

to a special medicinal agency of the chlorine itself.

ALTERATION OF ANIMAL HEAT UNDER THE INFLUENCE OF CHLOROFORM OR ETHER, BY DR. DUMERIL AND DR. DEMARQUAY.—Amongst the remarkable effects of these substances, one, which has hitherto escaped notice, and which fixed the attention of the authors, is a curious fall in the temperature of the body. It is more considerable during ethereal than chloroformic insensibility.

ACADEMY OF MEDICINE.

Meeting of Feb. 8; M. ROYER-COLLARD in the Chair.

The meeting was entirely filled up by a paper by M. Huguier, entitled "De l'Esthiomène de la Région Vulvo-Anali." The length of the communication, and the importance of the subject, will justify us in delaying one week the review of this document, in order to place it at full length before the readers of the *Medical Times*.

OPERATIVE SURGERY.

Operations performed at intervals (en plusieurs temps). A Memoir, read by Dr. Vidal (de Cassin) to the Academy of Medicine at the Meeting of Jan. 25.—(Continued.)

3. INCISION OF DRY-SEATED ABSCESSSES AND CYSTS.—Callisen had already conceived the idea of opening dry-seated abscesses in several successive operations, and M. Bégin established this notion as a precept. By the first operation the surgeon should approach as near as possible to the purulent collection, and sometimes the remainder of the operation may be abandoned to Nature, who performs her part by an ulcerous process, hastened by the phlogosis which the first operation has induced. This method has been chiefly applied to the surgical treatment of hepatic abscess, and it is well known that M. Récamier opens certain cysts of the liver only after the application of caustic. The object of the first operation is to cause adhesions between the visceral and parietal layers of the peritoneum, in order that the abdominal wall may, as it were, become the wall of the abscess, and that effusion of pus into the serous cavity may be almost impossible. As I have already stated, the second part of the operation is sometimes abandoned to Nature, who attains her end by ulcerations. Graves is of opinion that the surgical action should be always limited to the first operation. M. Bégin is of a contrary opinion, for the second operation the knife should be always preferred; for the first, opinions are divided—M. Récamier uses caustic, M. Bégin recommends the knife. The propriety of producing adhesions is attributed by the former to the caustic, and is the reason of his preference; but the inflammation produced by incision may certainly have the same result. Besides, the cause of the partiality for caustics is the consequence of two exaggerated fears—that of the patient who, above all, dreads the incision; that of the surgeon, who exaggerates the difficulties of the operation. The caustic cannot be used with the same precision as the knife; and the time necessary for the elimination of the slough is suppressed, if incision be preferred. Some operations seem, also, to exclude the application of caustic. Thus, in order to carry into execution the idea of M. Bégin and others, who, to create an artificial anus, according to Littre's method, recommend first that adhesions be established between the intestine and the abdominal wall. It is evident that it will be far preferable to divide in the first instance the abdominal walls, to acting blindly with a caustic, the action of which it is quite impossible to direct or to limit.

4. LITHOTOMY.—The idea of practising lithotomy in several successive operations is ancient. Franco looked upon this method as the best for the extraction of calculi. It was also mentioned by Covillard, Deschamps, Camperzoin, and Saucerotte. But my predecessors were in the habit of opening the bladder on the very first day, and removing the concretions at a later period; whereas, I recommend that the first operation do not extend to the bladder, which will

be incised only when secondary inflammation has caused a sort of organic cement to be secreted around those parts which will, after operation, be in contact with urine. Infiltration, one of the great causes of the mortality in lithotomy, is thus prevented. M. Nélaton, M. Monod, and Professor Gerdy have already performed lithotomy according to the principles I here defend; but the cases, in which many serious complications existed—sufficiently serious to prevent the idea of lithotripsy or even of the usual operations for lithotomy being entertained—these cases were not fortunate in their issue.

5. AUTOPLASTIC OPERATIONS.—In these, Groefe and Professor Roux have found great advantage in employing the method which I here recommend. In ruptures of the perineum it will be found useful; and finally, by its adoption, operative surgery will attain the following results:—1. The great disturbances of the system will be avoided. 2. The modes of execution varied, and the resources of nature called into action. 3. Certain plastic operations, more perfect and less dangerous, will become possible; and 4. This question will be solved—Is it better to undergo several simple and short operations, unattended with peril, than submit to uncomplicated, long, and dangerous operations?

ACADEMY OF SCIENCES.

Meeting of Feb. 14; M. POUILLLET in the Chair.

TREATMENT OF ACUTE MANIA.—M. Brière de Boismont, who already brought before the Academy of Medicine the treatment of mania by prolonged baths, now laid before the Institute a paper on the same subject, being the *résumé* of twenty-five cases. He insisted with much reason upon the value of a method which, in the short space of a few hours, relieved the brain from the frightful influence of acute mania, and represented the advantage of employing a plan of treatment of a simple and not debilitating nature. He concluded his communication by asserting that the acute forms of insanity might be cured in the space of one or two weeks, by the exhibition of baths prolonged during five, ten, twelve, and fifteen hours, and accompanied by continuous cool irrigations upon the forehead. Acute mania was the form which was most speedily cured; secondly, acute delirium, delirium ebriosorum, puerperal mania, and acute monomania. In several of these forms, however, the cure was neither as rapid nor as constant as in the first. Acute atoxic mania, and chronic mania, were improved, but not in any case completely cured. M. Brière de Boismont was further of opinion that his method would be found useful in hysteria, and in other nervous maladies attended with excitement.

M. Jobert read the first part of a paper on the reproduction of typhus; we will, when the communication has been concluded, present it to our readers in a complete form.

ACADEMY OF MEDICINE.

Meeting of Feb. 15; M. VILPRAU in the Chair.

EXTRACT OF SECALE CORNUTUM IN THE TREATMENT OF INTERNAL HÆMORRHAGE: A REPORT BY M. PIORRY.

M. Piorry reported on a paper by M. Arnal, relative to the action of the extract of ergot in hæmorrhage; and the following were the most remarkable conclusions which the author had arrived at:—Fresh ergot did not seem to be more efficient than the preserved drug; in some cases its action was even less powerful. This medicine does not coagulate the blood, and its influence is negative in external or traumatic hæmorrhage. The oil extracted from the ergot of rye does not, says M. Arnal, contain the active principle of that drug, neither can it be dissolved in ether or in water. The powdered ergot is the most active and efficient form in which the medicine can be exhibited. This substance modifies the composition of the blood, which it deprives of a portion of its fibrine.

The reporter proposed the thanks of the academy be forwarded to M. Arnal, and that his paper be inserted in the "Bulletin."

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

Convulsions depending on Tape-worm.—Mr. Hutching relates the case of a girl, aged fourteen, who had suffered for three months from attacks of convulsions three times a week. Tonic remedies were employed for a month, and the convulsions disappeared; in another month, however, they returned with abdominal pain and diarrhoea. Worm powders and ol. terebinth., in doses of twenty drops, were prescribed without effect. She was now ordered ol. tereb., 3 iij.; ol. ricini, 3 iv.; gr. opii et tr. card. comp. aa. gr. xij.; aqua-menth. virid., 3ss. M. st. haustus, primo mane exhib. In the night she passed five or more yards of tape-worm, since which she has permanently recovered.

Femoral Aneurism.—Patrick M'Vastry, aged forty-five, a prisoner in the Maryland Penitentiary, presented himself to Dr. Gibson on the 25th of June, with a large tumour occupying the greater part of the inguinal triangle (Scarpa) on the inner and anterior part of the left thigh. Its true nature was immediately discovered, and the patient put in preparation for an operation. From the close approximation of the aneurism to the crural arch, it was deemed expedient to tie the external iliac artery; and after a week's preparatory treatment, consisting in the regulation of diet and attention to general health, the operation was performed on the 2nd of July. The patient being placed on a narrow table, with the shoulders elevated, an incision, three inches and a half long, was made about an inch above and parallel with Poupart's ligament, commencing opposite the anterior superior spinous process of the ilium, and ending a little above the external ring. The first cut divided the skin and superficial fascia, and exposed the tendon of the external oblique muscle, which was next divided to the same extent on the director. The lower margins of the internal oblique and transversalis were now found, and divided to the extent of three quarters of an inch upwards, when the fascia transversalis was exposed and torn with the finger-nail, and the artery then discovered on the inner border of the psoas muscle, covered by the sheath it receives from the fascia iliaca. The director was here used to rupture the sheath, on the inner side of the artery, and detach it from the vein, and, when the whole circumference of the artery was thus cleared, the aneurismal needle armed with the ligature was easily passed around it, from the inner side above the epigastric. The ligature was now drawn firmly and tied, and the pulsation in the tumour instantly ceased. The divided internal oblique and transversalis muscles were carefully adjusted, the wound sponged clean, and the edges brought together by the interrupted suture and adhesive straps, leaving merely space for the passage of the ligature. On the third day after the operation, the wound was examined, and union found to have taken place by the first intention, with the exception of about a quarter of an inch round the ligature. The sutures were cut out and the straps retained. A slight discharge had stained the compress. The wound was dressed daily. On the twenty-first day the ligature was drawn away with a very slight effort, and the opening left gradually contracted and healed. About ten days after the operation, another tumour appeared about the middle of the femoral artery on the opposite thigh, also aneurismal, and the size of a large walnut. The femoral artery was tied on this side, in its upper third. The pulsation ceased immediately on the application of the ligature. The wound also healed by the first intention, and the ligature was detached on the eighteenth day. The patient is now entirely well, and almost strong enough to resume the usual labour of the convicts.

Irritable Bladder, with Stricture of the Urethra, dependent on Tape-worm in the Intestine.—A case is related in "The Dublin Medical Press," by Mr. Tufnell, of a man of temperate habits, aged thirty-seven, who came under his care on the 10th of June, complaining of excessive irritability of the bladder, with difficult micturition. He had enjoyed good health till about three months

previously, when he began to suffer from the usual symptoms of dyspepsia, with irritation of the rectum, and hemorrhoids. These symptoms increased, and to them were added tenesmus and frequent calls to make water, which was voided in a twisted jet, and accompanied by severe straining, but no pain. He received temporary relief from taking opium; but he became emaciated, and his health had suffered severely before he applied for medical assistance. A small bougie when introduced was arrested, and grasped tightly by a stricture at the membranous portion of the urethra, the probable result of an attack of gonorrhoea, from which he had suffered some years before. The urine was highly acid, and loaded with lithate of ammonia. The prostate was of natural size, but very sensitive to the touch. The patient was ordered to rest in the recumbent position, to have a pint of tepid water injected up the rectum night and morning to relieve local irritation, and to take infusion of columba with tincture of hyoscyamus, and liquor potassæ. The bowels at the same time to be evacuated by castor oil. Under this treatment he improved so rapidly that he resumed his usual habits at the expiration of a week. His symptoms, however, immediately recurred, and were as immediately relieved by his resuming his former treatment, with the horizontal posture. A second speedy recovery was effected, but he returned in a few days suffering severely, and anxiously desiring an operation for his relief, being convinced that he suffered from urinary calculus. The irritation about the anus had now greatly increased, and he was observed at the same time to be frequently rubbing his nose, which suggested the idea of the possible presence of worms in the intestines. A purgative of turpentine and castor oil was accordingly administered, and the following morning a tapeworm measuring thirty feet was evacuated. All the former symptoms immediately subsided, the urine became clear and healthy, and the patient was soon restored to permanent health.

Foreign Body in the Bladder.—M. Robert related the following case to the Surgical Society of Paris:—A young man, three days previously to his applying for assistance, had introduced an ivory ear-pick into his urethra, which very soon after its introduction became the cause of extreme suffering. On a careful examination of the urethra no foreign body could be detected, but it was discovered, by means of a sound, to have entered the bladder. It was there repeatedly seized with the three-branched forceps, but the attempts at extraction were fruitless, as the body lay across the neck of the bladder. It was agreed, on consultation with M. Heurteloup, that it should be broken, and, if possible, extracted piecemeal, and with this view a *brise-pierre tranchant* was introduced, and the ear-pick cut across. The following day the patient, with much satisfaction, showed to M. Robert a fragment of the ivory which he had voided with his urine, the appearance of which induced the belief that two fragments still remained within the cavity of the bladder. On the following day the patient had a shivering, which was speedily succeeded by a second rigor. M. Heurteloup now made a second attempt to reduce the ear-pick into smaller fragments, but failed in bringing the instrument in contact with any foreign body. During the night following this second operation, all the symptoms of acute peritonitis supervened, from which the patient rapidly sunk. On dissection the peritoneum was found highly inflamed, the rectum was adherent to the posterior surface of the bladder on the left side, and an abscess had formed in the cellular tissue of this part. The internal surface of the bladder was inflamed, and the ear-pick, perforating its walls, projected about three-quarters of an inch into the abscess. From this case M. Robert draws the conclusion, that, when a foreign body like the above has found its way into the bladder, and it is determined to attempt the destruction of it by crushing, it is desirable to finish the operation at one sitting (that is, to reduce it into such small fragments that they may be expelled from the

urethra), for fear of the pointed extremities which are left perforating the walls of the bladder.

Inflammation of the Ventricular Serous Membrane, and Chronic Hydrocephalus.—A young girl, ten years and a half old, intelligent and well developed, was seized suddenly with violent cephalalgia, accompanied by vomiting, fever, and intolerance of sound and light. On the fifth day there was a violent attack of general convulsions. On the seventh day, dulness of hearing, and afterwards cephalalgia, vomitings, and especially convulsions. On the eighteenth day, retarded and irregular pulse; complete deafness on the twenty-first day. On the fifty-second day the intelligence commenced to diminish, and the convulsions became more rare. On the sixty-third day there were involuntary stools; almost complete idiotism on the sixty-eighth day; disappearance of convulsions in three months. Eight days later there were vomitings, with intermitting convulsive cries, and in one of these attacks she died, four months after the commencement of the disease. On examination, the cerebral convolutions were completely obliterated, and there was a little opacity of the membranes enveloping the nervous centres. Arachnoid, slightly thickened and opaque, without any character of inflammation, acute or chronic. There were ten ounces of limpid and strongly albuminous serum in the ventricles, and their lining membrane had a gelatinous aspect, was half a millimetre in thickness, and of remarkable consistence. Dr. Rilliet thinks this a case of inflammation on account of the fever present at the commencement, and of the convulsions, which appeared only on the fourth day. He concludes, first, that the membrane which lines the ventricles may be inflamed without the arachnoid and pia mater of the periphery participating in the inflammation; secondly, that this meningitis is characterized by cephalalgia, vomitings, constipation, a tolerably intense fever, and repeated convulsions without alteration of intelligence; third, that the inflammation may terminate by a chronic hydrocephalus, as distinguished by failure of the intelligence, and latterly idiotism; fourth, that in this form of hydrocephalus the liquid effused is strongly albuminous.

Treatment of Cholera in China.—Dr. Coldstream says, in "The Monthly Journal," that in a manuscript translation of a modern Chinese work, on the treatment of diseases, lately forwarded to this country by Mr. Lockhart, medical missionary at Shanghai, the following prescription is given for the treatment of cholera:—"In cases of vomiting and purging, where there are dizziness of the head and confusion of vision, with coldness of the limbs, if the administration of medicine be at all delayed, the patient will be lost. You ought instantly to administer pepper, quince, and salt, of each five drachms; mix them with three bowls of water, and make a decoction to be administered, which will effect a cure. Also, use mint-leaves and orange-peel, of each five drachms, and make a decoction for use. Thus, if the patient be even in a state of collapse, he will be instantly revived. Also, take soot from the bottom of a cooking-pan half a drachm, and soot from the top of a chimney one drachm and a half; mix them with hot water for a dose. In cramp, with violent retching, whenever the limbs are cold, with ineffectual retching and severe straining without any result, drawing up of the knees to the abdomen, excessive perspiration, cold breath, respiration almost extinct, take of hot salt one ounce, ivory black one drachm, and make a decoction for use, which will produce vomiting, and the energy of the stomach will be restored, and the patient will be cured. Or, take two spoonfuls of salt, boil with boy's yellow urine for a dose, which will be efficacious. Or, take of pepper three or four ounces, with several ounces of salt, make the whole warm, and apply it over the navel as a fomentation, which will effect a cure."

THE MEDICAL TIMES.

SATURDAY, FEBRUARY 26, 1848.

SETTLEMENT OF THE QUESTION OF MEDICAL REFORM.

IMPORTANT ARRANGEMENT BETWEEN THE GOVERNMENT AND THE DIFFERENT MEDICAL CORPORATIONS.

We last week announced in general terms, that representatives of the two Colleges, of the Society of Apothecaries, and of the National Institute had had frequent conferences, and, by dint of much moderation and mutual concessions, had, agreed on the basis of a bill and charter, likely to be brought forward by the Government on one side, and to be satisfactory to the whole profession on the other. Without pledging ourselves to the complete accuracy of the following statement (which is, indeed, likely to be at fault in one or two details), we may announce generally, that the following are the principles on which the different bodies so uniting have agreed that the new bill should be based:—

"I. That a charter of incorporation should be granted to the surgeon-apothecaries of this country, under the title of 'The Royal College of General Practitioners of England.'

"II. That a council should be established to superintend the registration of all medical and surgical practitioners, and for the general control of medical education and practice.

"That the council should consist of one of her Majesty's Principal Secretaries of State, in right of his office (who should also be president of the said council, with power to appoint a vice-president), and that the other members of the council (of whom not less than two-thirds should be registered members of the medical profession) should be such persons, not more than twelve, whom her Majesty, with the advice of her Privy Council, should deem fit to be members of the said council.

"That the council should be empowered, with the approval of the Secretary of State, to appoint a principal secretary and local secretaries for Scotland and Ireland, and clerks, messengers, &c.; and that the members of the council, the secretaries, clerks, &c., should receive such salaries as the Lords of the Treasury should think proper to allow.

"III. That a register should be made and published by the said council, as soon as conveniently may be, of all persons entitled, as after explained, to be registered as physicians, surgeons, or general practitioners, and who shall apply to be so registered within one year if residing in any part of the United Kingdom, or within two years if resident abroad, for which a fee of ten shillings shall be paid by each person so registered; and that to the register should afterwards be regularly added the names of all persons who shall receive letters testimonial, as after explained, of their fitness to practise as physicians, surgeons, or general practitioners, and that for such registration should be paid the sum of five pounds in the case of a physician or surgeon, and of two pounds in the case of a general practitioner. All such fees should be applied towards defraying the expenses of this act.

"The register to be formed on the plan of a specimen submitted to the committee of the House of Commons in 1847 by the registrar of the College of Physicians.

"And all persons desirous of being continued on the register should be required to send their names and residences to the council annually, but without the payment of additional fees.

"The register to be received as evidence in courts of law.

"IV. That those persons should be entitled to be registered as general practitioners who shall be enrolled as members of the Royal College of General Practitioners within one year from its incorporation, according to the provisions of a charter which has been prepared for that college; and that those persons shall afterwards be entitled to be so registered who, having attained the age of twenty-two years, shall have received letters testimonial of their fitness to practise as general practitioners, from the examining board of the Royal College of General Practitioners, and who shall also have been examined and admitted as members of the Royal College of Surgeons.

That those persons should be entitled to be registered as surgeons who shall have been examined and admitted as fellows or members by the Royal College of Surgeons. But, after the passing of the act, those who shall be admitted as members shall be also examined and admitted by the Royal College of General Practitioners, and registered as general practitioners.

"V. That those persons should be entitled to be registered as physicians who shall have been admitted as members of the Royal College of Physicians, according to the provisions of a new charter which has been prepared for the College of Physicians, and has also been submitted to the Government, which charter it is expedient should be granted to the College of Physicians.

That the cases of persons who have been engaged in practice prior to the passing of the act, without being members of any corporate body in the profession, should be referred to the college of the department in which they have practised respectively, for special investigation of their claims to be admitted to register.

"V. That the members of each class of the profession, registered in each of the three kingdoms respectively, should be entitled to be registered and to practise reciprocally in either of the three kingdoms as physicians, surgeons, or general practitioners, as the case may be, provided the education and examinations of each class respectively be assimilated and regulated by a certain standard common to each class; and provided that, previous to registration, they be enrolled in the college appropriated to their class, in the country in which they practise.

"VI. That the council shall be empowered to allow or disallow any new by-law which shall be made by either of the colleges.

"Also, cause a register to be made of medical and surgical students, and to make such dispensing regulations as shall seem fit in favour of those students who shall have commenced their professional studies before the passing of the act.

"Also to call for returns respecting examinations, and fees for letters testimonial and admission into the respective colleges, and to take such other measures as may be necessary in order to assimilate, as nearly as possible, the education, examinations, and fees for each class of the profession, respectively, in each of the three kingdoms. And that the council should be empowered, in any case in which it should appear to be necessary, in order to secure efficiency and uniformity of examinations, to depute one or more of its members to be present at the examinations of any of the colleges, provided the members of the council so deputed be medical practitioners, and of the same class in the profession as the college to be visited; and if, upon the report of such visitor, or otherwise, the council should be of opinion that its regulations are not complied with by any examining body, that it should be lawful for the council to refuse to register, upon the testimonials of the body so in default, until the same be amended to the satisfaction of the council.

"That the council should be empowered to strike from the register the names of any persons who shall be proved to have obtained the registry of their names by any fraud or false certificate, or who shall have been convicted of felony, or of having wilfully and knowingly given any false certificate in any case in which the certificate of a medical practitioner is required by law; also,

the names of any persons who shall have been expelled from either of the colleges, according to the terms of their respective charters, provided such expulsion shall have been approved and allowed by the council, as before required, respecting by-laws.

"VII. That no one who is not registered should be judged capable of performing any act which is required by law to be done by a medical practitioner; nor should any but a registered person be appointed to any office which is deemed by the council to be a public medical or surgical office; nor should any but registered general practitioners be entitled to demand or recover fees for medical and surgical advice and attendance, or for medicines prescribed or administered.

