefore purified and strengthened, and the absorbents stimulated to a healthy action. While it is doubtful whether the disease is simple or scrofulous, or mixed, leeches and evaporating lotions are applied: in proportion as it is thought to be specific and scrofulous, tonics are used, and iodine internally and externally. Lugol gives half a grain of iodine twice a day, increased gradually to one and a quarter; one grain of iodide of potash increased gradually to three. When suppuration is unavoidable some apply poultices to hasten it; others think that they obstruct the granulations, and tend to make the ulcerations and the ultimate scars larger, and they persevere with the iodine till the last. When matter is really formed it should not be allowed to discharge spontaneously, because this requires time, during which the abscess increases in size, more internal mischief takes place, the scar will be larger, and the opening seldom chooses the best position. The matter should, therefore, be discharged artificially; if the abscess is small it is punctured with a lancet; if it be large with a trochar, and when emptied, injected with a solution of iodine, two or three grains to a pint of water; or iodide of potash, four or five grains to a pint. The injection should remain a few minutes and be withdrawn, and a compress of lint applied. This will sometimes obliterate the cavity; if it does not, a free opening must be made. When the skin is unhealthy Baudeloque prefers opening the abscess by caustic, made of equal parts of quick lime and caustic potash, made into a paste with spirit of wine. He thinks the wound will heal better if all the unhealthy skin be removed in this way.

Luxation of the Semilunar Cartilages of the Knee-joint.—Mr. Vincent remarks, in his "Observations on Surgical Practice," that he has had several of these cases under his management; always, as might be expected, of the internal one. The case is marked by the joint becoming, on some quick motion of the trunk about the axis on one leg, locked. Often there is great pain, and a slight projection of the anterior edge of the cartilage beyond the margin of the head of the tibia. It is a fact that the pain is sometimes excruciating, and will continue, yet the moment the cartilage is reduced, no pain, or even tenderness, will remain. Much force and varieties of positions given to the knee by powerful means is worse than useless. He has only seen one case in his practice ever reduced by any thing like force, and that was in a man who had frequently suffered the same, where, by carrying the leg as far back as could be done, the car-

tilage slipped into its place. The true way of manipulating here, is to place the patient on his affected side, with the limb bent, and then to rotate gently the tibia on its axis. In this position the joint is loose, making no pressure on the cartilage, and it has the best chance of quietly slipping into its place. It has been known in this luxation, when left alone, that whilst the patient was asleep the cartilage has slipped into its place after a few days. A medical gentleman in the country came to Mr. Vincent not long since to confer with him about a case of this sort in a patient of his, a miller. He had tried every experiment in vain. He was assured he might make his mind easy, and go back and try to keep the miller in bed, and it would slip into its place while the man was asleep. He very soon wrote that it happened as it had been predicted, even though he could not prevent the miller going into his mill. If the gentle rotatory motion does not succeed, the only thing is to keep the patient in bed, and in some of his slumbers all will come right. Of course, if this accident has once occurred, it will be liable to happen often.

Strumous Conjunctivitis.—This disease, Dr. King says, is the most prevalent before puberty, nine-tenths of ophthalmic attacks being strumous. The prominent symptoms are intolerance of light and profuse lachrymation. The old treatment was leeches, blisters, and a dark room. The modern treatment is exercise in the open air, a good diet, tonic medicines, especially quinine, iodine, and iron; and locally laudanum and belladonna to soothe; and as astringents, acetate of lead, sulphate of zinc, nitrate of silver, and Tr. iodini, but especially silver and iodine. The solution of silver is two grains to the ounce of distilled water, increased gradually to five or more, if ulcerations form on the cornea, in which case even the solid stick may be used. Velpéau, of La Charité, formerly preferred the lunar caustic to all other applications; but iodine was not then so well understood as it is at present. He also paid continual and high compliments to Mr. Wardrop as the most original writer on the eye then known. When the iris is affected, the iodide of mercury is said to be useful. It has also been recommended to apply the solid lunar caustic or the Tr. iodini to the external surface of the closed eyelid. Dr. Furnival says it will stop the morbid action in the first stage, and in the chronic stages it will lessen, and even remove, opacities of the cornea.