"VIII. That penalties should be imposed by summary process on all unregistered persons practising medicine or surgery.

"Also, on all unregistered persons falsely pretending to be registered.

"Also, on all persons assuming any professional name or designation to which they are not by law entitled, or which implies that they belong to a class in the register in which they are not registered, or that they are members of a college in which they are not enrolled.

"In thus laying down the principles on which a bill should be framed for regulating the whole medical profession, the committee has entered into particulars only as regards the profession in England; but under the fifth head, respecting reciprocity of practice in the three kingdoms, it has assigned the conditions which are clearly indispensable for the attainment of that desirable object.

"The committee is aware that some variations from the plan which is here drawn out for England may be rendered advisable or necessary, by local circumstances and the rights of existing institutions, in Scotland and Ireland.

"And the committee is contented that such variations should be made, provided the principles be not contravened, that equality of education and qualifications in each class respectively of the profession in the three kingdoms should be first obtained, in order that the right of reciprocal practice may be justly allowed."

LORD ASHLEY'S RESOLUTIONS.

The publication by Lord Ashley of his eight resolutions has given a somewhat new turn to the question of poor-law medical relief.

The Committee appointed by the Convention aimed at winning from Parliament and the Government a reconsideration of the whole system; and with that view, while keeping constantly before the public the injuries it daily caused, they carefully collected the data which established for their claims a case at once certain and irresistible.

As, however, it is one thing to show a large title, and another to win its ready and full recognition, the body of medical poor-law officers have not been indisposed to the more modified movement which Lord Ashley has proposed to them.

The resolutions of his lordship do not go far enough; they are far from offering us all the guarantees of that general improvement required by the circumstances of the profession; but it must be confessed also that they introduce with little show, and with no great alterations, agencies which, well worked, may hold within them the seed of very much good. The two first resolutions, giving immediate access to the doctor, secure what is a boon no less to the medical man than to the poor; and, if it should turn out that an order be refused by the relieving officer after a single attendance, there will remain possibly in the new officer (the medical inspector) the power of ordering payment where the case is one of the extras. This is important.

While we thus admit the advantage of the object aimed at by the two first resolutions, we do not see what is gained by introducing the complication of a "parish list." A first attendance is as much secured to the "casual" poor as to the poor on the "list," before any order from the relieving officer: without that order, both are equally deprived of further attendance: the list made, then, for the medical man is, in fact, for his purposes no list: it neither serves the poor nor aids him, and has no business that we see in the resolutions at all. We apply to it the words of Horace: "*Nec Deus in seculo*," &c., and the sooner the two resolutions form one the better.

The third resolution might, we think, be well omitted. It gives no new privilege to the poor; and seems to look forward to a system of female midwifery that cannot be too soon done away with. Why shall we specially arrange for medical relief in first and difficult labours when such relief cannot now be denied by law? and why shall pauper matrons be indirectly precluded from medical assistance, except under certain circumstances which, occurring many months or years before, are supposed to omen a troublesome or protracted parturition? We would respectfully urge that this resolution is quite unneeded, and that if it is to have any action, it will not be one of improvement.

The fourth resolution, providing for a consultation where the destruction of infantile life seems necessary, is one on which we would avoid unnecessary discussion. It will not be opposed by the profession.

The fifth resolution, insisting on legal qualifications when attainable, is but a reiteration of the present law, tending perhaps, though certainly in a very slight degree, to make more difficult the employment of unqualified men as poor-law medical officers.

The permanency of appointment, provided for by the sixth resolution, is unquestionably a boon. It will be a practical benefit if carried into effect: action favours professional independence.

The succeeding resolutions are, however, the important part of Lord Ashley's propositions. We again print them:—

"7. That it is expedient that medical inspectors be appointed by the poor-law commissioners, or by the Secretary of State, or with his sanction; one to each district to which an assistant poor-law commissioner or inspector is attached, at a salary not exceeding four hundred pounds a year, exclusive of travelling expenses, and exclusive of an allowance of a clerk, if the duties should require one.

"That the duty of the medical inspectors should be to inspect and report on the medical treatment of the poor of the different unions, and on the fitness of the medical men appointed by the unions; to inquire particularly into the treatment of the sick poor in the union-houses, and to regulate such treatment; to inquire into and report on the diets and healthful condition of the poor within them generally, together with such other sanitary duties of every kind as may be required of them by the Secretary of State, or by the poor-law commissioners; and particularly with respect to the number of medical officers who ought to be employed in each union, and the salaries which ought to be awarded to them for their services in each particular union, or part of a union, in the district."

The practical value of all these resolutions will be the use to which the inspectors will turn their powers. To some extent these officers will be a protection of the poor;—to what extent will they be a protection to medical men? The answer depends on another question—how far

their reports and recommendations will affect salary.

Lord Ashley, in his conference with the Committee, expressed his willingness to insert a clause enabling the inspectors to affix the amount of salary that ought to be paid, subject to the approbation of the Commissioner or the Secretary of State. This will certainly be an important change; but still the inquiry will remain—What are the inspectors likely to make of their power? We speak in doubt and hesitation, but our hope and expectation is that the inspectors will work well. If they should make on our side duties more burdensome, there is force enough in the profession, we surmise, to see that they make them also far more remunerative.

In any case nothing can be lost by the passing of Lord Ashley's resolutions. If they even made matters worse, they would only make the proximity of our remedy greater; and if they act for improvement, as they to some extent must, the profession would not have been justified in refusing them in the expectation of getting more by waiting. The organisation of poor-law medical officers remains as strong and united as ever. They have established a case for Government interference that must sooner or later conquer all opposition; and the success of Lord Ashley in carrying his suggestions will only serve as an encouragement for the continuance of their good work, in greater zeal and energy.

It is with these facts before us, and supported by these considerations, that we consider the Convention has done a wise, as well as graceful, thing in promising its aid to the noble member for Bath, and recommending his measure to the "active support" of the profession.

THE FATAL CASE AT NEWCASTLE —THE INHALATION OF CHLOROFORM.

The fatal case which occurred at Newcastle, after the inhalation of chloroform, has produced a controversy amongst some of the members of the medical profession. At present three parties have appeared in the lists, advocating three different opinions—one, that death was produced by brandy and water poured into the pharynx when the patient was in a state of syncope; another, that the anæsthetic agent caused death in consequence of some idiosyncrasy in the patient's constitution; a third, that the chloroform being introduced into the lungs in too rapid a manner, and in too concentrated a form, death was the consequence of an over-dose.

Dr. Simpson, of Edinburgh, is the physician who has advanced the doctrine of Greener's death having been the result of suffocation. He has endeavoured to prove its truth by referring to the post-mortem appearances, these, as he says, being in accordance with those usually occurring in persons who have died from obstructed respiration. He admits that asphyxia may result from the use of chloroform, and that the respiration may be temporarily suspended when very powerful and deep doses of the anæsthetic agent have been administered; but says that patients have always recovered by simply removing the napkin from the face and letting them alone. Dr. Simpson imagines that, had this simple process been adopted in the case now under consideration, death would not have resulted.

Still further to establish the position which he has assumed, he states that the morbid appearances of the body differed in some essential points

from those seen in the bodies of animals killed by the inhalation of chloroform; in every case firm coagula of blood were found; in some the lungs were congested, in others not, nor was there congestion of the brain in any.

It is natural that the learned Edinburgh accoucheur, to whom the credit is due of having introduced to the notice of the profession chloroform as an anæsthetic agent, should endeavour to shield it from any blame which its adversaries may attach to it in a doubtful case. All his sympathies are engaged on its behalf, and, having used it in very many cases with the greatest success, of course he considers that with ordinary care no fatal results can ensue. The administration of the brandy and water to the patient by her medical attendant was a happy circumstance, in the doctor's estimation, to save the credit of his adopted child; and the *nimia cura medicinis* is saddled with all the blame of the fatal catastrophe. Little did Dr. Meggison imagine when he took the spirituous compound into his hands, and through the open jaws of his patient poured it into her pharynx, that it was as pregnant with death to her as the renowned horse admitted within the walls of Ilum was to that ill-fated city. The ingenuity of Dr. Simpson will certainly tell upon the minds of many intelligent medical practitioners, and will make them hesitate to pronounce a verdict in this case against the new anæsthetic agent.

Another opinion upon this case is, that the fatal result was brought about by some peculiarity in the young girl's constitution. Of this opinion is Sir John Fife, who made the post-mortem examination of the body. He stated at the inquest, "I attribute the fatal effect of the chloroform in the present instance to peculiarity in the constitution of the young woman. I am doubtful whether it arose from the state of the lungs, or the peculiar susceptibility of the nervous system. It sometimes happens that a person will die from the shock of the operation within a very few minutes after, and with nothing to show the cause. I think in such cases the same individuals would be influenced in a similar way with the chloroform. The same susceptibility of nerve that would render the shock fatal would render the chloroform fatal." Drs. Meggison and Glover entertain the same sentiments also; and the quantity of the anæsthetic agent administered (a tea-spoonful) seems to favour their views. From the mode of inhalation it is fair to presume that not more than one-half passed into the lungs. This, though a small quantity, operating upon a frame greatly depressed from the fear of undergoing an operation, was considered as the real cause of death.

It is evident from the report Dr. Meggison furnished to the columns of the *Medical Times*, that the girl dreaded greatly the operation; he says, "The whole of the day previously she had been fretting much, and apparently dreading it, crying continually, and wishing she were dead rather than submit to it. In this state we found her on Friday, when we went to perform the operation. She sat down in the chair sobbing." It is well known to every operating surgeon that some patients appear as if they neither dreaded nor felt pain, while others seem almost dead when placed on the operating-table. Some will watch the steps of the proceedings, while others will manifest their fears and sufferings by groans. Fear is one of the most acute and depressing passions of the mind, and cases have been known of persons expiring suddenly when

about to undergo an operation. Mr. E. B. Curling, in a pamphlet recently published, on "The Advantages of Ether and Chloroform in Operative Surgery," says, "The state of the system, consequent upon great dread, or striking up the mind to the endurance of a painful operation, is related in some few instances to have had a fatal termination. A case of this kind occurred to that eminent and cautious surgeon, Mr. Cline. A patient, whose breast he had amputated, expired within an hour afterwards without any loss of blood, and having had no previous indisposition, only a prodigious reluctance to the performance of the operation. Mr. Travers mentions the case of a man who was the subject of strangulated hernia, and expired suddenly during the steps preliminary to the operation. Some years ago a man died at the London Hospital whilst undergoing an operation for femoral aneurism. After the artery had been exposed, and the ligature applied, but not tightened, it was discovered that there was no pulsation in the tumour, and that the patient was dead."

It is evident, therefore, that the depression of the vital powers by fear will sometimes produce fatal results, independently of any anæsthetic agents which may be employed to prevent pain.

Dr. Snow is of opinion, however, that neither the brandy and water nor the collapse from mental emotion was the cause of death, but the chloroform, and this from being too rapidly administered, and in too concentrated a form. He considers that the effects of the vapour may accumulate for twenty seconds after the inhalation is discontinued, and that this will be more formidable in proportion to the quantity of vapour inhaled and the rapidity with which the symptoms are induced.

He thinks that, if only half a drachm entered the lungs of the patient in a very short space of time, its action on the nervous centres was so great as to put a stop to respiration. He, therefore, repudiates the opinion of Sir John Fife, that death resulted from congestion of the lungs, which was only a consequence of the mode of dying, and an indication that the heart continued to inject blood into the lungs after oxygen was no longer admitted to facilitate its passage through the capillaries. This, however, is a mere opinion which some of the members of the profession will receive and others reject. But the recommendation of Dr. Snow, that chloroform should be gradually and cautiously exhibited, will be universally considered as a maxim which ought to be constantly observed.

After reviewing the conflicting sentiments of the different medical gentlemen cited above, our own opinion is, that the patient's state of collapse induced by excessive fear had much to do with the subsequent fatal results. The operation was submitted to with great reluctance, and while the patient was greatly depressed the anæsthetic agent was administered, which still further weakened the vital powers.

As it is requisite to use great caution in giving either chloroform or ether after a severe injury when a state of collapse prevails, so is it equally necessary that the same care should be observed when the patient is depressed by excessive agitation.

Anæsthetic agents have not yet accomplished their state of probation, and we hope that nothing further will occur in relation to them that will shake the confidence of the profession or of the public.

EMIGRANT VESSELS.

THE Government has at length been induced to propose to the House of Commons a bill for the better regulation of emigrant vessels. The catastrophes which occurred last year have rendered it necessary that some stringent measures should be adopted to protect the unfortunate human beings who are compelled to leave their native shores for, may be, the Western Continent.

The bill, which was read a second time on Monday evening last, proposes that for the future a space of twelve feet shall be allowed to each passenger instead of ten; that vessels shall be supplied with an adequate quantity of food proportionate to the number of passengers; and that every vessel shall take a responsible Government officer to see that the regulations made by the law are enforced, and, should any improper conduct of the captain or officers of the ship be manifested towards the emigrants, to lodge a complaint on arrival in port.

There is one great defect in the bill, however, inasmuch as it does not effectually provide for emigrant vessels carrying duly qualified medical practitioners. Passengers will be left as in times past to struggle with disease without the hand of science to help them, and all for the reason, as Mr. Labouchere would have us believe, that a sufficient number of surgeons could not be found for the numerous emigrant vessels. A lazier excuse could not probably have been made, as there are at the present time nearly twenty thousand medical practitioners in Great Britain and Ireland. Surely amongst this number, when a proper remuneration for their services was secured, there would be enough found to supply the wants of every vessel.

It is evident, from the statement of the honourable member just referred to, that it is the expense, and not the want of a sufficient number of medical men for the purposes required, that is the real cause of their employment being left to the caprice of an avaricious merchant. The Government will have a superintendent in every ship—probably some warrant-officer of the navy—who is to receive for the voyage the sum of £20, and his vigilance is to supersede the necessity of medical appliances. Yet it was absurdly hinted that, when a competent and trustworthy surgeon could be found, he might execute also the office of superintendent, and thus respectable merchants might be able, for one half the expense they have hitherto incurred, to send in their vessels medical practitioners.

The proper persons for such an office are members of the medical profession, as from their education they are best acquainted with all that is necessary to ensure the comfort and health of the passengers. A person in a less honourable position in society would command but little respect, and, with a small salary for his services, would be especially liable to the influence of a bribe, should the captain be disposed to promote his own pecuniary interests at the expense of the health and morals of the passengers. The extent to which this kind of wrong has been carried is truly appalling. Mr. Stephen De Vere, an Irish gentleman of station and character, having occasion to go to British North America, went as a steerage passenger, that he might make himself personally acquainted with the condition and treatment of such passengers, knowing that there were to be among them some from the neighbourhood in which he resided. The following is an extract from a letter which he wrote:—

"No moral restraint is attempted; the voice of prayer is never heard; drunkenness, with its consequent train of ruffianly debasement, is not discouraged, because it is profitable to the captain, who traffics in grog. In the ship which brought me out from London last April, the passengers were found in provisions by the owners, according to a contract and a furnished scale of dietary. The meat was of the worst quality. The supply of water shipped on board was abundant, but the quantity served out to the passengers was so scanty that they were frequently obliged to throw overboard their salt provisions, and rice (a most important article of their food), because they had not water enough both for the necessary cooking and the satisfying of their raging thirst afterwards. They could only afford water for washing by withdrawing it from all the cooking of their food. I have known persons to remain for four days together in their dark close berths, because they thus suffered less from hunger, though compelled at the same time by want of water to heave overboard their salt provisions and rice. No cleanliness was enforced; the beds never aired; the master during the whole voyage never entered the steerage, and would listen to no complaints; the dietary contracted for was, with some exceptions, nominally supplied, though at irregular periods; but false measures were used (in which the water and several articles of dry food were served), the gallon measure containing but three quarts—which fact I proved in Quebec, and had the captain fined for. Once or twice a week ardent spirits were sold indiscriminately to the passengers, producing scenes of unchecked blackguardism beyond description; and lights were prohibited, because the ship, with her open firegrates upon deck, with lucifer-matches and lighted pipes used secretly in the sleeping-berths, was freighted with Government powder for the garrison of Quebec. The case of this ship was not one of peculiar misconduct; on the contrary, I have the strongest reason to know, from information which I have received from very many emigrants, well known to me, who came over this year in different vessels, that this ship was better regulated and more comfortable than many."

Without stringent regulations, and efficient officers to see them carried out, such transactions will be of frequent occurrence. Emigrant ships are chartered by the owners for the sole purpose of obtaining a profitable return for the money employed in the speculation. Government should take care, however, that the health and morals of the passengers are not sacrificed upon the altar of that a sanguinary deity, mammon. They have been, and will still be, if superintendents of emigrant ships are to be chosen from amongst warrant-officers of the navy at a salary of £20 for the voyage, and the employment of surgeons is left to the caprice of those who charter the vessels.

MEDICAL EDUCATION REFORM.

TO THE RIGHT HON. LORD JOHN RUSSELL.

MY LORD,—There are many reasons why I should address your lordship in particular on a subject which involves the public weal, and affects materially the interests, the rights, and the privileges of individual members of the community.

Firstly,—Your lordship is the head of her Majesty's Government.

Secondly,—Your lordship is the head of a professedly liberal Administration.

Thirdly,—Your lordship has already distinguished yourself as the advocate of civil and religious liberty, and even now confront one of the most influential bodies in the state in support of your principles.

I confess the last is my strongest reason for addressing your lordship, as you have shown your determination to oppose the enactments of those public bodies who, forgetful of the pur-

poses for which they were originally intended, would pervert their powers to their own aggrandizement, and, whilst they neglect the duties of the offices to which they have been appointed, would raise up in the country institutions of sacerdotal, religious, and civil despotism, contrary to the spirit of the British constitution and the liberty of the British subject.

Your lordship may, perhaps, deem the immediate subject of my letter as of too unimportant a nature to receive that consideration which I appear to claim for it.

I grant that, taking an isolated view of its several bearings, this might be the case; the injuries that would result would be confined to only a few thousand persons, and these of a class in life not usually deemed worthy in modern times of particular consideration, namely, members of the medical profession; but, taken in conjunction with other encroachments on private enterprise and private freedom, the subject obtains an importance which demands, and should obtain, consideration.

The evil has ascended; it beards your lordship in your office, and confronts the power of the Crown. So long as it confined its operations to other circles it received no attention—it was not thought worthy of consideration; it might enter the cottage of the poor, the dwelling of the tradesman, or the home of the professional man,—it might desolate their hearths,—the evil was not of magnitude. It approaches your lordship's position, and immediately swells into a monster of national importance.

My lord, you have assisted to create the demon whom you combat, and, like another Frankenstein, now struggle with the being of your own construction, which threatens to crush you. Your hands and voice have been raised to coerce those classes of society from which you sprang, and from which your power is derived; you assisted to destroy the balance of power in the state, and now feel the consequences. Let us forget the past, my lord, and provide for the future; the name of Russell enjoys a prestige in its favour which a mistaken line of policy cannot obliterate. The great fault of rulers of the past and the present age has been, and is, to establish monopolies, and thus concentrate in the hands of a few individuals the power, the wealth, and the resources of the country. The church stands foremost in the struggle, and rank, wealth, and speculation follow close behind. Even the petty bodies of the kingdom raise their standards, and exult in the prospect. The medical corporate bodies think they may act with impunity under your lordship's Administration, and already grow confident of success.

Let me be more specific. The Royal College of Surgeons of England are now busily engaged in the attempt to establish one of the great monopolies of the age, in which they are supported by most, if not all, the other medical bodies where they have any influence, or over which they exert any control. They lead the way—the rest follow; it is in vain that a few honourable individuals resist the attempt—the majority triumph.

I shall not dwell on all the objects for which the body was founded, and for which corporate bodies are established. I shall only mention the support and protection of its members, and the education of medical youth. The former of these has given them but little trouble—they were not interested in the matter. The latter has been a matter of pecuniary interest, and has received much of their attention.

Let me consider what they have done for it and for themselves. Medical education is conducted in the hospitals and schools of the metropolis. The hospitals are immediately under the control of the Court of Examiners of the college, inasmuch as its members or their immediate friends have the government of these public institutions in their hands. The nominal heads are the general committee; the real are, the medical committee, who examine the names of the various candidates, and recommend them, or otherwise, for appointment.

Having thereby established a monopoly of hospital education to an extent and with results which I shall hereafter more fully explain, they have turned their attention to the schools, and are now engaged in obtaining the same results with regard to these.

For many years past, it has been the desire of some of the members of the court of the college to erect colleges for medical education, instead of the former schools in the metropolis. Their first step towards this has been to form schools attached to the principal hospitals; this having been done, their next is to dignify these with the name of college, and to fill their classes by the drawing students from other metropolitan schools. The private schools, or those not connected with hospitals, are, therefore, marked for destruction, and every means had recourse to for their annihilation.

Formerly, anatomy, one of the principal branches of medical education, was taught in schools founded and carried on by private teachers, amongst whom the distinguished names of Joshua Brookes, Carpué, and others stand prominently forwards. These schools were established and recognised by the college with much difficulty. The teachers succeeded, or otherwise, according as they displayed the talents necessary for their undertaking. But the court of the college began to throw impediments in their way, the most serious being the necessity of having a complete school for medical education, including a surgical lecturer, such lecturer being an hospital surgeon; the difficulty of procuring which was great, or in some cases impossible, as hospital surgeons are so much influenced by, and in the power of, the court. Owing to these impediments, private schools have languished, and even now all but extinguished, in the metropolis. The court still persevere, and continue their endeavour to destroy their rivals: with what injury to those engaged in the study of medicine and the subject of medical education, I shall show at a future opportunity; with what advantage to those members of the court who are proprietors of rival establishments, is too evident to require explanation.

The formation of King's College and University College aids them in their efforts: the former is supported by the same party who now dispute the authority of the Crown; the latter, by men who are not likely to impede the accomplishment of ends which favour their own enterprise. The monopolists will have their support. Private enterprise is thus sought to be extinguished, to add to the emoluments of men acting in a twofold capacity—as the rivals of private teachers and the dispensers or withholders of their sanction to teach. The result need not be stated. The consequences are not so immediately obvious, but I will undertake to prove that they tend to the injury of the rising generation of students, and the deterioration of medical education.

Will your lordship sanction such proceedings, and act in opposition to those liberal principles which you have always advocated? If freedom from restraint, encouragement of private enterprise, and the support of honourable competition form your political code, as I trust and believe they do, you will not—you cannot.

I propose in other letters to place before your lordship the abuses which have already appeared in the management of our hospital and other medical educational establishments, and those likely to ensue unless some higher power than those already opposed to these encroachments on private right should interpose; and beg to subscribe myself your lordship's obedient and humble servant,

ESCALAPIUS.

EVIDENCE TAKEN BEFORE THE SELECT COMMITTEE ON MEDICAL LEGISLATION.

(Continued from page 351.)

(John Ayrton Paris, Esq., M.D., President of the Royal College of Physicians, London, called in, and Examined.)

A QUACK PHYSICIAN.—The last instance of that I have fresh in my recollection from the

absurdity connected with it; it was a licentiate of the college; amongst other absurd things which he did, he became the proprietor of a nostrum, which he called "Water from the Pool of Bethesda," and hearing of this we sent a person for a bottle of the water from that celebrated pool; and the directions with it were, that it was to be placed upon a shelf and after some time it would become turbid, and that was an intimation that the water was troubled, and that it was to be then swallowed immediately; but this water was kept by the gentleman for a considerable time, and it underwent no change; a remonstrance was then made to this doctor, and the answer he made was, "I will explain it to you directly; you bought a guinea bottle, and the quantity of water is so small that you cannot discover the change which it undergoes; but if you will buy a five-guinea bottle, you will find that it will become turbid to your utmost satisfaction." That gentleman was suspended for some time, and his name left out of the list; that is the last instance that I remember, and that must have been ten or twelve years ago.

WISDOM OF THE COLLEGE AUTHORITIES.—Though some physicians may practise in London, and many in the country, without our licence, and though some even resist our authority, I am of opinion that, upon the whole, the power exercised by our college has been conducive to sustain the literary attainments of the profession and their honourable and moral conduct. That is the result of my experience as a member of the College of Physicians, and as now presiding over it. I have the strongest opinion upon that point.

DISASTROUS RESULTS OF ANNILATING THE POWER OF THE COLLEGE.—The abrogation of this power would destroy the profession, in my opinion; the grade of physicians would no longer exist. If the charter of the college were abrogated, and our powers at an end, I think that the profession to which I belong would not gain in public estimation, nor would the public gain from the lower standard of the qualification of physician. That is my decided opinion. No complaints have come within my knowledge, or have been preferred to me, nor am I cognizant of any complaint of any abuse of power or authority, as exercised by the college. No complaints have been addressed to the college of abuse of their power and authority, that I am aware of. To Parliament representations have been made of the abuse of our power; in the various attempts made to obtain reform, I have no doubt that statements against our college have found their way into various petitions.

HOW THE REGISTRATION BILL WILL BE INJURIOUS TO THE COLLEGE AND PROFESSION.—We stated in our petition that, by clauses 3, 10, and 31, in the bill now before the House, taken in conjunction with Schedule B., all medical practitioners would be reduced to one grade, whatever might be their respective qualifications. I will point out to the committee how those clauses, taken in conjunction with Schedule B., would operate in producing the effect which we predicate to them, of reducing the profession to a single faculty. Clause 10 enacts, "That every person who shall be registered, and shall possess a certificate in force according to the provisions of this act, shall be entitled, without other licence than such registry and certificate, to practise medicine throughout that part of the United Kingdom for which his certificate was issued." All that he requires, therefore, is to be registered. And then, in conjunction with clause 31, which is the explanatory clause, it is enacted that the words, "medicine" and "medical," when used in this act, shall also mean and include the words, "physic," "surgery," and "surgical." It appears, therefore, that any person who is registered, whether medically or surgically, can perform all the duties of a physician or a surgeon, or a general practitioner, or apothecary; all he requires is to be registered. It does not signify in what way he is registered, because "medical" and "surgical" are synonymous terms; it signifies, therefore, very little whether he is registered as a surgical

practitioner or a medical practitioner; they are one and the same thing. Then, by the registration under this bill, in the manner prescribed by the bill, it is my opinion, that whatever may be the respective literary, scientific, or practical qualifications of parties so obtaining a privilege or licence to practise without any test of their respective qualifications as physicians, as surgeons, or as dispensers, they may interchangeably or collectively perform all those functions. There seems to be no test whatever except the diploma or licence which they obtain from some chartered or legitimate body; it appears that there is no examination testing their qualifications, and they are then registered; the respectability or amount of their knowledge, of course, is only to be gathered from the certificate or diploma which they bring. In my opinion, the effect of granting the same professional privileges to medical practitioners of the lowest qualification as are now granted or distributed to men possessed of the highest would be to lower the general standard of the profession, both literary and professional. I think the inducement to an extended preliminary education of the highest grade would be much reduced; the highest grade would cease to exist. If that should be so, our profession would not any longer be a learned profession. The members of our profession who rise to pre-eminence in the college and in practice in London, generally have gone, before they commence practice, through a long course of literary study. They are scholars generally. Their scholarship is tested both by our college and frequently by the universities before they come to our college. My experience leads me to think that to the public those high attainments and that literary education give security for greater intelligence, and to science itself greater chances of knowledge by which it may be extended and perfected; and I have no doubt that the abrogation of our charter, ceasing to hold out inducements of this kind, would greatly lower the standard of the profession in the metropolis. I think you could not lower the standard throughout the metropolis without lowering it in every other part of the kingdom. From my knowledge of the practice of physicians, I should say unquestionably that a preliminary literary education enables the practitioner to extend medical science and to advance knowledge. The effect upon the profession generally of the extinction of the most highly-educated class in that profession would be to reduce it to one grade, and the general tone of the profession would be very much lowered indeed. To the old members of the profession, such as myself, occupying a station in the profession, and to physicians of great eminence, such a result would be a matter of indifference, any further than as we have a desire to see the profession confined to highly respectable people, as it is at the present moment; but personally the bill would not affect any of the seniors of the college. My place in the profession and the college is already attained. The degradation of the rising members of the profession would be a matter of personal indifference to us, except so far as the welfare of society at large is concerned; nor have we any interest in the college from its personal relation to ourselves. We are supporting the college upon this great principle, because we are satisfied that the existence of the college is essential to the welfare of the profession; but as far as we are concerned individually it is not of the slightest importance. We have no funds at our disposal, and no places to give away, and no personal influence arising from it; and we have, therefore, no motive operating upon us to induce us to sustain the college, except that which operates upon us in the conscientious discharge of a public duty. I am aware that this bill would, by the system of registration contained in it, open to the profession the right to practise in different parts of the United Kingdom.

DEFECTIVE STATE OF MEDICAL EDUCATION.—I am quite convinced that at the present time there is not, throughout the different parts of the United Kingdom, sufficient care taken to ensure an equal standard of qualification to justify an

equality of privilege; there is every possible difference in the various institutions of the country as to education, and as to what is required of candidates, and also as to duration with regard to residence; every university school has its own peculiar laws with regard to them. If you can by any means establish a uniformity of education, we are very ready to grant reciprocity of privileges. Taking the licensing bodies in the different parts of the United Kingdom as now constituted, and as exercising their power of licensing unchecked at present, security is certainly not given to the public of equality of attainments. I have considered very attentively Clause 23 of this bill, which offers the security of uniformity of education and qualifications by the means proposed to be therein taken.

EDUCATIONAL CLAUSE OF REGISTRATION BILL.—I do not think that that clause prospectively provides the security which is now wanted for equality of attainments. With all respect and due deference, I regard the Secretary of State and the Queen in Council as inadequate to discharge the duties that would be imposed upon them; they could only do it by calling in to assist themselves assessors; they must consult medical men; and, therefore, you are getting rid of the College of Physicians in order to introduce assessors; it would come to that. How can the Secretary of State possibly, amongst all his multifarious duties and occupations, superintend such an examination as would be satisfactory? He must have assessors, and who are those assessors to be? The effect of Clause 23 would be to transfer some of the most important functions of the existing corporate bodies to the registrars. The powers now exercised of examination by the corporate bodies would, in point of fact, be transferred under Clause 24 to the officers appointed by the Secretary of State; and it appears that a physician, a surgeon, or an apothecary might come to sit in our college, supposing the examinations are to go on (which I doubt very much), and might report to the Secretary of State his opinion on the validity of our examinations. It would be possible for the Secretary of State to appoint an apothecary to come to an examination of a physician, conducted by our four censors, and sit in judgment on our examination. And that apothecary might report to the Secretary of State that those four censors, being the most eminent physicians in London, conducted the examination, in his opinion, improperly. And the final decision, as to the adequacy or inadequacy of the examination by our four censors, under the superintendence of the inspector, must at last be decided by the judgment of the Secretary of State, upon a matter purely medical, purely professional; so it would appear from this clause.

REGISTRATION DESIRABLE.—I have not any objection to registration. I think that it would be for the good of the profession and the public that there should be an annual and a complete registration. When I say that, it appears to me desirable that the registration should be of that character, that, at once and without any difficulty, any person searching that register, with a view to obtain medical advice, should be able to know what the precise grade and qualification of the person is whom he sought in that register; the medical men should be registered in classes or grades.

RETURN OF THE MORTALITY IN 117 DISTRICTS OF ENGLAND.

For the Quarter ending December 31, 1847.
(Published by Authority of the Registrar-General.)

STATE OF THE PUBLIC HEALTH IN THE LAST QUARTER OF THE YEAR 1847.

The quarterly returns are obtained from 117 districts, subdivided into 582 sub-districts. Thirty-six districts are in the metropolis, and the remaining 81 comprise, with some agricultural districts, the principal towns and cities of England. The population was 6,612,800 in 1841.

57,925 deaths were registered in the last quarter. The average number of deaths deduced from the returns of the corresponding quarter of nine preceding years, and corrected for increase of population is, 46,549. There is, consequently, an excess of 11,376 deaths in the quarter. The deaths registered in the Decem-

ber quarters of 1845, 1846, and 1847, were 59,291, 53,092, 57,925; the mortality in the first is to that of the last quarter nearly as 2 to 1. The mortality, it will be seen in the subjoined table, was below the average in the autumn quarters of the five years, 1841-45, and above the average in the five years 1838-40, 1846-47.

	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
Deaths registered in the December Quarters of 10 years	40,173	41,740	44,186	39,299	39,062	48,688	44,080	39,301	53,092	57,925
Deaths which would have been registered if the mortality had been uniform, and the numbers had increased from 1838 at the rate of 1.75 per cent. annually	39,820	40,516	41,225	41,947	42,681	43,428	44,189	44,961	45,749	46,549
UNHEALTHY SEASONS. Difference above the calculated number	353	1,221	2,961	..	..	..	..	..	7,343	11,376
HEALTHY SEASONS. Difference below the calculated number	..	..	..	2,635	3,019	820	108	5,670	..	..

A slight increase in the mortality was noted in the returns of the June quarter, 1846; the mortality in the following hot summer when the potato crop failed was excessive; cholera and diarrhoea were epidemic in the autumn of 1846, as well as the winter and spring quarters of 1847, the mortality was still higher; scurvy prevailed in the beginning of the year, but in the summer the public health appeared to be slightly im-

proved. Epidemics of typhus and influenza, however, set in, and made the mortality in the last quarter of 1847 higher than in any quarter of any year since the new system of registration commenced.

Deaths registered in each of the Four Quarters of the Nine Years 1839-1847, in 117 of the Districts of England and Wales.

Quarters ending	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
March	49,410	46,876	46,967	44,903	43,748	44,134	49,949	49,650	56,106
June	41,944	42,074	39,133	38,369	40,343	38,977	40,847	43,734	51,251
September	37,817	39,498	36,058	39,469	36,953	38,935	36,139	51,251	51,251
December	41,740	44,186	39,299	39,062	42,608	44,080	39,301	53,092	57,925
Total	169,711	172,134	161,450	162,543	163,659	166,126	165,936	194,104	215,000

The deaths in the year 1845 were 166,000; in 1847, 215,000. The excess in 1847 is 49,000 or not less than 35,000 over the corrected average of 1839-45. The districts from which the quarterly table is made up have hitherto returned less than half the deaths in England; but it is not probable that the country districts have suffered to the same extent as most of those in the return.

In London the deaths registered in the quarters ending December 1845-46-47 were 11,838, 13,221, and 18,553 (12 weeks). The greatest number registered in any quarter of the nine previous years was 14,686 in the severe winter of 1846.

DR. BERNCASTLE AND THE CROYDON CASE.

[To the Editor of the Medical Times.]

SIR,—I have been anxiously expecting an announcement to the effect that the profession had made the cause of Dr. Berncastle their own. If we neglect this eligible opportunity of settling once and for ever the *questio vexata* between the public and ourselves, as to our gratuitous aid, at all times and under all circumstances, being under their control, then I think we deserve not only all the indignities hitherto heaped on us, but become hungry supplicants for such as are in store.

The Croydon board have prostituted office to persecute an individual, and, by a publication of their resolutions, have grossly libelled a private practitioner whose patient they had repudiated. "For every wrong there is a remedy," says English law. That Dr. Berncastle has been wronged none will doubt; let English law supply the remedy, which I feel certain it would do, in swinging damages upon an action for libel. Dr. Berncastle has behaved himself nobly towards his profession by refusing to compromise their interests, and they are bound to support him and bear him harmless in this suit if he will still further oblige us by entering upon it.

There is now the finest opening for planting the standard of Medical Reform that has occurred in this country for several years—such as would cast all parliamentary and other vapouring into the shade. How much benefit has accrued to the profession by a few "legal" decisions that the practitioner is entitled to charge for his visits; and how much must accrue by a legal decision that he is not compelled to work for nothing!

Dr. Berncastle has been condemned by a public body, and therefore has an appeal, but hundreds of practitioners have been similarly condemned privately, insidiously, and maliciously—without hope of appeal. A fitting opportunity offers, and let us establish our proper position. I am not ashamed to plead equally guilty with Dr. Berncastle under similar circumstances. I also, at one time, refused to attend in a stray midwifery case without an adequate fee which was refused; time permitted the patient to be given to another parish, where another case being preternatural at least £1, but, as I believe, £2. Had I yielded to popular clamour, I should have been guilty of robbing my own wife and children by squandering time which ought to be devoted to their support, and further guilty of robbing my neighbour, his wife, and family, of one or two pounds.

My pocket is not overflowing with the abundance of my union salary, nevertheless I shall be most ready with my subscription towards defraying the expense of an action for libel which will result to me in the comfortable assurance that, if in the discharge of my duties I meet a premature grave, my family will be enabled to receive at least some compensation for the services which hastened me thither.

The matter might be advantageously taken up by the Provincial Association, the Association of Union Surgeons, or by a special association for this particular purpose.

There can be little doubt, after his noble conduct hitherto, that Dr. Berncastle would permit proceedings to be carried on for the sake of his brethren; but for us to stand by and see him grossly victimized would be an indelible stain upon the honour of our profession. I am, Sir, yours faithfully,

QUID PRO QUO

GOSSIP OF THE WEEK.

APOTHECARIES' HALL.—Gentlemen admitted members on Thursday, Feb. 17:—Samuel Franceys Gosling, Congleton, Cheshire; John Orred, Liverpool; Charles Devonport Rock Symons, Devonport; Thomas Hore Graham, Stoke, near Devonport.

NAVAL APPOINTMENTS.—Assistant-Surgeons Thomas Hunter, to the Ganges; Allan Brown, to the San Josef; Richard D. Pritchard, to the Blenheim; Fysher Negus, to the Caledonia; William R. Cockburn, to the Havannah.

On Friday, the 18th of February, a deputation from the Committee of Poor-law Medical Officers was deputed with an interview with the Council of the Royal College of Surgeons. The deputation, consisting of Dr. Hodgkin, Mr. Vallance, Mr. Mitchell, Dr. Barnett, Mr. Lobb, Mr. Lord, Mr. Bottomley, and Mr. Peter Martin, were received by the president, Mr. Travers, and by Mr. Green and Mr. Stanley, the vice-presidents of the college. The deputation stated in detail the evils attending the present system of medical relief, both as regards the medical profession and the sick poor, and submitted to the college the heads of a plan they had agreed upon, as containing the principles of a better system. They reminded the college that the only improvement which had hitherto been made in the system since the introduction of the new poor-law, had been a great measure owing to the exertions of Mr. Guthrie, and explained that, by the general reduction of salaries consequent on the medical order, the change had partially failed in giving the relief intended. The deputation particularly dwelt on the necessity of placing poor-law medical relief under competent professional control. The president and vice-presidents of the college assured the deputation of the interest felt by them in the matter, and of their approval of the principles set forth by the deputation. Without committing themselves to the details of the plan, they gave an assurance that it should have the full consideration of the council, and intimated that the council sympathized fully with the objects contemplated by the committee of medical officers, and would be ready to give them its active support.

MEDICAL REPRESENTATION.—The committee was nominated as follows:—Sir James Graham, Mr. Rutherford, Mr. George Hamilton, Lord Robert Grosvenor, Sir Henry Hallford, Colonel Mure, Sir Robert Harry Inglis, Mr. McGregor, Mr. Walter, Mr. French, Sir Thomas Birch, Mr. Osborn, Mr. William Lascelles, Mr. Wakley, and Mr. Grogan. Power to send for persons, papers, and records. Five to be the quorum.

MEDICAL RELIEF.—The following cases occurred in a union in Sussex:—Three cases—two of typhus fever, and one of severe abscess connected with the knee-joint, in which a pint of pus was discharged daily—were ordered port wine by the surgeon of the union, and in each case "home-made port" only was allowed by the Board of guardians. This wine, a species of alcohol, was procured at a grocer's shop, at 1s. 6d. the bottle. Death occurred in all the cases, and it is only within the last few days that the surgeon has found his patients had been taking this wretched substitute for genuine port.

DEATHS IN GLASGOW IN 1847.—The mortality tables for Glasgow for the year ending Dec. 31, 1847, have just been prepared. The number of deaths is 18,886, being a total quite unprecedented in the annals of the city, and exhibiting an increase over 1846 of 7260 deaths. The proportion of deaths far exceeds the cholera year. The great mortality has arisen from the frightful immigration of diseased Irish, from whom fever has spread throughout the community. Upwards of 7000 bodies have been buried at the public expense during the year.

THE LONDON FEVER HOSPITAL, KING'S-CROSS.—On Friday the annual meeting of the supporters of this institution was held at the Freemasons' Tavern, to receive the report for the past year. The Earl of Devon, the president of the institution, in the chair. The report stated that in the year 1843, which was remarkable for the excess of fever, there were 1462 cases admitted; in the year 1844 there were but 646 admitted; in the year 1845, 559 admissions; and in the year 1846, they amounted to 568. The average still diminished in the early part of the last year, the admissions being 47 in January and 19 in February. After that period the cases gradually increased; in March they were 41; April, 70; May, 178; in November they diminished to 121, and in December to 114. The admissions between March and November amounted to 1258, and the total in the year to 1462. The majority

of the cases were those of the Irish poor, who were in extreme exhaustion, being destitute of clothing, and in want of food; out of the number of patients 114 had died. The accounts showed that the sum of £1446. 3s. 4d. had been received, and £1998. 9s. 11d. expended, leaving a balance of £551. 6s. 7d. against the society. In the course of the proceedings a communication was made to the meeting that it was the intention of the sanitary commissioners to open a correspondence with the governors of that institution, in reference to the site taken for the erection of a fever hospital in the Liverpool-road, which was in the midst of a dense population.—The noble chairman remarked that the same objection could be made against any spot of ground taken by the governors.—The president was rejoiced, with the committee and the other officers (the Hon. Algernon Herbert, a trustee, being elected vice-president, in the room of the late Archbishop of Canterbury). Thanks were voted to his lordship, and the meeting separated.

SCARCITY OF LEECHES.—The *Amblatt* of the Royal Government of Liegnitz states, that formerly the leeches were so abundant in the Silesian waters, that there was an ample supply for the whole province, and at low prices. Lately the scarcity of these valuable creatures has not only called for their importation, but the price has been so greatly increased by it that the application of this remedy is often attended with the greatest difficulty. This scarcity is chiefly owing to the reckless leech-catching by incompetent persons in strange waters, in consequence of which some have been quite deserted. An order has, therefore, been issued, that after the 30th of January all leech-catching in strange waters shall be liable to a heavy penalty; and all persons possessing such waters shall be bound to use their best exertions for promoting the increase of leeches.