Cold Water in Fever.—Dr. Nevins read a paper at the Liverpool Medical Society, on the beneficial effects of the use of cold water in fever. He applied it by means of a sheet dipped in cold water, and folded once round the body, and immediately enveloped the patient in four or five blankets, so as carefully to exclude the external air. Profuse perspiration was soon induced, which was allowed to continue for one or two hours, and was then checked by folding the patient for a moment in another cold wet sheet, after which he was rubbed dry and placed in bed. Whilst in the blankets cold water was allowed to the patient, as a drink, if desired. The patients operated upon were from ten to thirty-five years of age, and were generally within the first three or four days after the accession of the fever; whilst the skin was hot, and the pulse frequent, with some power. In these cases the skin became soft and moist, the heat abated, and the pulse was reduced in frequency, and it had not been observed that any injurious depression resulted from the perspiration, whilst the severe headache frequently present was essentially relieved. Even when there was slight bronchial affection he had used this plan without its being increased, and, on the contrary, it appeared to be mitigated, if previously slight. If severe he resorted to applied the cold sheet.

Congenital Hernia of the Liver through the Umbilical Ring.—Dr. Pochhammer was called to examine a new-born child, the non-excised portion of whose umbilical cord was distended by a tumour, of the size of a hen's egg, filling up the

umbilical ring, through which it protruded. Not being able to press the tumour within the abdominal cavity, he cut through the coverings of the tumour, which was then found to be produced by the displaced liver, with its gall-bladder well formed. He dissected the liver away from the adherent integuments, and then replaced it as high up in the right hypochondrium as he was able, and placed a ligature around the base of the cord. The operation was successful; the remaining portion of the cord withered, fell away, leaving a healthy cicatrix; and the infant continued to grow and enjoy good health. At the end of a year from the operation, the umbilical ring remained dilated to the size of a crown-piece, but the abdominal viscera were readily retained *in situ* by a simple bandage.

Chinese Method of Testing the Purity of Opium.

—The opium from Bengal, which consists of two kinds—namely, Patna and Benares—is always of a good quality and pure; but the Bombay malwa is now so much mixed up with other ingredients, that the Chinese smuggler will not buy it until he has had an opportunity of testing its quality. This is done in the following manner:—having selected the chest or number of chests which he wishes to purchase, they are opened, and he takes out three or four of the worst-looking cakes, cuts a small piece from each, and dissolves them in a copper ladle over a charcoal fire. When the opium is melted, it is poured out into a coarse paper filter. If it is not of the worst description it readily passes through the paper into a small basin which is placed under it. When it will not pass through the filter, the Chinese call it man-jing; by which name they designate opium which is so bad, or so mixed with extraneous ingredients, that it will not dissolve in water or pass through the paper filter. This description of the drug, of course, only bought at a very reduced price. When the mixture passes through the filter, the paper is carefully examined, and if any sediment remains, such as sand or rubbish, with which the opium is frequently adulterated, it detracts considerably from its value. This filtered mixture is now put again into a clear copper pan, and boiled slowly over the charcoal fire, until the whole of the water is evaporated, and nothing remains but pure opium. The drug is then poured out into a small porcelain cup, and stirred round and examined with great care. At this stage of the process, colour forms the principal test of its quality, and as the smuggler stirs it round, and holds it up to the light, he pronounces it to be "tung-kow," if it is thick like jelly; "pak-chat," if it has a whitish colour; "hong-chat," if it is red; and "kong-see-pak," if it is opium of the first quality, or like that sent round by the East India Company.

Ulceration of the Os Uteri, a Cause of Sterility.

Dr. Mitchell, in "The Dublin Medical Press," relates a case which was cured by application of nitrate of mercury, and subsequently nitrate of silver in strong solution. The lady afterwards bore children. Dr. Mitchell cautions the profession as to the use of sponge tents, and mentions a case in which a piece of sponge had been allowed to remain in the vagina, and had formed an adhesion with the os uteri, effectually blocking up the passage. The sponge had been used as a plug in a case of flooding during abortion, and when removed the female rapidly recovered and became pregnant.

Sarcina Ventriculi.—Dr. Schlossberger, of Tübingen, says the effects of reagents on the sarcina are interesting, as showing that it possesses chemical characters distinct from most of the organic forms which present themselves to the microscopic observer. It has been ascertained, by experiments, that cold and hot water, alcohol, ether, volatile and fixed oils, have little or no effect on this parasite, except occasionally causing slight shrinking in volume. Organic acids, and dilute mineral acids, have likewise no effect, even at the boiling temperature. Iodine tinges it with its own yellowish colour, but gives no indication of the presence of the parasite.