DR. W. REID CLANNY ON CHOLERA.—In the year 1834, I published the results of many experiments upon a most difficult subject, viz., the nature of human blood; and therein proved by chemical experiments that which had been heretofore a *quæstio vexata*, i.e., whether the air we breathe found its way into the systemic circulation? Those experiments were performed *in vacuo*, and proved incontrovertibly that the atmospheric air passes by *endosmosis* through the air-cells of the lungs, is received by the extreme branches of the pulmonary vein, and thence from the left to the right heart. Two years afterwards, Professor Magnus, of Berlin, confirmed these experiments by the medium of transmission of pure hydrogen into blood received from different animals. The halitus with which the air-cells of the lungs are bedewed, and which has its origin from the serum of the blood, by the process of *exosmosis*, into the air-cells, undoubtedly suspends sufficient free carbon, in such quantity as, by uniting in a direct manner with the inspired oxygen, forms carbonic acid gas, and consequently sufficient animal heat is thereby extricated to keep the temperature of the lungs, at least, equal to that extricated in the systemic circulation, even in the coldest climates. These experiments prove that a portion of the inhaled oxygen is absorbed into the systemic circulation, and in the bloodvessels comes into contact chemically with the free carbon of the blood. The proportion of nitrogen in atmospheric air respired is not essentially altered. The absorption of oxygen and the separation of a portion of carbon, therefore, are the causes to which arterial blood owes its property of being the sole stimulus of living structures. Venal blood which has not undergone this change has a poisonous action on the organs of the body, particularly in the nervous system, its action being similar to that of carbonic acid, sulphuretted hydrogen, and some other gases, by which irritability of the organs of the body is destroyed, and by most of which the arterial blood is darkened in colour. Undoubtedly all organic processes are greatly dependent upon the influence exerted by the nerves on the organic portions of the body, as Home

and Brodie have proved; and it cannot be denied that the reciprocal actions between these organs and the nerves generate a considerable proportion of animal heat. We are assured, therefore, that the object which the respiratory process is intended to attain, is evidently the absorption of oxygen into the blood, which conveys that gas as a stimulus to the different organs of the body; and the removal from the blood of the carbonic acid which is formed in the course of the circulation. The external layer of the organized skin seems to possess very feeble absorbent power; and, consequently, we are not for a moment to suppose that gases, whether pure or in the form of gaseous fumes, find their way into the system by the skin. From recent investigations by Herschel, Whewell, Peacock, Lloyd, and Sabine, we are assured that the march of the magnetic phenomena in this region of the globe is steady, rapid, and in a westerly direction. May we not from this fact conclude that the Asiatic cholera which reached Sunderland from the east in the autumn of 1831 was conveyed to us by atmospheric or terrestrial agency? Moreover, we find from "Dr. Hecker's History of the Black Death," or great pestilence of the fourteenth century, which desolated Asia, Europe, and Africa, had its progress from the east to the west. In the progress of natural phenomena from east to west, that great law of nature is plainly revealed, which had so often manifested itself in the earth's organism as well as in the state of nations dependent upon it. This town has frequently been visited by typhus of a severe type; at one period it was not only malignant but assumed the petechial form, or spotted fever as designated in our vernacular language. We may divide infectious agents into those which, like germs, are capable of reproducing and of multiplying themselves as organized bodies, and into those which are devoid of this character, and require for their propagation certain accessories, without which they will not appear. The former of these represents contagious; the latter infectious. In Sunderland we have for many years found that infection shows itself amongst persons residing in low, close, ill-ventilated, dirty houses and situations, especially in streets in which animal and vegetable substances undergo decomposition, and by which the air is frequently poisoned. The window-tax has ever been a source of regret, particularly amongst members of the faculty—for where light is kept out filthiness must prevail—even in the houses of persons in easy circumstances. This tax is also another source of defective circulation of atmospheric air. It is a known fact that light is a disinfectant. My late and much-lamented friend, Dr. Henry, of Manchester, described to me, many years ago, and soon after the visitation of cholera, the results of his experiments in proving the disinfecting power of heat in typhus and scarlatina. He placed articles of clothing in long iron cylinders, and for an hour kept them in an atmosphere at 200 deg. Fahr. It must be acknowledged that this plan is superior to the use of chlorine gas, which, in general, affects the lungs when used near to the patient, and even chloride of lime, into which articles such as linen rags are moistened and suspended round the room, and which is often offensive to the patients, and hinders respiration. Tubs of pure water should be at hand, into which all clothing, whether worn by day or night, should be immersed, and washed with white soap.

THE CHOLERA.—In several districts of the Transcaucasian region, especially at Tiflis and its vicinity, it was remarked last summer, shortly before the appearance of the epidemic, that the bees displayed a prodigious activity. The gardens and meadows were covered with them. They were met in swarms carrying, as a booty, a quantity of honey and wax; but the moment the malady declared itself they kept themselves concealed in their hives, which they had hermetically closed with wax. It would be interesting to ascertain if the same phenomenon was observed in the other parts of Russia where the cholera prevailed.

NOTICE.

SUBSCRIBERS IN ARREAR are respectfully requested, in conformity with the terms of their subscriptions, at once to forward their remittances to the OFFICE.

TO SUBSCRIBERS.

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 Carfax.

MORTALITY TABLE.

For the Week ending Saturday, Feb. 19, 1848.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES.....	1134	1107
SPECIFIED CAUSES...	1102	1102
Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	302	184
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	47	69
Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	120	138
Diseases of the Lungs, and of the other Organs of Respiration.....	213	225
Diseases of the Heart and Blood-vessels.....	28	39
Diseases of the Stomach, Liver, and other organs of Digestion.....	68	62
Diseases of the Kidneys, &c. Childbirth, Diseases of the Uterus, &c.....	11	13
Rheumatism, Diseases of the Bones, Joints, &c.	7	8
Diseases of the Skin, Cellular Tissue, &c.	3	1
Old Age.....	42	79
Violence, Privation, Cold, and Intemperance.....	32	31

TO CORRESPONDENTS.

Mr. Caton's papers have been received.
 "Sigma."—The name of the person will be found in "The Medical Directory" recently published, in the list of persons whose qualifications are not known.
 "Sydenham."—The registration of births, marriages, and deaths, by the parish clerks, cannot be relied on. Under the present system there is a near approximation to truth. The causes of deaths, however, cannot be exactly relied on, as in many instances unqualified persons give certificates which are received by the deputy-registrars.
 "Investigator's" paper "On the Philosophy of Existence" is not suitable for our columns.
 "Cantab."—The work was printed at the Pitt Press. Consult the "University Calendar."
 "Mr. Foster."—The work may be consulted with advantage, and is worthy of a place in the library.
 "M. D., Dublin."—The London College of Physicians is, we believe, about to issue a new Pharmacopoeia. We have not heard that it will be published in the "vulgar tongue," nor do we think that it is likely.
 "Scrutator."—We must be permitted to prefer our own judgment in reference to our correspondents' communications. While they are not devoid of merit, we decline publishing them, as they would not sufficiently interest our readers.
 "An Unfortunate Surgeon."—There is no remedy in the County Court, as our correspondent would have to show that he is a licentiate of the Apothecaries' Company, London.
 "Stephanas."—Druggists are not compelled to undergo an examination before they engage in business in London. The Pharmaceutical Society's diploma is obtained, because it is supposed to confer on the possessor a little honour. We cannot offer an opinion upon the examination which a candidate for it is required to undergo.
 "Magister Artium."—1. A physician with a German diploma has no legal right to practise medicine in England. 2. The sale of diplomas by "agents" has been stopped.
 "Dr. Newberry."—The communication was furnished to us by the surgeon immediately after the fatal occurrence.

"A Member and Licentiate."—We think that an advertisement would not produce the wished-for result. The appointment is neither permanent nor lucrative.
 "Iota."—Apprenticeship is not required by the English College of Surgeons.
 "A Medical Student, Bristol."—The passage from Celsus has exercised the ingenuity of his medical commentators. It is supposed that the disease referred to was inversion of the uterus.
 "Scotus."—The licence of the Apothecaries' Society constitutes a legal title to practise in England and Wales.
 "A Regular Contributor, Oxford."—A discussion upon the origin of the medical term referred to would be more curious than useful. It is compounded of two Greek words, and is not defined by any Greek writer.
 "R. N."—The effusion is usually preceded by an attack of febrile symptoms and an inflammatory affection of the part resembling erysipelas; and these febrile symptoms have a tendency to recur, though often at irregular intervals, so as to resemble somewhat an erratic intermittent.
 "Consistency."—Our correspondent is alarmed without reason. We have not yet dealt with the subject.
 "Dr. Henderson."—1. Yes. 2. In July last. The papers requested shall be sent at an early opportunity.
 "Argus, Cheltenham."—The publication of the article would expose us to an action for damages, and do no good.
 "A Liverpool Subscriber."—A qualified practitioner can charge a fair sum for attendance as well as medicines. The case would be successful in the County Court.
 "P. B., Sunderland."—The lecture on Animal Magnetism has been received.
 "Young Physic" is evidently inexperienced. We are sorry that his request cannot be complied with.
 "Amicus."—The classical examinations must be first passed.
 "T. T. B."—Sulphuric acid may be distilled regularly, and with but little danger, by dropping into the retort a few pieces of platinum foil.
 "Leonard F. M.D."—The lectures will be published regularly till completed.
 "Medico-Chirurgus" writes us, in reference to chloroform, "that it is an agent which as yet cannot be thoroughly trusted. In two cases under my superintendence it produced violent muscular spasm. In three other cases sickness and headache supervened after its inhalation. The chloroform I believe to be good, having obtained it of one of the first chemists in London."
 "Mr. Wm. Hallam, Newcastle, Staffordshire."—Paper "On the Use of Chloroform in Midwifery" received.
 "H. A." is thanked for his analysis of "The Provincial Medical Directory."
 "A Constant Subscriber, Manchester."—It is probable that the matter would be closely scrutinized in court, and facts might be elicited which would sustain a prosecution under the Apothecaries' Act.
 "P. L. S., Liverpool."—The natives of tropical climates generally use a vegetable in preference to an animal diet.
 "Mr. A. W. Close, Manchester."—The case of cesarean section by Mr. Goodman has come safely to hand.
 "Mr. Evan Thomas, Cumberland Infirmary."—Communication received.
 "Mr. J. Jones, Llanfarn, Montgomeryshire," is thanked for his communication, and his suggestions shall be attended to.
 "An Annual Subscriber's" paper "On Impregnation" is under consideration.
 "Dr. G. W. Maxwell, Calcutta."—The communication entitled "A Key to Cholera" received.
 "Mr. John Robinson Chapman" is, of course, not the *soldier* Mr. Chapman going about asking alms.
 "Mr. Maxwell, Priors Lynn," is thanked for his suggestions.
 "M. D.'s" letter last week "on Dr. Lee and the Nerves of the Heart" should say, instead of "live like," &c., "lie," &c.
 "Mr. W. R. Wilde, 15, Westland-row, Dublin."—Letter received.
 "Dr. Wilesworth, Swansea."—Communication has been received.
 Dr. Wilesworth's lecture is unavoidably postponed till next week.
 Dr. Bushman's paper on the Progress of German Medical Science is also deferred till next week.
 "M. D."—By Lord Denman's decision in the celebrated Houslow case, the coroner is bound to seek unbiased testimony in calling in an additional medical witness. The custom of carrying about a private friend, to give medical testimony at inquests, subjects the party to the penalties of a misdemeanour. Till we abolished it, this custom was as common in Middlesex as in the county of our correspondent names.
 "A Looker-on," who writes an anticipatory condemnation of the "coming charter," and insists that it will place in jeopardy the improving position of the general practitioner in this country, should wait, like ourselves, before pronouncing a positive judgment, till the details of the document are before him.
 "A Medical Officer, Lincolnshire."—We have endeavoured to make room for the letter in vain. The letter from Bulwell may be delayed, we consider, under present circumstances, with advantage.
 "Medicus" is thanked for his complimentary effusion to our alleged services to the profession, as well as for the proposition which accompanies it. We decline, however, to concur in the suggestion.
 "J. H. B. writes to us, that when we printed from "The Annual Register," two or three years ago, the report of the case, "Wakley and the Hope Insurance Company," we did not publish the public certificate of Ex-Sheriff Parkins exonerating the plaintiff from having had any official concern in the public execution of Thistlewood.

Our correspondent thinks that as the plaintiff is a surgeon and a public man, and as the circumstance is referred to in the report as a popular rumour, we are bound in fairness to him to publish the certificate. We were not aware of the document's existence, but, if our correspondent sends it to us, we have no objection to give it publicity in our next number. It has always been our study to do justice to both sides.
 "A Subscriber" writes us: "In the numbers of the *Lancet* for July 17, 1847, and subsequently, will be seen an extraordinary suggestion of a physician to a dispensary for diseases of women and children, and one, moreover, which he shows by cases that he has several times put in practice, viz., the division of the hymen, in cases of virgins who have what he conceives to be an inflammation of the neck of the womb. Now, in all the annals of medicine there does not appear to have been a more monstrous proposition than this, or one calculated to make more mischief in families; yet the sapient *Lancet* has published the communication as if it were a great discovery. Women are sufficiently arduous at present, and often enough pass themselves off to their husbands as maidens when they have no pretension to virginity; but, when they meet with a man who is not to be deceived on this point, they have at present no alternative scarcely but to confess the lie, or at least to let their husband remain assured that they have in all probability had prior intercourse with some other man. I say in all probability, because, even now, there are some rare cases where it would be wrong to say a woman was not a maiden because she had not presented the ordinary signs of virginity. But, if we are to have a practice like the one under consideration introduced, women (no longer maidens) may always boldly set forth to their husbands that their virginity was destroyed by the knife at the physician-accoucheur's recommendation! The introduction of such a practice, then (independent of the immorality to which it may lead among such surgical operators themselves), is calculated to increase the amount of profligacy among unmarried women of all grades in society. By the way, Parent Duchatelet, Lignac, and others consider the signs of virginity, even without any such operation, often now difficult to be assured of in many cases. Such is the aspect of the case in its moral bearings; let us now see if it is justified by necessity; for the physician who recommends it seems a conscientious man, and appears to think it is sometimes necessary for the cure of disease. But to this it may be replied, how does he know the powers of nature? and how does he know that a good course of purgatives, leeches, the hypogastric, or other means, will not succeed at last? or even that nature herself may not suddenly cure this inflammation of the neck of the womb, just as she cures many other internal inflammations, sometimes without any physic at all? A woman, then, will be a fool who submits to have any operation of the sort performed. She had far better trust to the powers of nature, than stand the chance of bearing her husband's reproaches, should she have her hymen divided for any disease of the womb and then think of marrying!"
 "Medicus" wishes to know "If the Mr. John Edward Ryan, of Farnham, Kent (whose death was recorded in your obituary of the 19th instant), was the Mr. Ryan who was so shamefully persecuted by the drugmongers of Rhubarb-hall, some years ago; which proceedings were the more palpable, he being a qualified surgeon, and not a quack? This distressing case, Quackley, sen. (father of the gent who performs such far-famed operations), promised to lay in all its details before Parliament the instant his constituents returned him for Finsbury—Quackley's own words being 'that he would make the old hag bitterly rue their interference.' If this be the same personage, the Society of Apothecaries ought, in justice, from their overflowing coffers, to allow his bereaved widow a compensating pension; Mr. Ryan's untimely end being doubtless accelerated by their unjust treatment."
 Letters and communications have also been received from Mr. Caton; Sigma; Sydenham; Investigator; Cantab; Mr. Foster; M. D., Dublin; Scrutator; An Unfortunate Surgeon; Stephanas; Magister Artium; Dr. Newberry; A Member and Licentiate; Iota; A Medical Student, Bristol; Scotus; A Regular Contributor, Oxford; R. N.; Consistency; Dr. Henderson; Argus, Cheltenham; A Liverpool Subscriber; P. B., Sunderland; Young Physic; Amicus; T. T. B.; Leonard F., M.D.; Medico-Chirurgus; Mr. Wm. Hallam, Newcastle, Staffordshire; H. A.; A Constant Subscriber, Manchester; P. L. S., Liverpool; Mr. A. W. Close, Manchester; Mr. Evan Thomas, Cumberland Infirmary; Mr. J. Jones, Llanfarn, Montgomeryshire; An Annual Subscriber; Dr. G. W. Maxwell, Calcutta; Mr. John Robinson Chapman; Mr. Maxwell, Priors Lynn; M. D.; Mr. W. R. Wilde, 15, Westland-row, Dublin; Dr. Wilesworth, Swansea; Mr. Speculator, Manchester; M. D.; A Looker-on; A Medical Officer, Lincolnshire; Medicus; J. H. B.; A Subscriber; Medicus; Dr. Murphy, Fermoy; Mr. J. Andy, Rufford; Dr. Robertson, Newry; Mr. Croft, Bracknell; Mr. Brook, Chuddeley; Dr. Healy, Dublin; Dr. Powell, Sligo; Mr. Pretty, Inessingfield; Dr. Hutchinson, Bridlington; Mr. M. Bean, Egin; Dr. Cockran, Auchterarder; Dr. Mackay, Preston; Mr. Willows, Melton Mowbray; Dr. Menzies, Pitlochrie; Dr. Haile, Charlton-on-Medlock; Mr. Gregory, Higham Ferrers; Mr. Moore, Wilmshaw; Mr. Chapman, Uxotexter; Mr. Collyns, Dalverton; Mr. Coleby, North Walsham; Mr. Miller, Eyn; Dr. Green, Youghal; Mr. Spurgin, Northampton; Mr. Tebbel, Hastings; Mr. Ashton, Ramsbottom; Mr. Evans, Canterbury; Mr. Shepard, Uak; Mr. Leak, Hemsworth; Mr. Stevenson, St. Leonard's; Mr. Rayn, Bratall; Mr. Halder, Preston; Dr. M'Nab, Epping; Mr. Welling, Ravenstone; Mr. Gibson, Amble-side; Mr. Davis, Outerarde; Mr. Squibb; &c.

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Read by Mr. HANCOCK, Surgeon to the Charing-cross Hospital, and Lecturer on Anatomy and Physiology at the Royal Westminster Ophthalmic Hospital.

LECTURE V.

ON WOUNDS AND INJURIES OF THE CHEST.

The operation for empyema; ancient mode of operating; the modern methods by trocar and canula, and by incision; Dr. T. Davies' grooved needle; place of election; directions for the operation; comparative success of the operations by incision and by puncture with the trocar; admission of air into the cavity of the chest; opinions of Mr. Cock and Dr. Hughes on paracentesis thoracis, and on the admission of air into the cavity of the chest; M. Goze's case of paracentesis thoracis for hydrothorax; in hydrothorax, the puncture should be closed immediately—in empyema, a permanent drain should be established; Dr. Th. Thompson's case; Dr. T. Davies' practice; the propriety of injecting fluids into the cavity of the chest; Dr. Gibson's case; case by Morand; case by Desmer-broek; case of Dr. Wendelstadt; case of musket-shot wound of the chest; case of penetrating wound by a Polish lance; cases of the operation by necessity; Messrs. Faure and Aubert's cases of external abscess communicating with the chest; lance wound of the chest; Dr. F. Bird's report of a fatal case of pistol-shot wound of the chest, under the care of Mr. Lynn and Dr. Roe in the Westminster Hospital; post-mortem appearances.

The operation for empyema appears to be of a right ancient and military origin. It has not been satisfactorily decided whether it was first performed on Phalarus, Jason, or Prometheus; and it is, therefore, said of all three, that each, being expected to die of an abscess in the lungs, declared to be incurable, went into battle for the purpose of getting himself killed, but, being fortunately only run through the body, they all recovered in consequence of the escape of the purulent matter through the holes thus made. It is certain that the operation was performed by Hippocrates and his successors, by the knife, by caustic, and by the hot iron. Ambrose Paré appears to have been the first who recommended a trocar and canula, and many instances of success in all ways are recorded. The modern methods are two in number: one by the trocar and canula—the other by incision; although there are few persons in England who would now resort to incision, unless there were reason to believe some extraneous matter required to be removed, even if it were only a portion of carious rib—a consequence, by no means rare, of long-continued disease. After penetrating wounds of the chest, in which the presence of a foreign body may be suspected, if not actually known, the method by incision will be essentially necessary, as will be hereafter shown.

The late Dr. T. Davies claimed the invention of a grooved needle for the purpose of exploring the cavity of the chest; but, as a trocar and canula are made as small, they may be safely preferred; if fluid should pass through the canula, a larger one may be introduced in its place, if thought advisable. In ordinary cases, the little wound should be closed immediately after the evacuation of the fluid, and it usually heals, if small, without difficulty, and the operation may be repeated, if necessary, with greater confidence. The introduction of the instrument gives but little pain, is rarely followed by any bad consequences, and ought, therefore, to be had recourse to much more frequently than it is at present, and at a much earlier period. Whenever auscultation and percussion give reason to believe that a fluid is collected, which medicine has not been, nor is, able to remove, the simple operation by the trocar and canula should be performed.

It is, in fact, merely an exploration. Care should, however, be taken that the point of the instrument is perfectly sharp, or it may separate the thickened false membrane from the inside wall of the chest, and, by pushing it before it, prevent the fluid from passing through the canula when the trocar is withdrawn. The place of election, in England, for a puncture in ordinary cases, is usually between the fifth and sixth ribs, counting from above, and between the sixth and seventh from below, and at one-third of the distance from the spinous processes of the vertebrae; or two-thirds from the middle of the sternum. If there should be any protrusion of the intercostal spaces, it may be a rib or two lower. The point of the instrument—one of which has now a place in every military case—should be introduced nearly midway between the two ribs, or a little nearer the lower than the upper, and pressed on until all resistance has been overcome. It is entered nearer the lower rib, to avoid the intercostal artery, and yet not touching the rib, lest it should induce a too forcible contraction of the intercostal muscles, when it is said the point might be suddenly raised and broken against the upper rib, and the operator much inconvenienced. In France, Sabatier, Pelletan, Boyer, &c., reckoning from below upwards, recommend the opening to be made between the third and fourth ribs; Chopart and Desault, even between the second and third, on the left side, and the third and fourth on the right; but the diaphragm would in all probability be wounded by a trocar, unless the fluid effused were in considerable quantity; Laennec, between the fifth and sixth from above, as in England.

If the person should be very fat, or the puffing of the integuments considerable, it may not be easy to feel the ribs, in which case even recourse should not be had to incision. When the arm is placed by the side, and bent forwards at a right angle, so that the hand rests on the ensiform cartilage, the inferior angle of the scapula will correspond in general, but not always, with the interval between the seventh and eighth ribs at the back part. The attachment, however, of the

last of the true ribs, the seventh, to the xyphoid cartilage, can always be ascertained in front, and an error of importance cannot well take place, as the object in making a puncture by measurement is to avoid the diaphragm. Freteau, of Nantes, in his able paper on empyema, published in the "Journal Général de Médecine" for 1813, says that Dr. Lefond and himself performed the operation on the left side between the tenth and eleventh ribs, and on the right side between the ninth and tenth, in more than thirty dead bodies, and always opened into the cavity of the chest, performing it close to the edge of the latissimus dorsi muscle, or about three inches and a half from the spine—an operation which in this place should be done by incision, and not by the trocar. When there is reason to believe that there is an extraneous body to be extracted, such as a ball, the place of election is of importance, as it is desirable it should be a little above the diaphragm in order to facilitate its extraction; for although, by carefully shifting the position of the patient, a ball or a piece of bone may be brought to rest against the opening, it will not be easily taken hold of, unless it lies upon the diaphragm—a point which will be hereafter further elucidated. When an external swelling indicates the presence of matter, and there is reason to believe it communicates with the inside of the chest, the opening should be made into the tumour, which is called the "operation by necessity;" this is not an uncommon occurrence after gunshot wounds. The operation by necessity is not always, however, done in the most convenient place, and must then be repeated lower down, which will also be sometimes necessary in consequence of the matter collected in this way being cut off by adhesions from the general cavity.

When the operation by incision was alone performed, the success was certainly not great. Dupuytren said in his lectures that, in fifty cases he had seen, two only had entirely recovered. In more modern practice the success after the operation by puncture has been much greater. Dr. T. Davies lost only four out of sixteen patients. M. Mourguery, out of one hundred and twenty-two cases collected from different sources, noted eighty-six as having been successful. Dr. Roe, in his able memoir on paracentesis thoracis, published in the 27th volume of "The Medico-Chirurgical Transactions," records all the cases he refers to, and enumerates the deaths as six out of twenty-four, three of the twenty-four operations, and consequently three of the deaths, being done on persons in whom recovery could not be expected. The difference between these results may be attributed to the operation by puncture having superseded that by incision, and principally from the operation having been had recourse to at an early period. Dr. Roe thinks the proper period to have arrived when the inflammation has been subdued, and a large quantity of fluid remains in the chest over which medicine seems to have no control, and he believes, with Broussais, that this will be about the end of the third week. After wounds penetrating the chest, and which do not admit

this effused fluid to flow out, it occurs much earlier.

When the operation is performed in a case of hydrothorax, or when the fluid is serous, it is generally called paracentesis thoracis, from *para-* "to perforate," under which circumstances it is possible that both sides of the chest may be affected; and it may be permitted to add, even in the present day, that both sides may not be punctured in succession, and that an error in puncturing the sonorous or sound side, instead of the dull or affected side, has been almost immediately destructive of life.

The admission of atmospheric air into the cavity of the chest during this operation has been much deprecated, and many inventions have been recommended for its prevention; but it is scarcely possible to prevent some air getting in. It is often seen to do so; and it is proved to have done so by auscultation, and it is usually absorbed in a few hours. In one case reported by Dr. Roe, and which I saw, it gave rise to distressing symptoms, from pressure on the lung; it was removed by a common syringe, to the great relief of the patient, and without inconvenience following. In all these cases two things must be considered. Can the compressed lung expand, so as to fill the chest when the fluid is withdrawn? The answer must be, that in a great number of cases it is so bound down by adhesions that it can dilate but slowly, if at all. If it be then asked, whether a vacuum is formed in the chest, the answer will be no; and it will then be admitted, on consideration, that air always finds its way into the chest, and that it rarely does any harm. Indeed, I believe from experience, that the admission of common air never does any harm, in persons in health; and that, when mischief ensues after an operation or an injury, it occurs from the irritation caused in a particular state of constitution, and not from the admission of air. If the wound into a cavity can be closed and healed, the air will remain with impunity. If the wound cannot be healed, inflammation may be propagated from it to the whole cavity with which it communicates.

Mr. Cock and Dr. Hughes published in the "Guy's Hospital Reports" for April and October, 1844, a valuable paper on "Paracentesis Thoracis," in which, in addition to other matters, they advocated two points, from which, with all due respect for the learning and ability they have so unequivocally shown, I have ventured to dissent: one is, the ill effects arising from the admission of atmospheric air; the other, the advantage to be derived from drawing off a part only of the effused fluid at the first operation, lest the air which must necessarily enter might continue to compress the expanded lung, although in a less degree. Dr. Hughes, in some papers published in the *Medical Gazette* for 1846, expresses a desire to modify these opinions to a certain extent: thus, for instance, he says, "On some occasions, when the effusion is recent, the whole of the liquid may be removed at once, without the admission of any air, from the expansion of the lung. The operation thus becomes a very tolerably correct indication of the state of the lung and of its capability of restoration, and thereby affords a substantial ground upon which to found a prognosis:" and again—"Unless the lung is capable of full and free expansion, we do not attempt to draw off all the effused fluid: we remove, indeed, only so much as the expanding lung and the surrounding compressed organs are capable of replacing. The opening is carefully watched, particularly during the acts of inspiration and of coughing; and when the stream begins to fail, the body is turned towards the punctured side, till there is at length an alternate flow and stoppage of the stream during the acts of expiration and inspiration. When this occurs we withdraw the canula; when, in fact, there exists a tendency for the external air to enter the cavity, that tendency is at once stopped by closing the aperture. Sometimes, it is true, a considerable portion of fluid is thus left behind." This fluid, if not absorbed, must be removed by another operation.

The irritative quality of the air seems thus to be in a great measure given up, and it is probable that the retention of part of the fluid will follow, unless in cases attended with great debility; for, if the air does not prove a cause of serious irritation, it is much less likely to prove a permanent cause of compression, than an equal quantity of fluid. Some late French writers, and especially Messrs. Raybaud and Trousseau, placing greater confidence in the evils arising from the admission of air, have lately used bags made of gold-beaters' skin, or gut, or bladder, attachable to the canula, for the purpose of receiving the fluid as it escapes, and thereby preventing the ingress of air, which the following case by M. Goze, physician-in-chief to the Military Hospital of Marseilles, published in the 63rd vol. of the "Mémoires de Médecine et de Chirurgie Militaires," 1847, would seem to show is not always followed by serious consequences.

CASE 12.—L. J., twenty-four years of age, of the 51st Regiment of the Line, was admitted into hospital on the 27th of September, 1846, with inflammation of the chest, the symptoms of which disappeared after forty-three days of treatment, leaving those of effusion. After fifty-three days' further treatment, the effusion being stationary, as well as the functional derangements which are the consequences, the left side of the chest was punctured between the third and fourth ribs, and seven hundred grammes, or thirty-ounces, of a citron-coloured limpid fluid were evacuated. Previously to the operation, the pulse was small and frequent; dyspnoea on attempting to walk; dulness of the side; respiratory murmur little sensible, without noise or rale, and distant from the ear; elevation of the ribs of the left side very limited. Three bubbles of air entered the cavity of the chest during the flowing out of the fluid, in spite of the efforts made to prevent it by closing the orifice of the canula with the thumb, as the stream appeared to be about to stop. The canula was withdrawn during expiration, and the wound closed. From the day of the operation the lung recovered its functions, the pulse its natural beat, the appetite improved, strength was gained. On the 6th of December, fourteen days after the operation, respiration was as complete on the affected as on the sound side. Sent home on leave; he was three months afterwards declared to be fit for service.

A more important question occurs in succession. Supposing that the constant admission of air does no mischief, is it more advisable that the patient should run the risk of inflammation occurring from the propagation of irritation, from whatever cause it may be excited, by keeping the wound open, and allowing a constant drain from the part; or should it in all cases be immediately closed? In all cases of serous effusions there can be little doubt that the fluid should be evacuated, and the wound closed. When the fluid is purulent, I am of opinion that a permanent drain should be early established. It is not common for the operation to be repeated several times, without the serous discharge becoming purulent; and in such cases it usually becomes necessary at last to allow the wound to remain open, until the discharge shall cease of itself. Dr. Hughes, in the *Medical Gazette* for 1847, has related a case in which the chest was punctured, consequent on pleuritis, fifteen times—the patient eventually recovering, without a permanent drain having been established, although the serous discharge became at last more puriform. In a very instructive case, recorded by Dr. Th. Thompson, in the 27th vol. of "The Medico-Chirurgical Transactions," the opening became permanent, after the chest had been four times punctured for the evacuation of a purulent collection. There can be no doubt, in such cases of internal disease, about the propriety of making the opening, between the fifth and sixth rib, a dependent one, by attending to the position of the patient; but having seen several cases in which an opening lower down, nearer the diaphragm, would have been more advantageous, as more likely to aid his perfect recovery when the

patient was able to walk about, and even follow his ordinary occupation, I apprehend that whenever more than one opening is necessary, and the first is made between the fifth and sixth ribs, the succeeding ones should be made lower down; so that, when it is thought right to leave the last puncture to become fistulous, it may be made as near the diaphragm as may be thought consistent with the safety of that part.

When a doubt exists as to the probability of more than one puncture being sufficient, and it seems likely that a third, or even more, will be required, the surgeon will, perhaps, do well to anticipate this necessity, by keeping the wound open. Dr. T. Davies, whose cases were very successful, did this, by introducing a piece of gum-elastic catheter through the canula into the chest, to the extent of about three inches, enough being left outside to admit of its being secured by tapes and adhesive plaster. He says he never saw the gum catheter do harm, and he drew off through it a certain quantity of the fluid daily, until it ceased to be discharged; the elastic tube bending with the heat, and applying itself to the inside of the ribs. Whenever, in such cases, the lung rubs against it, which can be ascertained by a blunt probe, it should be removed, and the external wound kept open by a shorter and softer plug. In all these operations, care should be taken to prevent the occurrence of inflammation. The accession of pain in the part, of difficulty of breathing, of fever, should be met by cupping to a few ounces, by dry-cupping, by mercury in small doses, by rest, by diet, &c., and, if a plug has been introduced, it should be removed.

The propriety of injecting stimulating or even simple fluids into the cavity of the chest has been often advocated, and as frequently repudiated. It appears to me that warm water or milk and water are alone admissible, and that only when there seems to be an adventitious cause keeping up the irritation, which may, perhaps, be brought to the opening by the sudden abstraction of the injection. My excellent friend, Dr. Gibson, professor of surgery in the University of Pennsylvania, says, in his "Practice of Surgery," vol. 1, page 116, that he has succeeded in floating out with the matter pieces of cloth and bits of exfoliated bone by throwing in an injection of tepid milk and water. He says that in the case of the late Captain G., of the U.S. navy, wounded in a duel in 1810, his health improved so rapidly under their use, that he was able to take the command of a frigate at sea, where he remained for several months, with very little inconvenience. Finally he died, partly from constitutional irritation, partly from the reproduction of matter, and the detachment of portions of carious ribs and vertebrae, which found their way into the chest, lodged on the diaphragm, and could not be removed, he being averse to a counter-opening being made, as proposed by Drs. Parsons and Gibson, who, on examination after death, thought that, if the operation had been done, he might have recovered.

It is obvious that matter had been long pent up in the chest; that nature had made many efforts, before the ribs became carious, to evacuate it through the thick and hardened pleura, by ulceration. The operation in this case ought, I apprehend, to have been done between the eleventh and twelfth ribs behind.

Mr. Quekett has lately had an opportunity afforded him of injecting the false membrane, formed upon the pleura of a cheetah, an animal of the leopard species, which died at the Zoological Gardens of empyema.

In this case, the membrane covering the right side of the chest was upwards of one-eighth of an inch in thickness, and the vessels, which were very numerous, were found to be very readily filled from the arteries and veins. The membrane itself could be peeled off from the pleura with little difficulty. The fluid found in the chest contained flakes of lymph floating in it, and, when examined microscopically, was found to consist of numerous pus globules or cells, with lymph particles and globules of oil; the

flakes, and the last portions of the false membrane deposited, were clearly made up of lymph particles, whilst that which was first deposited, and into which the arteries penetrated, had assumed more of a fibrous than a cellular character.

CASE 13., by Morand.—A clergyman attacked by pleurisy in March, 1761, was reduced at last to that state of oppression of the chest, that he could hardly move, spit, or speak, and was supposed to be dying. Morand, who saw him on the 7th of May, finding that the whole left side was œdematous, decided on puncturing it, which he did to the great relief of the patient, evacuating six pints of serous fluid mixed with purulent matter. The distention of the chest rapidly returning, an opening was made into it seven days after the first puncture, and five pints of fluid, containing more pus than before, were evacuated. The wound was kept open by a tent of lint introduced for several inches into the cavity of the pleura. He suffered very much after this, and became so much emaciated that his life was once more despaired of. About the middle of June he began again to improve, the lint could only be introduced with difficulty, and a flat silver tube was substituted for it, through which the cavity of the chest could be washed out. After the 7th of September, the wound was dressed but once a day, the discharge being principally serous until the 15th of November, when it became entirely purulent until the 25th of December, when the wound closed, and the patient recovered his health. Morand remarks that there were very few instances known of recovery after the operation for empyema, and that, when he was in the habit of using the silver tube, he was astonished to find that it was always introduced to the extent of four or five inches without touching anything, and that the fluid should not be evacuated therefrom at once, that the lung might have time to recover itself gradually. He was not aware of the manner in which it was permanently compressed and fastened back to the spine. This case, nearly one hundred years old, shows that the chest was at that time punctured, that when it filled again it was opened, and the matter was allowed to run out daily. Morand was also aware that the lung was collapsed and compressed. He seemed to be acquainted with every leading fact, save that the cure was effected by the falling in of the chest.

CASE 14.—Diemerbroek, in his "*Historia de Empyemate*," relates a successful case treated by operation, after an attack of pleuritis, indicates the symptoms common to such complaint, and the mode of cure, and among other directions gives the following: that, if the collection of matter should not be removed by the remedies employed in the course of two weeks, recourse should be had to the aid of surgery; that an incision should be made in the side, between the fifth and sixth ribs, large enough to insert a silver tube, which is to be retained in its place by proper bandages, and closed by a plug until it be thought right, from time to time, perhaps morning and evening, to let out the matter; the tube to be retained until matter has ceased to flow through it.

CASE 15.—Dr. Wendelstadt, of Hersfield, in the year 1810, and in the twenty-third year of his age, suffered an attack of pleurisy which became chronic, and ended in effusion. After severe suffering for six months, he was able to attend to his professional duties. The ribs of the right side protruded, but the intercostal spaces did not; the whole side was motionless on respiration taking place. The circumference of the chest continued to increase, and fluctuation within became evident on succussion. In June, 1819, having undergone another attack of pleurisy, he submitted to the operation for empyema, as offering some hope of preserving life. When a pint of fluid had been discharged the wound was closed, and he experienced great relief. The next day a third of a quart was taken away twice in the day, and on the third day as much more, but he thought this was too much, as he

became greatly exhausted and feared that suffocation was impending; he was recovered by stimulants. On the fourth day the fluid was thicker in consistence, and fetid, and continued more or less so for a fortnight. It was then allowed to flow as it would at each dressing. Asstringent injections were used for six weeks, but were then abandoned, and he gradually recovered his strength. Thirteen years afterwards, in 1830, the wound was still open, discharging twice a day, sometimes only half a drachm, sometimes three or four ounces daily. The right side had altogether shrunk, and did not move on inspiration; he had no cough, and was otherwise in good health; a piece of a rib became loose, and was removed at the end of thirteen years, when the report of the case terminated, the patient being in health.—*Journal der Praktischen Heilkunde*, 1831.

It may be remarked on this case that the admission of air did no harm; that the lung remained compressed; that the whole side thickened and flattened, as a consequence, so as to obliterate the cavity; but the cure would not have been even then effected, if the piece of carious rib had not been discovered and removed. Death, it may be presumed, would have followed its lying long in the cavity, and keeping up a constant irritation and discharge.

CASE 16.—Mr. Winter, secretary to Admiral Sir C. Napier, on the 5th July, 1833, when he took the fleet of Don Miguel, was wounded by two musket-balls, one in the arm, and one which entered between the inferior edge of the left scapula and the thorax, which it penetrated, fracturing a rib in its progress, and lodged. He fell, and spat up some blood, and, as symptoms of inflammation supervened in twenty-four hours, he was bled largely, and this was repeated frequently until these symptoms were subdued. He was after a time sent to the Marine Hospital, Lisbon, in a miserable plight, suffering from hectic fever, with a flushed face, hot skin, glassy eye, great prostration of strength, cough, restlessness, dyspnoea, and copious night-sweats. The wound discharged a watery, sanious, fetid matter, in quantity, and he was unable to do anything but eat, and for food he had a great craving. From this state, under good treatment, he gradually recovered his strength, and on the 18th June, 1834, a piece of the rib was removed. The wound remained open with a great purulent discharge, which kept him in a reduced state; and a little more than one year after the injury, he reached London, and was taken into the Westminster Hospital. I found the left side of the chest flattened and contracted, and the lung doing very little in the respiratory way, as far as could be discovered by auscultation: the wound discharging a quantity of matter, which he could readily evacuate by making the opening the dependent point, but not otherwise. On enlarging the external wound, so as to make the opening into the chest direct, I found I could pass a round-pointed gum-elastic bougie into it for four inches, and, on bending it down, for six inches more, it having to pass over a thickened pleura, and false membrane of an almost cartilaginous nature, for the extent of an inch, before it could be felt to be in a large cavity. As it did not appear to me that he had any chance of recovery unless another opening was made lower than the sixth rib, in a more dependent position, I proposed the operation to him, but he would not submit; and after a time he left the hospital, and went into the country, where I was informed he died, hectic.

CASE 17.—A non-commissioned officer, of the 2nd division of cavalry, was wounded at the battle of Albuhera, on the 16th July, 1811, in several places, by the lances of the Polish cavalry, one of which penetrated the left side of the chest behind, immediately below and before the inferior angle of the scapula. He spat and coughed up blood, and lost so much from the wound, that he became insensible, the bleeding having been stopped by some of his shirt bound upon it tightly by means of his woollen sash. Brought to me at the village of Valverde, my attention was drawn to him some days afterwards, in con-

sequence of his having got worse under his treatment, the difficulty of breathing having increased, so that he was obliged to be raised nearly to an upright position, as well as from his inability to rest on the part wounded, from the dark blue inflammatory swelling which had taken place, the wound having closed. I did not hesitate to make an incision into it, when a quantity of bloody purulent matter and clots of blood flowed from it. The incision was then enlarged, so as to allow of a direct opening into the cavity of the chest, which was ordered to be kept open. The relief was immediate, and the symptoms were soon restored to the state of those in other persons who have an open wound in the chest. He was removed to Elvas, doing well, some three weeks afterwards.

This case offered the nearest approach I have seen to the ecchymosed œdema described by Valentin as accompanying effusions of blood into the cavity of the chest, and, with the following, are instances of operations, not by election, but by necessity.

CASE 18.—A French soldier had been wounded at Almaraz, by a musket-ball, which went through the right side of the chest, in a line nearly horizontal from a little below and to the outside of the nipple, backwards. The first symptoms having subsided, although much neglected, he gradually descended the Tagus to Lisbon, where, after some months of continual discharge, the wounds closed, first the back, and then the front. He did not recover his strength, always looking sickly, and suffering from pain, difficulty of breathing, and other inconveniences which did not prevent his walking about in the confinement to which he was doomed as a prisoner of war. My attention was drawn to him by Dr. Dos Santos, a Portuguese physician, who had been educated in Edinburgh, and who was in charge of the hospital, at one of my visits of inspection, in June, 1813, in consequence of an obvious fulness of the intercostal spaces, of the great difficulty of breathing, and of a puffy inflammatory swelling which was forming around and at the seat of the wound in front. Into this I made an incision, and, as soon as it was deep enough, it opened into the cavity of the chest, the walls of which, on introducing the finger through the opening, appeared to be very much thicker than usual. A large quantity of pus was discharged, and the man was relieved, but this amelioration was not of long continuance, and he gradually sunk and died. On opening the body, the inside of the wall of the chest was found to be half an inch in thickness in consequence of a firm deposition on the pleura of a yellowish ash colour, honeycombed or ulcerated, as it were, in places, and particularly where the opening had been made. The lung was shrunk up from the anterior and lower part of the chest, but adhered to the wounded part behind, and was covered by a layer of false membrane of considerable thickness. The wound through the lung could not be distinctly traced, from its being throughout diseased.

CASE 19.—At Santander, in October of the same year, 1813, I received some eight hundred wounded in the affairs of Le Saca, Vera, &c. One of the light division had been shot through the left side of the chest, in a nearly similar manner; the posterior wound had closed, but a sufficiently large quantity of matter was discharged through a small anterior one to show that there must be some dépôt from which it proceeded. I, therefore, directed the wound to be laid open, and, as soon as I saw that its course was into the chest, I enlarged the opening into that cavity, and gave free vent to a quantity of matter, thus affording great relief. Some small pieces of rib were discharged, and a bit of something like the cloth of his coat also came away. He could lie on either side, and hopes were entertained of his recovery until after I left Santander in December, to join the army in France, when he suffered a relapse of inflammation, and died. No dissection, I learned to my regret, was made.

M. Faure, in his Inaugural Thesis, published at Paris, in 1814, gives the case of a man in whom pleurisy terminated in the formation of an external abscess, as large as the closed hand, on

the right side, beneath the pectoral muscles. On being opened, it discharged a pint of purulent matter, and was found to communicate with the cavity of the chest. Death followed soon after. The cavity of the pleura of the right side contained eight ounces of pus; the lung was compressed to the size of the fist; the pleura lining the wall and covering the lung were both coated by false membranes.

M. Aubert, in another case of a similar kind, published in the same thesis, opened the chest on the 17th of July, and the patient, after many accidents, recovered his health in the May following.

CASE 20.—A soldier of the German Legion had been wounded at Waterloo, by a lance, between the sixth and seventh ribs of the left side. He spat up much blood for several days, and was carried to Antwerp, where he remained for several months, suffering from great difficulty of breathing and other distress in his chest, which recurred from time to time, although his wound had healed. He was admitted into the York Hospital, Chelsea, in the spring of 1816, from the barracks in the Savoy, where he was awaiting the award of his pension, in consequence of an attack of inflammation, of which he died. On examining the body, the lung of the right side was found to be greatly inflamed and full of purulent fluid, which caused his death. The left or wounded side was found to contain a small quantity of pus, the cavity being very much diminished, by the great thickening of the pleura, and the falling in of the ribs, which were also thicker and greatly flattened, and consequently changed in their form; the lung, shrunk or collapsed, was covered by a thick adventitious membrane, and bound down against the spine, leaving a long small space, which once had been doubtless full of matter. The mediastinum and heart appeared to lean towards the right side, aiding in this manner in the obliteration of the cavity, which must take place if a permanent cure is effected in empyema. I have seen two cases in which this obliteration appeared to be complete: one in a soldier, who had been wounded in the chest,—one in a gentleman, the subject of empyema, in private life. In both the spine was also distorted, the side wasted, the pimple lower than the other. The breathing of the opposite side more marked and developed; it might have been called puerile. I have never had an opportunity of examining a case of the kind after death, in which a cure had been long effected. In both these it took nearly three years to accomplish.

CASE 21, by Dr. Frederick Bird.—William Griffin, aged eighteen, admitted into the Westminster Hospital Sept. 14, under Mr. Lynn.

Ten days before his admission into the hospital, whilst labouring under great mental excitement, he discharged a pistol against the left side of his chest. A wound corresponding to the middle of the eighth rib was produced, from which a very small quantity of blood escaped, but was immediately followed by vomiting and fainting. The medical practitioner who was called to him at the time passed a probe to the extent of four inches into the wound.

The wound had nearly cicatrized, but he became the subject of acute pain, diffused over the whole of the left side of the chest, accompanied by fever and frequent cough, dyspnoea, and inability of lying on the right side. After a lapse of a week he was transferred to the medical wards, under Dr. Roe, at which time he had begun to expectorate purulent matter of an extremely fetid character, occasionally mixed with blood. His respiration was hurried, the right side of the chest expanding much more freely than the left; the lower three-fourths of the affected side were dull on percussion; tubular respiration could be detected at the upper part, but at the lower part no air appeared to enter; well-marked modification of voice existed over the whole of that side of the chest. By measurement no difference in the relative size of the chest was observed, but the intercostal spaces of the left side remained motionless during expiration.

The heart could be felt feebly pulsating at the epigastrium.

Oct. 15. Had been slowly improving until this evening, when he suffered from a violent paroxysm of coughing, during which great dyspnoea suddenly came on. He sat propped up in bed, his respiration was almost ineffectual, his face livid and covered by a cold clammy sweat, pulse scarcely perceptible at the wrist, and his extremities were becoming cold. On examining the chest, the left side, before quite dull, now afforded tympanitic resonance on percussion, which, together with the total loss of respiration, and the presence of metallic tingling, proved the existence of pneumo-thorax. I introduced a trocar between the sixth and seventh ribs, which was followed by an escape of gas, with about five drachms of pus, both of a very fetid character; the canula becoming obstructed, a larger one was then passed through the opening, but not more than half an ounce of pus escaped; it was then withdrawn, and found to be blocked up by what appeared to be disintegrated lung. As he was now greatly relieved, no further attempts at evacuating the fluid were made.

16, two A.M. Two hours after the operation. Respiration has become much easier, heat of surface is quickly returning, and his pulse is becoming more full.—Four A.M. Has had a paroxysm of coughing, during which six ounces of fetid pus escaped by the opening, after which he felt relieved.—Ten A.M. A second gush of sanious fluid, to the amount of five ounces, containing small masses of sloughing membrane, took place. Cavernous respiration can now be heard at the upper half of the lung, mixed with gurgling and metallic tingling. Expectoration is muco-purulent and offensive.

17. Since yesterday seventeen ounces of pus have passed through the wound. He is altogether improved.

18. Diarrhoea has supervened, under which his powers are rapidly diminishing.—Vespere. Has vomited, during which six ounces of pus were forcibly ejected by the wound.

19. The diarrhoea has been arrested by the use of opiate enemata, but he appears more prostrate. The discharge from the wound continues at intervals.

21. Has somewhat improved; not more than three ounces of matter have escaped since the last report. He suffers from accessions of fever towards evening, and perspires very profusely during the night; the cough is less frequent, and he expectorates freely, the sputa being of the same purulent, fetid character. Scarcely any discharge now takes place from the side.

Nov. 5. Has remained in nearly the same condition until yesterday, when he ceased to expectorate, and has since become much worse; his skin is now intensely hot, face flushed, tongue brown and coated, pulse jerking, but feeble and frequent; the opening in the chest has quite healed.

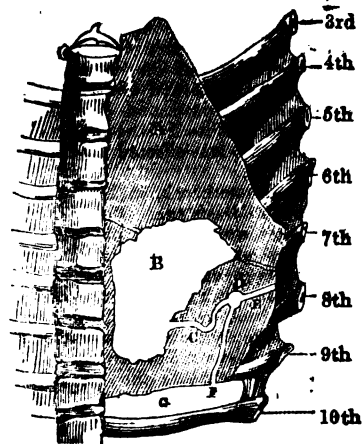
A second opening was now made about an inch external to the former one, and a canula introduced, but not more than one ounce of pus escaped, the instrument becoming blocked up by portions of sloughing tissue; during a paroxysm of coughing, which occurred a few hours afterwards, several ounces of fetid, sanguineous pus were forced through the wound.

8. Has been much relieved since the last operation, and he has now again begun to expectorate freely, as much as a pint and a half of extremely fetid, purulent matter, mixed with opaque masses more or less moulded by the bronchial tubes through which they have passed, having been coughed up during the night. All the physical signs of a large cavity in the lung can be now distinctly heard. Not more than five ounces of pus have escaped through the opening.

16. Since the last report he has been slowly sinking—is emaciated to an extreme degree. The wound originally produced by the pistol-ball, as well as those made by the trocar, have become fistulous, so that, during respiration, the air passes into the chest, and is expelled with as much freedom as that passing by the trocar.

Expectoration has continued very copious, about a pint and a half having been passed in each twelve hours; large sloughs have formed upon the nates and hips, his intellect wanders, and he has frequent syncope. Died on the 5th of December.

Section Cadaveris.—The pleural cavity of the left side contained about ten ounces of purulent matter mixed with blood, and having floating in it numerous masses of white curd-like matter, at the bottom of which, in the angle formed by the diaphragm with the spine, was found a pistol-ball, partly covered by albuminous matter, and discoloured. Fluid injected into the left bronchus was found to issue freely from an opening at the most depending part of the lung, communicating with a small cavity, the interior of which was lined by the same thick membrane met with in cases of chronic phthisical disease; from the upper part of this cavity two other sinuses were found, the one passing externally, and terminating by an adhesion of the lung with the ribs, at the point where the ball had entered; the other was longer and more tortuous, passing deeply into the substance of the lung, and ending in a large abscess capable of containing five or six ounces of pus. The lung was, at its lower part, firmly attached to the ribs by intervening false membrane, whilst the upper part was free, and had become compressed towards the spinal column. The substance of that part of the lung, not involved in the abscess, was infiltrated with pus, and the greater number of the bronchial tubes were filled up by masses of curdy matter, similar to those found floating in the effused fluid. The natural division of the lung into lobes was quite destroyed by the pleuritic adhesions of one to the other, whilst the pleura lining the parietes was covered by rugged layers of false membrane of irregular thickness, and readily detached. No trace of tubercular deposit could be found, and the lung of the opposite side was quite healthy.



A. Section of the lung, made vertically. B. Section of the abscess communicating by the sinus (C.) with the circumscribed gravity (D.) in which the bullet had been lodged after its entrance by the sinus (E).

F. The sinus by which the ball had passed into the pleural cavity (G).

Opposite the 7th and 8th ribs the lung is quite adherent.

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

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

(Continued from p. 252.)

GENTLEMEN,—To-day I shall commence some observations on *fever*, as it is observed in children up to about fourteen years of age.

It is not my intention to discuss the much-disputed question as to whether the general disturbance of the system we denominate *fever*,

febrile action or erethism is or is not always dependent upon, or essentially connected with, local lesions or anatomical changes going on in the circulation and nutrition of particular portions of the body. This you will have heard spoken of before in the lectures on general pathology and medicine. I shall here take for granted that it is necessary for practical purposes to draw a broad line of distinction between what I shall call *symptomatic fever* on the one hand, and *idiopathic fever* on the other. The former undoubtedly is due to the previous existence of some such local change as I have spoken of, by the persistency of which it is kept up, and without which it never would have taken place. The latter arises—in one sense, at least—as it were, *per se*; it is to us, so far as our powers of analysis can go, the primary disease, the symbol of the original morbid characters developed in the frame.

In the *symptomatic* variety we can affirm that such and such a local affection has produced febrile erethism; in the *idiopathic* we can say no such thing. A child has serofulous disease of the articulating cartilages of the knee-joint, or inflammation of the lining membrane of the lower bowel, and in the course of these disorders fever is set up either of a hectic or remittent typhoid kind. If we can remove either of these causes the febrile disturbance will cease. Another child in whom no disorder of any individual portion of the body, so far as we are aware, is going on, is all at once attacked with fever, and we shall be puzzled to remove that fever by attempting to treat any local modification which we may fancy has produced it. Local diseases will be brought in the train of that fever, and which we shall be called upon to treat; but these will be effects of the same general and hidden powers which gave rise to the primary or idiopathic febrile excitement.

Whilst drawing this distinction, then, between symptomatic and simple idiopathic fever, as also separating these from the eruptive forms, I shall, nevertheless, beg your attention to some general principles which overrule the constitutional disturbance we call febrile action in the young child, from whatever this disturbance may arise, and which is marked by some peculiarities special to early life.

By this general term fever, or the words “feverish symptoms,” we usually understand a condition of the body in which at first the circulation is accelerated, the animal heat increased, and the nervous system irritated; with these, also, we usually observe diminution of appetite, increase of thirst, and more or less intellectual inaptitude, or aberration from a usual condition. Of course it is very difficult indeed to give in an aphoristic or axiomatic way a good definition of so general and constitutional disorder, though certainly, so far as adults go, the comprehensive definition of Cullen is the best of any—“*Post horrorem pulsus frequens, calor major, plures functiones læsæ, viribus præsertim artuum imminutis.*”

Fever is, however, so complete a *whole*, made up of so peculiar a combination and succession of symptoms, that any notion you can well form of the *general* must be derived from a careful consideration of the *particular*; and, therefore, any attempted universal definition, such as I have given you, can only partly develop the idea of such a disorder. I may quote to you the words of Feuchtersleben in his *Medical Psychology*, who says, “The pupil must bring with him to the sickbed the general idea of fever, in order to understand fever as it actually occurs; and, *vice versa*, it is only the careful abstract consideration of a fever as it actually occurs which furnishes the general idea of fever.”

I must now recal to your recollection what you have learned in the lectures on general pathology, viz., that feverish symptoms once having constitutionally manifested themselves, whether in adults or children, do one or other of these three things:—First, after their establishment, they subside completely for a regular interval, say of twenty-four,

forty-eight, or seventy-two hours, leaving the system in a state of repose, when again they break out; or, secondly, instead of the whole train of febrile phenomena, keeping in abeyance only the more intense ones, do so, and then only for a shorter period of time, say twelve or twenty-four hours, when again they make their appearance, the body, in the interval of comparative repose, often suffering materially; or, thirdly, instead of there happening any period of rest or cessation from febrile erethism, the body, once invaded, enjoys no abatement, on the symptoms proceed and do not stop for any definite or very appreciable space of time. Now, if the symptoms exhibit the first characters, the fever is said to be of the *intermittent*, if the second of the *remittent*, if the third of the *continued* type.

These great types or forms become, both in the adult and children, often variously modified during their progress, and, though idiopathic in many of their states at first, may pass on to a very complicated condition afterwards—a condition associated with many important local inflammations. Or, on the other hand, though they may be symptomatic at the onset, yet the fever may become of so intense a character, and constitute so severe a constitutional disturbance, as to put the local affection completely in the background. Not only this, but these types may run one into the other. Feverish symptoms of a regular form may appear, gradually become irregular, and pass into another form. An intermittent series may become remitting, a remitting continuous, or a remittent fever intermittent, especially in the child. Thus one fever may become another: there is a mutability of fever.

The only other general principle I shall recal to your mind is, that when the feverish symptoms run their course with very marked depression of the general vital powers, or of the heart and nervous system, and with the state of the secretions, as might be expected, greatly deviating from the natural condition, the symptoms are then said to be *typhoid* in character; but when this occurs the symptoms are generally *continued*, or become so very soon. I here, of course, avoid all discussion as to the specific differences between typhus fever and continued fever of a typhoid kind—a subject which you perhaps know has been much discussed in modern times. The bearing in mind the general principles I have recalled to you will suffice us, and I shall now pass to the peculiarities of febrile action in the *young child*.

The first point of interest I may mention is, that idiopathic fever is observed in one form only in children at the breast, or before they are eighteen or twenty months old; in fact it is not until after between three and four years of age that it becomes of marked frequency. Before the completion of the second year we constantly observe febrile action set up, but such constitutional disturbance is then symptomatic: it is the effect of a local disorder, of a topical affection. With acute bronchi-pneumonia, or with chronic enterocolitis, we observe it in perfection; or we may perceive its disturbing influence in the travail of difficult dentition. But, as I have said, there is one form in which it certainly occurs as truly idiopathic before the child has completed twenty-four months: it occurs in the form of an intermittent fever. I have seen it as early as sixteen months, at least I considered the child to be labouring under it, treated it as such, and the infant got well.

Bouchut has seen it at eighteen months, and his able article on the subject first drew my attention to the early occurrence of the affection. This writer remarks that intermittent fever is seen in children of all ages, and is developed under absolutely similar conditions as those which tend to its evolution in adults. In Paris it is met with in children at the breast, brought up in unwholesome, damp, and badly-lighted habitations, and amongst those whose alimentation is defective. It is thus a malady of the lower orders. It is also seen amongst infants born in marshy places, and amongst those sent to be nursed in such localities. It is very common in Orléans

and Berri, provinces which furnish a great proportion of the nurses of Paris.

Whether fever is observed at a very early age as symptomatic or idiopathic, it presents peculiarities differing somewhat from the train of morbid phenomena we observe in older children and in adults. A sort of premonitory sign of the outbreak of the disorder in the latter is horripilation, rigor, or chill, soon observed after some amount of lassitude, debility, or general *mal-aise*. In the young child the former is wanting: there occur a certain amount of *mal-aise*, of tetchiness, of disinclination to be touched or moved from the position it takes, and then breaks out increased heat of skin. Even in the intermittent form no shivering occurs; there is no trembling as if the child experienced a great degree of cold. The earliest age at which Bouchut observed it was two years and a half. This augmented temperature of the cutaneous surface I particularly impress upon you, as it is one of the most important symptoms of the fever of infantile life. By simply taking hold of the child's arm, when any other means of inquiry would be difficult, you can satisfy your mind at once, should the paroxysm be on, or the mother will tell you of her own accord, perhaps, that at night the child “burns like a coal” or “gets so hot” in the afternoon. In some forms of fever the heat is great in the extreme; the child seems to burn when you place your ear against the chest to listen for the crepitant rattle of pneumonia. So extreme does the heat often feel, that the same terms may be applied to this sign of the symptomatic fever of pneumonia in the child as was applied long ago, by Galen, to that of the autumnal remittent fever of adults—“*Maximum indicium est mordacitas et acrimonia caloris.*” What is interesting is, that Sir J. Pringle and Sir G. Blane, as well as Galen, all speak of a “mordant heat” in relation to fever of a *remittent* form; and you will presently hear from me that this is the usual type of fever in a child. It was remarked by the more ancient writer that this peculiarity of heat is not felt the moment the hand is applied, but is perceived on continuing the hand upon the patient for a certain time. It has been so stated in later times. So far as the child is concerned, I have been able always to feel it at once, but undoubtedly the longer you keep your face against the chest the more hot will it feel. Very often, whilst the trunk is so warm, the feet and legs especially feel cold. M. Roger, a year or two ago, made many experiments relative to the heat of the body in the diseases of children. He found that the highest and most continuous temperature occurred in the fever of typhus, of meningitis, and pneumonia, viz., 108° F. In disease of the respiratory organs Roger found that the temperature rose in proportion as the parenchyma of the lungs became involved. He gives as a general rule that, whilst in adults the temperature of the body in disease fluctuates through a range of only 7° C., in children it varies as much as 19°; and that, if the temperature is above 100° F., fever, either symptomatic or idiopathic, is present, whatever be the rates of the respiration and pulsation.

Accompanying the heat of skin is seen a slight general increase of colour on the face; sometimes one cheek is more flushed than the other; or again, during the paroxysm, both may become very red indeed. The mouth is hot; the tongue often, but not always, coated; and frequent desire to suck is evinced. With these is felt acceleration of the pulse.

This last sign is, however, in infants, comparatively useless for you to judge by alone; and, although it is of value going along with the increased heat and nervous irritability, you need seldom refer to it when you have the others existing, since it is always very difficult to count the pulse satisfactorily, and a temporary increase will be caused by the mere examination of the little patient, and the flurry it is put into. Another thing I may tell you is, that in almost all of Roger's experiments it was found that there was no proportion between the elevation of the tem-

perature and the excitement of the pulse except in pneumonia, where there was always a correspondence between the temperature, pulse, and respiration; and in typhus fever a greatly elevated temperature was associated with a moderate range of pulse; and the author to whom I refer asserts that this fever may be diagnosed to a certainty in older children when the temperature is 84°F , or upwards, and the pulse under 100. It would be no easy matter, again, to say what is the usual rate of pulse in the young child when in health, for the records given by writers vary so much.

In Doukhrut's chapter on the "Circulation" you will find a great deal of interesting matter upon the subject; and I may give you the following *résumé* deduced from the many authorities there quoted. In children at the breast, the pulse is subject to variation according to individual constitution. The maximum and minimum rates may be stated at 160 and 160 pulsations in the minute, but 118 to 120 is the rate more frequently observed. During sleep the pulsations diminish by fifteen to twenty; by strong emotions, &c., they may increase fifteen, twenty, or even forty. Towards the end of the first year the pulse is rather more frequent in girls than in boys; as weaning time approaches, the pulse gradually becomes slower. Now, you can judge how little aid we can derive from the pulse in infants, unless the rate of pulsation becomes very high and continuously so.

The next point of interest is this: whilst in adults symptomatic fever, except hectic, and idiopathic, save the true intermittent and remittent of malarious poisons, have always a tendency to become *continued* in type, in young children they have not—in them they are of the remittent character. Whether symptomatic or idiopathic, the younger the child the more is the tendency of the fever to a remittent form, and as age increases that to a continuous character is observed. This must be carefully kept in mind by you, as serious consequences may result if such is not done. For example: suppose you were called to a case of pneumonia, and in an afternoon visit you found the skin burning hot, the face flushed, the child restless, the thirst great, the respiration increased, the *mal-aise* considerable, &c.; on examining the lungs, that you found the signs of inflammation of them in perfection, and that you were led to give an unfavourable prognosis. But suppose again that, on your visit the next morning, you found the child failing to exhibit this series of phenomena in such intensity; that you found the skin comparatively cool, the flush gone from the face, the pulse not so rapid, nor the respiration so frequent, &c. &c.; and that, therefore, you gave a more favourable opinion, as the constitutional disturbance appeared so much diminished, and you considered the local disorder must have become lessened in intensity too. If you were to call a few hours later in the day, perhaps, you would deeply rue your morning's prognosis; you would find the paroxysm of the fever present, or even in still greater intensity, and, on examining the lungs, still more involvement of them in disorder than before. Your first and third visit were in the periods of febrile exacerbation; your second one in that of the interval of comparative repose, and you forgot the essentially remitting character of the constitutional phenomena. All the time the local affection, and which finally proves fatal, was as bad as ever.

Again, no severe local inflammation of an acute character occurs in the adult without the symptomatic fever rising high very early in the disease; in fact it is the fever that often strikes the friends of the patient before they become aware of the mere topical disorder. But in children this is by no means the case: there occur examples of acute local inflammation, which are not at once accompanied, at any rate, by very appreciable febrile disturbance, but which supervenes afterwards. Hence the attendant is sometimes misled as to the real danger of the patient. These cases, too, are quite different, I may remark, from those forms of so-called "latent" inflammation in the

adult, which are also often accompanied with but little fever. In other instances, quite the reverse of what I have told you happens, and may equally mislead. A very important local disorder arises, such as enterocolitis for example, and with it such intense remittent febrile disturbance that the attention is only directed to the fever, which is assumed to be the disorder, and the true one of which the fever is but a symbol is passed over. Hence has often arisen the mistake of supposing that a child has idiopathic fever, whilst it has a local inflammatory disorder, with symptomatic fever of a severe kind.

In the chronic affections of young children the accompanying fever has often remissions of very long intervals indeed, and the paroxysms are sometimes of so very subdued a character as to require close observation before the period of the exacerbation is detected.

Considerable symptomatic fever is often set up in the infant by very slight local affections, more particularly of the digestive apparatus, and, once established, will sometimes bring in its train complications so severe that the primary affection bears no comparison with them. We see high febrile erythema play much harm with a child who is cutting its canine teeth; a little acidity in the stomach will bring with it severe fever and stomatitis of a very bad form. The fever which often accompanies difficult dentition appears often to owe no other cause than the gingival irritation affecting the irritable nervous system of the child, or, at least, it is impossible to associate it with any other local lesion, or an inflammation; in other cases it coincides with these latter more or less pronounced; and which are sympathetic disturbances due to the irritation of the gums. Fabre remarks, however, that, even when there exist these local alterations of the circulation or nutrition of individual parts, it is but slightly probable that they are its principal cause. The difficulty of the question previously struck Sydenham. This fever is very irregular in its course, often but slight and of no long duration; but in other cases it is greatly prolonged and draws after it very serious disorders. All the functions of the body appear to languish, digestion especially is badly performed, and at last the little patient is plunged into a state that leads to a fatal result. M. Barrier says, that on an autopsy in such cases no lesion can be discovered which is capable of explaining the fatal termination. It is, therefore, a serious nervous affection. Sydenham must have taken a similar view of it, since he says, "I have been in great doubt a long while about the cure of these, neither could I be certainly persuaded, but of late, that any committed to my care were recovered so much by art as by chance; till at length, being often admonished of the happy success of a remedy that is not very famous, yea, indeed, very contemptible, upon the account of the common use of it, I had also prescribed it, which answered my desire better than any I know: it is three or four drops of spirit of hartshorn, according to the age, given in a spoonful or two of black cherry-water, or of any proper julap, four or six times once every fourth hour." ("Peohey's Translation.")

I told you that, as one of the prodromi of the febrile paroxysm in adults, the chill or rigor was usually observed, but that in young children such was always wanting. The same remark holds good in regard to the outbreak of perspiration, which we often see in the former, as reaction comes on when the fever exhibits paroxysmal exacerbation. In the young child this perspiration is not observed, or but very rarely, and then it is only partial. I have seen it, it is true, in the symptomatic fever of bronchi-pneumonia, in an unweaned infant who was taking frequent doses of the nitrate of potash; but they ceased on suspending the medicine, and, therefore, should be ascribed to it, and not regarded as a true febrile phenomenon. But even this kind of perspiration is very difficult to produce in a marked degree.

Lastly, you must remember that the period of

the diurnal paroxysm of the fever in young children is more often in the afternoon, from four to six o'clock, than at any other time. It is not unfrequent, however, at night, and sometimes there occur two fits—one early in the afternoon, and another in the night. Sometimes, but far more rarely, a paroxysm is seen early in the morning.

ORIGINAL CONTRIBUTIONS.

A REPORT ON THE CAUSES, CHARACTER, AND TREATMENT OF SPERMATIC CHOLERA AS IT OCCURRED IN HER MAJESTY'S 86th REGIMENT, AT KURRACHEE, IN JUNE, 1846.

By ALEXANDER THOM, Esq.,
Surgeon of the Regiment.

Communicated to the Medical Times from the Army Medical Board.

(Continued from p. 269.)

Having thus touched on what I must consider as the general causes of cholera, or such as may be supposed to engender a diathesis predisposing to an attack of it, I may proceed to specify the apparently direct and collateral causes which gave rise to it in the 86th Regiment, and to show their similarity to those which have been assigned in the preceding pages. It will be necessary, on the present occasion, to direct attention to the circumstances peculiar to certain classes, which in one case gave themselves an unexampled virulence and fatality, and in another complete immunity, and such as, happily, are in a considerable degree under our control. The general atmospheric causes which must continually occur in a more or less degree cannot be prevented, but in all probability it very rarely happens that these are increased in intensity as to produce cholera in a severe and prevalent shape without the usual assistance, which appear to have lent a far more dangerous character to it than even the purely primary causes alone.

Scinde forms a Choleric District.—The climate of Kurrachee has only been known for a few years, but in that time every European regiment that has been stationed there has been more than once decimated by cholera, often within a few days: the 40th, 41st, 22nd, 28th, 60th, 86th, British Europeans, &c., all have had their share of it.

Climate of Scinde.—Now, it is curious that rain hardly ever falls at this place, yet the air is for six or eight months very humid, and contains more aqueous vapour suspended in a cubic foot than that of the Mauritius, or even Sierra Leone, an island surrounded by a hot ocean, and subject to heavy rains. The evil of the climate, in my opinion, is because the atmosphere will not deposit its load of vapour in the form of rain, to cool the surface of the earth and lower the dew-point. In July the weather is often the *ascending* rain, and a misty or drizzling state of the atmosphere exists, scarcely wetting the ground. In Scinde the two monsoons common to India are experienced, but they are liable to certain causes which change their direction and render its soil extraordinarily dry; and the country, from the shores of the Arabian Sea to the Punjab, is an arid desert of dry clay, or alluvial soil, spread out by the Indus. The air during N.E. monsoon is dry and cold, like the dust of India; but the S.W. monsoon, or sea breeze, of the hot months, which discharges torrents of rain along the peninsula as far as Cutch, generally blows towards the coast of Scinde, between W.S.W. and N.W. By a glance at the map of Asia, it will be seen that these westerly winds of summer must come from the vast dry and heated surface of the sandy deserts of Arabia or Africa, and, by sweeping across the mouth of the Persian Gulf, imbibe a large quantity of aqueous vapour by the time they reach the coast of Scinde. This is the common course of the seasons. It happens, however, generally every three or four years, that the summer monsoon reaches the coast from a S.W. or S.S.W. direction, on which occasions a few heavy

showers of rain fall about Kurrachee. Such was the case in the present summer, when heavy rain has been experienced, and cholera preceded it; last summer there was only one shower, and no cholera prevailed, except a few cases among the natives. I believe, however, that the hot wind from Arabia, in crossing the narrow sea to Scinde, receives a full charge of vapour; for, although rain is very rare in summer, yet hygrometrical observations indicate a large proportion of moisture being supported by it, and deposition is prevented by the fresh increments of temperature which it acquires on approaching the bare, arid, and heated plains of Scinde. This appears to be the intelligible cause of the humidity of the Scindian atmosphere for six months annually, while scarcely four inches of rain fall during the whole year. The sea-air, at the temperature of 85° or 86°, and charged with vapour to 83°, instead of encountering general, local, or temporary currents at or below 88°, which would immediately cause deposition of vapour, becomes mixed with the hot stratum of air on the low land at 90° or 100°; and the mass of the two, which increases towards the interior, secures the continuous suspension of the moisture till it is wafted across the Sutlej wastes of the Indus, and reaches the cold of the Himalah or other mountain ranges. The farther from the sea, the hotter and drier is the climate in Scinde, all the year round; particularly at Sukkur, in Upper Scinde, where the cholera never reached to on the late occasion.

State of the Season preceding Cholera.—In the present season (1866) the month of March was dry and hot, and on the line of march above Sukkur the thermometer in the soldiers' tents was at times as high as 100° or 106° in the middle of the day; while the dew-point was only 60° or 70°.

April.—In April, as we reached the mouth of the Indus, the temperature was still high; and about the end of April, while under canvas at Kurrachee, a large tent with double flaps, the thermometer stood at 96°, 100°, 104°, and in some tents at 110°; the dew-point varying with the wind—from the land at 64°, from the sea at 76°.

May.—In May the S.W. monsoon, or sea-wind, fairly set in, but blowing from N.W. to W.; only occasionally, for a few hours in the morning, being at S.W., but backing to N.W. by evening. The maximum heat, 91°, was not so great as in the previous month; but the mean heat of the twenty-four hours was much greater, and the nights were getting hot and oppressive, and, by the end of the month were about 84°. The dew-point, owing to the wind being steady from the sea, was subject to little variation, and was slowly, but steadily, rising to about 78° at 3 p.m. in the end of the month. The winds, however, were very fresh, both day and night, and ventilation seemed to go on in the most secluded nooks.

I give the meteorological tables for June and July in full, as marked B and C.

Absence of Local Causes at Kurrachee.—Here, then, we have before us the state of the climate preceding and during the outbreak of cholera; and, as a proof of the purely atmospheric origin, I may mention that the prevailing wind had been westerly, or from the sea, during the two months which preceded its appearance, and leads us at once to banish all idea of its being charged with any specific miasma or poison. This fact is also directly opposed to the alleged existence of minute and invisible animalcules floating in the air, unless they are of marine origin—a probability not even indulged in by the most strenuous supporters of this source of cholera. In vain do we also seek for the cause of malaria in the locality around Kurrachee. The country is dry and bare; almost wholly destitute of vegetation, marshes, or jungle—unless a few stunted euphorbia, thinly scattered over the desert, can receive such a term—and is about sixty miles from the Indus and its supposed malarious influence during the inundation. The very filth which exists about the streets of the cantonment, and a dirty bazaar, a few hundred yards to

windward of the barracks, unless by mechanically arresting the wind, appeared to have had no influence; for, although some attributed cholera to this, yet the disease had disappeared before active steps could be taken to remove these nuisances. Another source of the disease is said to have been in the effluvia which was generated from the masses of half-buried or half-burnt bodies of the persons who died in the native town of Kurrachee, which was wafted from the place of sepulture towards the barracks, and was most offensive to the olfactory nerves; for it may be here observed, that Kurrachee is about a mile to windward of the cantonment for the troops, consequently the latter has all the benefit of such a nest of filth between it and the sea. In truth, the decomposition of the bodies of those who had been the victims of cholera was sagaciously said to be its cause. When this effluvia was most intolerable at the camp, the violence of the cholera had ceased, and it finally disappeared among the troops while this alleged agency continued! Another, and equally absurd, cause passed current in camp, and has been echoed by the Bombay papers, viz., that the disease broke out after "a black cloud" and dust-storm, which took place at five o'clock p.m. on the 14th. While in reality twenty cases had been admitted, and arrangements had actually been made to move our regiment (the first assailed), before this not-uncommon phenomenon terrified the crowd. As it was next morning before the awful condition of our corps was generally known in camp, a few futile imaginations attributed the disease to what they had seen, and others accepted this because it was full of mystery.

Not Contagious.—It is equally apparent that there was nothing contagious in the nature of the disease; for instead of a few cases appearing first, and then the disease gradually spreading, it suddenly burst forth in a few hours in every European regiment, whether in camp or barracks, in every tent, and every house; and it was as it were in forty-hours after, when, instead of spreading further, it gradually and steadily declined. Now, it appears that for some days, or even weeks, a few cases had appeared in the native town of Kurrachee; but there also, at the same period, the malady became suddenly general over the whole place. From the nearest part of the cantonment to Kurrachee is about a mile, and where there are two native regiments' lines; farther off are the officers' lines, and the Suddar Bazaar; next are the barracks, in which her Majesty's 60th are quartered; and to leeward of all, half a mile farther off, is the low plain in which her Majesty's 86th Regiment and the Bombay Fusiliers were encamped.

Its Progress opposed to Contagion.—Now, although the cholera first showed itself among the natives in Kurrachee, betwixt whom and the persons residing in camp there was daily and hourly communication, yet for at least a fortnight, its ravages were confined to the former; and in its visitation to the cantonments it did not break out in the Scapoys' lines nearest to the town, but, if it came from windward as a specific poison, it passed over all, and burst forth with the unparalleled fury which has already been stated, in the 86th Regiment, at the most leeward and remote point! It then turned back in the teeth of the wind, and broke out in the barracks as suddenly as in camp; and a few days later it recrossed the officers' lines and appeared on the windward side of the cantonments among the native troops nearest to the point where it first began. These facts are alone sufficient to show that contagion had nothing to do with the spread of the disease. The officers and families were all equally exposed by their duties to have caught the disease, at least in a proportion something approaching to that of the regiment in barracks; but they had almost a complete exemption from its deadly influences, while it was raging with terrible effects on every side, even in their own compounds. Medical officers and attendants did not suffer more from the disease than others, although fatigue caused

a greater numerical proportion to fall sick with diarrhoea.

Atmospheric Origin.—If, then, the prevailing sea-wind is unfavourable to the hypothesis that assumes insect life to be a cause of the disease; that there is an absence of the sources which are supposed to give rise to what is called malaria; and the facts which were observed in connection with the outbreak and spread of the disease are equally opposed to an infectious or contagious character or origin, we are irresistibly led to the conclusion, that the disease depended on atmospheric agencies. Although in the foregoing pages we have glanced in general terms at the manner in which the aerial causes operate, it may be useful to carry the inquiry a little further, and apply the same principles to the actual state of the climate at Kurrachee before, and during, the recent pestilence.

State of the Weather during Cholera in June.—As shown by the meteorological table, the climate of Kurrachee, during the few weeks preceding the appearance of cholera among the troops, was characterized by several peculiarities different from those which generally belong to all hot countries and seasons, perhaps merely so by their presence being in an excessive degree. First, the temperature was unusually high, being 90° to 92° in the daytime, and 86° at night, in good houses; and in the tents of our soldiers it rose to 96°, 98°, and 104°, as indicated by a thermometer suspended on a central pole five feet from the ground, and in the thorough draught between the doors. Secondly, the quantity of moisture in the atmosphere was greater than I ever saw it before in any part of the world, or at any season, the dew-point being at 83°, and the thermometer in the shade at 90°, the lowest range: even this gives 12·19 grains of vapour in each cubic foot of air. The mean heat in the twenty-four hours was such as to suspend an unusually large proportion of vapour in the air, always near, but rarely or ever reaching, the point of deposition. Even at the equator, with the sun over head, I never saw the point of deposition above 78°. The third, and, perhaps, most important circumstance worthy of notice in connection with the other two, was the light, weak, unsteady winds or calms, which prevailed in the early part of June. Now, this is exactly the reverse of what ordinarily happens. In the last two years, the months of June and July were remarkable for the strong, steady, and cool winds, and overcast sky, which have given so favourable a character to the climate of Kurrachee during the hot months. It also appears that the quantity of rain which fell during the prevalence of cholera was much beyond anything that had occurred for a long time before; at least it surprised the European officers who have been here for three or four years. The state of the barometer I cannot give, but it must have been low.

Effects of the Weather on the System.—The effect of all this on the bodily feelings of every one, even the older residents in India, may more easily be conceived than described. There was a sense of languor and oppression, a stifling feeling about the respiration, and inability to undergo the slightest fatigue without extreme exhaustion. It was impossible to sleep at night, yet during the day the tendency to be overcome by a torpid sort of sleep was universally complained of; the body was bathed in perspiration, and the skin was corrugated and thickened as if it had been immersed for a long time in water. The lightest clothing could hardly be borne, or anything that arrested the free communication between the skin and the air. Hence every one was forced to seek the open air out of doors, or some place where the weak breezes were turned into a sharp draught; and it was a luxury of no common kind to have a punkah. In fact, for ten days before the predictions were unhappily fulfilled, it was a common remark among "old hands," that it was "regular cholera weather." At this moment (14th Oct.), the thermometer is as high as it was during the cholera, being 90° to 92° in houses, and 100° in tents, in the middle of the day. Yet we feel

fresh, elastic, and free from that horrible, undefinable sense of oppression that prevailed in June. Evidently it is not simple temperature, and "lichen tropicus" has disappeared. But we have a palpable cause of this agreeable change: the dew-point is at 72°, instead of 83°; and the evaporation is now, even in a calm, more rapid than it was in a fresh breeze in June.

Causes Common to all Classes.—The morbid tendency in the system which preceded the pestilence was equally remarkable among the officers and families, as among the men. Every one more or less complained of loss of appetite, nausea, and tendency to diarrhoea. The gastric irritation was very troublesome, and created much thirst, at a moment when the stomach was unwilling to retain fluid. The lichen tropicus prevailed to an intolerable degree, and I doubt if a single individual escaped it, not excepting even the old acclimatized Indians, who considered themselves secure against it. Of the 410 cases of cholera which were brought under my observation, I do not recollect one in which the whole body was not covered with this cutaneous disease. A great proportion of the officers were ill with dyspepsia, diarrhoea, &c.

Signs of a Choleric Diathesis.—It was even found that mild symptoms, closely allied to those of spasmodic cholera, existed among the classes who were not sufficiently ill to be put on the sick list, and constitute what I consider to be the choleric diathesis, which precedes or ushers in an attack. With impaired appetite there was disinclination for animal food, a craving for drink, burning sensation at the pit of the stomach after eating, and the most trifling physical exertion was succeeded by unaccountable prostration of strength, restlessness, and anxiety. Persons who were delicate, or only returned under the head of "dyspepsia," were often suddenly attacked with "rice-water" dejections by stool, without any other sign of cholera; others had vomiting of the same, without purging; but even two or three scanty motions of this kind left the person shrunk, pallid, and depressed in strength. Those who were walking about at duty complained of fullness; tension and stiffness of the hands and feet, accompanied by an unpleasant tingling sensation in the palms of the hands and soles of the feet, often pervading the whole extremities, and producing twitching and spasmodic startings of the limbs when in bed. These last were very generally felt. At the same time the body was constantly bathed in perspiration, and the very atmosphere had a muggy, close feeling, as if it was a vapour-bath. During the prevalence of the disease, I had no tendency to diarrhoea or dysentery, although I have formerly suffered from the latter in a severe degree; yet I felt a constant tendency to nausea, loathing of animal food, and seldom could eat anything but dry biscuit, toast, or sago, although undergoing fatigue of no common kind, and at such a season. One night I was attacked with spasms of the calves of the legs, without any other symptom of cholera, except nausea. Two of my three assistants were taken ill, in twenty-four hours after the disease broke out, with diarrhoea and prostration of strength. The other continued at work, but suffered from diarrhoea.

I refer to this morbidly congestive condition of the system as existing among officers and their families, who are considered to have had a marked exemption from cholera; for it shows that they were equally subject to the atmospheric agencies as the men, and, had they been exposed to the same collateral causes as the latter, they would no doubt have suffered in an equal ratio, instead of that shown in Table D.

It is this peculiar state of the system which induces me to infer that all were subject to a common uncontrollable cause, which was modified by circumstances under our influence: in one class, running into a malignant form; in another, so mild as scarcely to merit the term "disease."

(To be continued.)

PROGRESS OF GERMAN MEDICAL SCIENCE.

By Dr. BUSHNAN.

(Continued from page 237.)

3. ON THE ANATOMICAL RESULTS OF ACUTE AND CHRONIC RHEUMATISM.—In 1813, and again in 1827, Chomel attempted to illustrate the pathology of rheumatism. Unfortunately his facts were few and insufficient, and since that time nothing of a very satisfactory nature has appeared upon the subject; nor even can we here except the "rheumatic callous" of Froriep; and hence, up to the present day, the terms rheumatism, rheumatic fever, &c., have proved a sort of "refuge for the destitute," beneath which an ignorance of diagnosis and of pathology has found a frequent and convenient concealment. I need scarcely notice the pamphlet of Gottschalk (Cologne, 1845), nor the treatise of Griesinger ("Roser and Winderlich's Archiv," 1846); for we learn little from them but what we knew before; indeed, further discussions upon symptoms are not required: we want anatomical results; and when we consider how rarely people die of rheumatism, and, when they do, that our anatomical researches are chiefly confined to the heart and its investures, we must hail with pleasure any well-observed and recorded facts—such as those which I am about to relate by Professor Hassé, of Zurich—that bear upon this much-to-be-desired investigation. There is no question that many diseases called rheumatic are plainly of an inflammatory character, especially those attacking the serous sacs; but still there remains a far greater number of which, as yet, we possess not the slightest anatomical knowledge; of these especially are those in which we find no change of form in the part affected during life, or at most something corresponding to the rheumatic callous of Froriep, and which, as they are not fatal, afford rare occasion for post-mortem examination. It is to such cases as these that Professor Hassé has directed his attention; and, as he says, it is only lately that "he has succeeded in coming upon the traces of the anatomical changes they produce." He first describes the case of a girl, aged twenty-five, who had died of consumption in the hospital under his direction, and who, fifteen months previously, had suffered severely from rheumatism; symptoms of endocarditis had appeared and been overcome. On dissection, the joints which had been affected were examined; and it was found that their cartilages exhibited, instead of their normal blue and whitish colour, a red appearance, which was much darker beneath the surface. This was especially the case in the astragalus, which presented many dark-red spots; and, in cutting through this bone, these seemed to have penetrated from two to six lines into its osseous structure. Under the microscope, this dark-red mass was found to be composed of a series of globular and flattened cells, not to be mistaken for those of the fatty cellular tissue, and of a diameter of 0.0046" to 0.0056", some containing a rather large nucleus, and others two or three smaller nuclei, perceptible either at once under the microscope, or when treated with acetic acid. Near these red spots a quantity of shrunken blood-globules were perceptible, and to which probably they owed their colour.

This important discovery induced Professor Hassé to examine, after death, the bodies of persons who, when living, had assured him they had not been afflicted with rheumatism; in these he could never discover similar appearances, while they were always present in those who had suffered from the disease. Professor Hassé in his paper relates ten such cases, and intimates that he might have enumerated several more; and, however important these may be, want of space obliges me, however reluctantly, to refer the reader for the details to the original communication in the "Zeitschrift für rationelle Medicin," vol. v.; while I briefly sketch from them the general anatomical results of acute and chronic rheumatism, and the deductions that are

to be drawn from the important discoveries of Professor Hassé, which are now for the first time, and through the medium of the *Medical Times*, made known to the profession at home.

It appears then, from a careful analysis of the cases of Professor Hassé, that nearly every species of organic change may follow rheumatism: softening and thickening of the affected part of the bone (the first, when the exudation is not absorbed; the second, when it has become organized and changed into osseous structure); destruction of the bone, forming depressions, cavities, and absorption of its apophyses; and ultimately, in many cases, atrophy and softening of the articular cartilages. The cells above described are not, therefore, to be confounded with the cells which fill the canaliculi of the bones of the fetus and new-born infant, as have been described by Todd and Bowman; they are distinctly a new formation, the result of exudation; for in healthy adults only fat cells are to be found filling the spongy tissue of the bones. Lastly, by this discovery of a new mass filling the interstices of bones in those parts which have been affected with rheumatism, a tangible and material character is given to a disease, the nature of which has hitherto been mysterious or unknown; while the practitioner is taught to persevere in his antiphlogistic treatment and counter-irritants, and not to wonder at the length of time he is obliged to devote to the cure.

4. ON THE ETIOLOGY OF PUERPERAL FEVER.—PUERPERAL PERITONITIS—"vulgarly" called puerperal fever," by some authors; but as I think one term is quite as good as the other, nor can I see any advantage in what has been well termed an "onomatomania," since it obliges us to learn two names instead of one, especially since names generally are

"Not bad *simpliciter*, nor good,
But only as they're understood."

And in the present case, perhaps, the old name is the better of the two; since, without clearly seeing the why and the wherefore, most practitioners of the present day are painfully convinced of the infectious nature of what I must still call *puerperal fever*; and, if names are useful only so far as they lead to the right understanding of the nature of things, the old term is, therefore, certainly preferable to the new one. We have seen, then, puerperal fever, both in an epidemic and sporadic form; we have read of the two hundred and twenty-two cases which occurred in 1829, in the Maternité at Paris; and we know that there is scarcely an accoucheur in great practice who has not at times had a succession of cases occur to him. This was remarkably evidenced in the practice of the late Professor Hamilton, of Edinburgh, in 1830-31; and, as I believe, later in that of that excellent practitioner, Dr. Thatcher, of the same place. I think a recent discovery of Dr. Semelweis, of the General Infirmary of Vienna, is likely to throw much light upon this hitherto-mysterious subject. During the last year puerperal fever reigned to a great extent in the maternity wards of that institution; and, after many means had been vainly tried to check it, it was arranged that neither professor, pupils, nor nurses should make an examination of a woman in labour without previously washing their hands in a solution of chloride of lime. Before this regulation was enforced, 18 out of 100 lying-in women died, while immediately after it the mortality was reduced to less than two and a half per cent. I must here explain to the reader that, on the Continent, clinical lectures are given in the midwifery hospitals; and that professors and pupils proceed through the wards and to each bed, examining one after another, and with unwashed hands, many women in different stages of labour. Here, then, is a reason for the ravages puerperal fever will sometimes commit in public hospitals; and now, too, we may understand why it sometimes accompanies an accoucheur from patient to patient. I am very far from bringing a charge of uncleanness against the English practitioner, still less against the private practitioner; but it is very natural to suppose a hasty lavation of soap and water may not always

remove virus from his hands. It may lurk about his nails or elsewhere, and remain there until deposited in the vagina of the next woman he examines. At any rate, an accoucheur may as well carry in his pocket a bottle of the solution of chloride of lime as one of eau de cologne; nor, after the remarks of Dr. Semelweis, is he justified in neglecting the precaution, if, indeed, he is not liable to come under the jurisdiction of the coroner.—*Zeitschrift der K. K. Gesellschaft der Ärzte zu Wien*, Dec., 1847.

(To be continued.)

PROGRESS OF MEDICAL SCIENCE.

Acetate of Lead in Tympanitis.—Dr. Badeley, mentions a case of temporary intestinal obstruction, with excessive lymphatic distention, in which the best effects followed the exhibition of the acetate of lead. Purgatives had failed to procure an evacuation. Vomiting supervened, with hiccough, and the coils of distended bowels could be felt through the abdomen. Feeling convinced that the symptoms depended upon a loss of tone in the muscular fibres of the alimentary canal, alum was ordered, with turpentine injections, and having failed, three grains of the acetate of lead, with one-sixth of a grain of morphia, were given every four hours. This was soon followed by the expulsion of large quantities of gas, and copious dejections. The hiccough and vomiting declined, and the man was soon convalescent.

Inflammation of the Spleen, and Suppuration.—Dr. J. D. Holly, of Lowndesborough, Alabama, was requested to visit a youth, aged fifteen years, who had laboured under intermittent fever. He now complained of excruciating pain in the left hypochondrium, extending as far as the clavicle, increased on pressure, with sensation of cold, and partial rigor; considerable nausea, dry cough, more than ordinary symptoms of pyrexia; great weight and fullness in the left hypochondrium, involving the upper portion of the lumbar space, with pain on respiration; slight hæmatemesis, with accelerated pulse; tumour extending from the origin of the cartilages of the ribs on the left side to the mesial line in one direction, descending to the ilium (crest), occupying the upper portion of the lumbar space. Venesection, both local and general, was practiced, cups applied to the left hypochondrium and lumbar space, with partial abatement of the foregoing symptoms. Vesication was resorted to, over the whole space occupied by the tumour, followed by the ordinary purgatives. After an interval of five days, pills of sulphas ferri x., aloes socatri (Jss.), sulphas quinae, were ordered. The patient complained of a dull, heavy pain, with a peculiar burning sensation, in the region of the spleen; striking as far as the spine and clavicle; attended with a fullness and throbbing, and an increase of the tumour. Shivering came on at intervals, terminating in slight perspiration over the most oedematous portion. Warm fomentations of hops were applied, wrung out in warm water, followed with a poultice of linseed-meal, copiously sprinkled over with mustard, without any perceivable change in the character of the enlargement. Caustic (the *potassa fusa*) was then had recourse to, in the solid form, well pointed, not in paste, as is sometimes used. On the following day the purulent fluid found an outlet externally (immediately over the splenic region), and large quantities of a dark puriform discharge came away through the opening; it was then dressed with common meal-poultice. The patient at this time was much emaciated, from large quantities of pus being added to the circulation, producing hectic fever, accompanied with diarrhoea. He was put under the use of nourishing food, wine, tonics, &c., which were used sparingly for a short time, and afterwards gradually increased. The diarrhoea was stopped with opium, astringents, and absorbents. For the inordinate perspiration, the *acidum sul-*

phuricum aromaticum was used, with the happiest effect. A tent was then introduced through the opening in the abdominal wall, in order to keep up the discharge from the spleen. Discharge has soon stopped; the left hypochondrium is much excavated, from the large quantities of pus evacuated from the spleen.

Aneurism of the Arch of the Aorta.—Dr. Fletcher exhibited, at the Birmingham Pathological Society, a sacculated aneurism of the arch of the aorta, taken from a patient who had suffered from vertigo, loss of memory, and want of power to express himself. This state was ameliorated by rest, and increased by exercise or excitement. Leeches, rest, and attending to the secretions, and absence from all sources of excitement, in the course of three or four weeks brought the patient into a better state, and he lost all the symptoms of cerebral affection. At this time, on examination of the chest, an aneurism was discovered, the upper portion of which passed up into the neck, just behind the sternal attachment of the left sterno-cleido-mastoid muscle. It had not caused the patient any local inconvenience, neither did he know of its existence. The aneurism did not increase in size. The patient eventually had attacks of peritonitis, attended with excessive depression; and he sank in three days from the commencement of the last attack. At the *post-mortem* examination the heart appeared healthy; aorta dilated and much studded with atheromatous deposit; an aneurism was situated in the arch of the aorta, between the origins of the arteria innominata and left carotid, and extended upwards about four inches, crossing obliquely the course of the trachea, so that its apex was situated under the origin of the left sternal attachment of the sterno-mastoid muscle. Into the base of the aneurism opened the arteria innominata, and the right common carotid, and the subclavian arteries on their respective sides, close at its base. The opening of the left subclavian was almost obliterated; it allowed the passage of only a very fine probe. The aneurism was divided into two sacs, by a band across its posterior wall, about two-thirds of its height from the base; both sacs were filled with very firm clots, composed of transverse layers of fibrine, very firmly adherent to the walls of the aneurism, and to each other, so that the aneurism may be said to have been undergoing the process of a natural cure. Immediately after giving off the left subclavian, the artery was of its normal state and size. Lungs healthy; some old adhesions of the pleura on each side.

Cataract composed of Phosphate of Lime.—M. Magne relates the case of a patient, aged 47, who had, 25 years previously, got some sparks of melted silver in his eye, which occasioned the cataract in question. One morning, on getting up, the cataract had fallen forward into the anterior chamber of the eye, apparently in consequence of a violent fit of rage into which he had fallen the night before. Violent pain and inflammation supervened, and M. Magne performed the operation of extraction, which was done with difficulty, owing to the restlessness of the patient. It was a perfectly hard capsular cataract, and an analysis by M. Lesueur showed that it consisted entirely of phosphate of lime, with a very small quantity of animal matter.

Use of Glisson's Capsule.—M. Petrequin regards it as destined to facilitate the portal circulation. The liver, he says, is a compact organ, not readily admitting of being distended; there is no heart to impel the blood through the vena portæ, nor are there any valves to sustain the column of blood in it; the capacity of this vein is also greater than that of the mesenteric artery, to which it corresponds, and it is one of the vessels whose calibre is most variable, because, from its relation to the digestive organs, it must admit of dilatation when fluids are absorbed, and be enabled to contract when those fluids have passed off. These various obstacles to the portal circulation are counteracted, and the power of accommodating the capacity of the vessel to its contents is ensured, by its running

in a fibrous sheath, and being quite independent of the tissue of the liver; it can dilate or contract as the quantity of fluid traversing it increases or diminishes, and it can also contract so as to press on the blood it contains, and thus favour its circulation.

Fracture of the Clavicle.—M. Velpeau, quoted in "The Provincial Journal," remarks that the most complex apparatus are in nowise preferable to the following simple plan of treatment in fracture of the clavicle:—A bandage is carried from the armpit of the sound side across the back and shoulder to the fractured clavicle. The patient's hand is brought up to the sound acromion, so as to raise the elbow as high as the sternum, the shoulder being thrown backwards and upwards. Whilst an assistant holds the limb, the bandage is repeatedly passed over the anterior part of the arm, and brought round by the sound armpit; and over this is passed one well moistened with dextrine, so as to produce an inflexible mould. The bandage need not be put on for four or five days after the accident, and in from a week to a fortnight the fracture will be sufficiently firm to allow of its removal. It is an error to suppose that a patient cannot raise his arm to his head when his clavicle is fractured. He believes he cannot, and is prevented from trying by the pain this causes. But if you insist upon it, and that not doubtingly, you will find he can accomplish it. I have not seen six exceptions in twenty years.

Mortality and Mean Length of Abode of the Patients in the Large Hospital of Milan from 1811 to 1844, and in that of the Brothers of Charity from 1604 to 1844.—The following conclusions are drawn from Dr. G. Ferrario's first table of the mortality, &c., in the large hospital at Milan, during thirty years:—1. The mortality of the sick in the great hospital of Milan, monthly and annually, is constantly greater in females than in males, in the proportion of 2 to 6 per cent. 2. The mortality from November to the end of April (that is, the whole winter and spring) varies in males from 14 to 19 per cent.; in females from 16½ to 24½ per cent.; and the total mortality of the two sexes from 15 to 21 per cent. 3. The mortality from May to the end of October (that is, summer and autumn), in males, varies from 7½ to 12 per cent.; in females, from 11½ to 14½; and in both together, from 9½ to 13 per cent. 4. During the whole period, the mortality of males, and of both sexes taken together, is at the minimum in September, it begins to increase in October, and continues to increase until it attains its maximum in January. It begins to decrease in February, and continues to do so in the succeeding months of spring and summer, and attains its minimum in August, and particularly in September. 5. The mortality of females, calculated alone in the six months of winter and spring, proceeds in exact proportion with that of the males, but differs in the other months. The minimum mortality of females is in August, and begins to increase in September, proving that females suffer more quickly than males from the morbid influences of autumn, and from the cold of winter. 6. The mean annual mortality of males was 12·41; and of females, 16·13; and of both sexes, 13·82 per cent., including those brought dead, or in the last moments of life, to the hospital. It is to be observed, that about 400 chronic incurables are always in this hospital. The stay in hospital was always longer in females, exceeding at least two days that of males; and in August four days. The mean stay during the thirty years, was thirteen days for males and fifteen for females. It is stated that the Milanese females are much less willing than the males to go to hospital, preferring rather to be treated at home by the permanent physicians for the poor. Their number in hospital is always less than that of males, and their diseases are in a more advanced stage. In the other hospital the mean stay was twenty-one days and a half. This increased time is owing to the convalescents being detained for a longer period, as there is a large ward set apart for them, and they are selected from the better class

of the lower orders, poor but not destitute, whereas no distinction of this kind is observed in the larger establishment. It is the opinion that great benefit would result from trials of any given remedy, or plan of treatment, in the same months in all the principal cities of Europe; and that thus some appreciation might be made of meteorological influences in modifying the effect of remedies, by comparing the mean mortality and duration of treatment.

Merbid Anatomy of the Cholera.—Dr. Parkes, in his work "On Asiatic Cholera," gives a summary drawn from a comparison of forty-six dissections; of these, thirty-nine died in the blue or collapsed stage, and seven of the subsequent febrile affections. In the head, accumulation of blood in the veins of the dura and pia mater, and effusion of serum or of blood consequent upon this. This congestion is sometimes as great in recent cases as in those of consecutive fever with head symptoms. In one case, there was a collection of adhesive mucus in the laryngeal ventricles; in several, there was frothy mucus in the trachea, and slight redness in the same situation, general or confined to the bifurcation. In the majority of cases, the parts were unaltered. The most common appearances in the lungs were the presence of blood in the large vessels, chiefly or solely; the collapse of the parenchyma, and deficient crepitation, arising from the more or less complete absence of air and blood. In other cases, there was more blood in the capillaries, a corresponding dark colour of the lung, and an amount of frothy serum which bore an inverse ratio to the degree of collapse. The right side of the heart, and the pulmonary arteries, were generally filled, and in some cases distended, with blood. The left side and aorta were usually empty, or contained only a small quantity of dark blood. In some cases, there were well-formed coagula in the heart, of more or less firm consistence; whilst, in others, the blood seemed wholly incoagulable. Even when coagula (so-called polypi) reached into the pulmonary arteries and venæ cavae, the remainder of the blood was dark, viscid, and permanently fluid. Whether coagulated or not, the blood was usually of a dark colour, described by authors as "carbonaceous," "tarry," "un-oxygenized." When brought in contact with the air in thin layers, it generally acquired an arterial tint. Nitrate of potash, chloride of sodium, &c., added to the blood, communicated to it a bright arterial hue. The serum presented the appearance of a thickish dark fluid, which gradually, after the lapse of twenty-four or thirty hours, deposited a loose cloud of colouring matter. It contained abundance of albumen, and always coagulated firmly on the application of heat. It contained, also, some of the salts, as it never failed to give, with nitrate of silver, a dense curdy precipitate, becoming dark on exposure to light. In the liver, blood was accumulated in the larger branches of the vena portæ and hepatic vein. The gall-bladder was moderately full, and the bile thick and viscid, but not stringy, as in some cases of dysentery. The spleen and kidneys presented nothing unusual. The stomach was often distended with a watery, pale, subalbid, yellowish, greenish, or greyish fluid. This was not coagulable by heat, but gave, in several experiments, a dense curd of precipitate with nitrate of silver. The contained fluid often smelt strongly of medicines which had been taken even a considerable time before death. When less distended, the stomach was corrugated, and the mucous membrane was as rugose as the stomach of a dog. The small intestines appeared generally dilated, and in every instance contained more or less of a peculiar fluid. The agminated and solitary glands were enlarged in the majority of cases; this enlargement, however, differed exceedingly in degree. They were most conspicuous in the least severe and in the prolonged cases, in which there is the greatest amount of purging. There was no ulceration or sloughing of these agminated glands in any case, and in two only was there ulceration of the solitary glands. In about half the number

of cases the colon was contracted. The degree to which this was carried was sometimes extraordinary, but bore no relation to the amount of purging. The glands were visible in every case, sometimes presenting dark central spots or dots. The fluid effused into the alimentary canal was generally found in the small intestines, and was one of the most constant after death appearances. In colour it was white, subalbid, or of a light grey-yellow or chocolate tinge. The fluid consisted of a thinner and a thicker portion, and its consistence varied according to the quantity of these component parts. The thicker portion was flaky, stringy, curdy, or clotted: it was not spread uniformly over the surface, but lay in masses here and there, as if it had been deposited from an agitated fluid: some of these masses, or bundles, often adhered with considerable firmness to the mucous membrane, and were detached with difficulty from between the valvulæ conniventes. It had a peculiar albuminous caseous smell, more developed by heat. In amount it varied greatly. In one case three pints were measured, but there was sometimes much more than this, and sometimes less. The thin serous fluid became cloudy and turbid by heat in some cases, but in the majority of instances it resembled the thin serous stools in being incoagulable. It precipitated nitrate of silver in every case. Occasionally there was an alkaline reaction: but this was not constant. When the clotted substance was separated from the thin fluid, and heated in a solution of liq. potassæ, or of carbonate of soda, it dissolved with greater or less facility. In ten trials the solution was almost or quite perfect; in a few other cases a portion was left undissolved. Nitric and sulphuric acids immediately gave a copious white precipitate when added to the alkaline solution. It was only occasionally soluble in acetic acid. There can be little doubt that the rice-water stools consist of the thinnest parts, which pass off, while the thicker clotted portion is retained, or appears in small quantities in shreds or flocculi. It seems probable that the peculiar stools consist of part of the water and salts of the blood mixed with a considerable amount of fibrine, and that they consist principally of the ingredients which have been found diminished in the blood. The bladder was always found contracted, sometimes to an excessive degree.

Hydatids in the Uterus.—Mr. J. B. Brown relates in "The Obstetric Record," the case of a woman, aged forty years, and the mother of four children, who applied to him, stating that she was about four months advanced in pregnancy, and that she had been troubled with a great discharge "per vaginam," of a dark brownish colour, and most offensive to the smell. The mammae were not so large as previously, but she had pain constantly darting through them, accompanied by soreness of the nipples. She had experienced morning sickness; had frequently suffered from sudden and violent pains, through the lower portion of her stomach, which obliged her to sit down. The os uteri was high up and tender to the touch; and the uterus enlarged to a size accompanying a four months' pregnancy. A month afterwards, during which time these symptoms continued unabated, flooding profusely came on. On examining some coagula that had escaped, some hydatids were discovered attached to them; the hand was introduced into the uterus, and a large quantity of hydatids, mixed with coagula, sufficient to fill a full-sized chamber utensil, removed. Of hydatids alone there were at least two quarts. The whole mass closely resembled the spawn which is seen in ponds, deposited by toads and frogs. The hemorrhage immediately ceased, and the patient gradually recovered under a course of steel medicine, and has since menstruated regularly. The peculiarity of this case consists in the large quantity of hydatids parted with, as few writers have recorded any cases similar in that respect.

APOTHECARIES' HALL.—Gentlemen admitted members on Thursday, Feb. 24:—Charles Jennings; John Farmer, Hereford.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TWO CASES IN WHICH THE HAIR, TEETH, AND SKIN, WERE VERY IMPERFECTLY DEVELOPED.
By JOHN TURNAM, M.D., Medical Superintendent of the Retreat, near York.

In this paper the author described the cases of two cousins, who were distinguished through life by the almost complete absence of the hair, by the teeth being not more than four in number, by the delicate and defective structure of the skin, and by the absence of sensible perspiration and tears. The author embodied in his paper a description, by Mr. Erasmus Wilson, of the microscopic character of the skin in one of the cases, from which it appeared that the dermis was in a state of extreme laxity and apparent atrophy. The sudoriferous glands were not wanting, but their ducts were unusually delicate, and their epithelial and, consequently, secreting lining was very thin. The patient died, at the age of fifty-eight, from disease of the lungs. The author pointed out and considered some of the physiological and pathological questions connected with these cases, and concluded his communication with a notice of such analogous instances as have been recorded.

ON CERTAIN PATHOLOGICAL CONDITIONS OF THE BLOOD AND URINE IN GOUT, RHEUMATISM, AND BRIGHT'S DISEASE. By ALFRED B. GARROD, M.D., Assistant-Physician to University College Hospital.

The author commenced by alluding to the ideas of the ancients as to the nature of gout, and then spoke of the views held at the present time, remarking that the balance of opinions was in favour of the humoral pathology of the disease; but that, up to the time when his researches commenced, no proof had been afforded as to the nature of the *materia morbi*, and even the existence of any such alteration in the blood had not been positively ascertained. The object of the author's researches is to prove that—

1. In gout the blood always contains uric acid, and that this body can be crystallized from that fluid in the form of urate of soda.
2. That the uric acid is diminished or absent in the urine immediately preceding the gouty paroxysm.
3. That, in patients subject to chronic gout with tophaceous deposits, the uric acid is always present in the blood and deficient in the urine, both absolutely and relatively to the other organic matters, and that the chalk-like deposits appear to depend on an action in and around the joints, &c., vicarious to the "uric acid secreting function" of the kidneys.
4. That the blood in gout sometimes yields a small amount of urea (no albumen being present in the urine).

Quantitative analyses and observations in favour of these conclusions were then detailed, and also the method used for separating the uric acid and urate of soda from the blood. Dr. Garrod thought it probable that the presence of a small amount of urea in gouty blood might be the cause of one of the symptoms which distinguished gouty from rheumatic inflammation—viz., the slightly cedematous condition of the inflamed part.

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

The next researches were made on patients suffering from acute rheumatism, and it was found that rheumatic blood contains no more uric acid than the healthy fluid, and no urea can be extracted from it. Analysis made on the blood and urine in Bright's disease appeared to show that, in albuminuria—1, the blood always contains uric acid, but that the amount of this sub-

stance is subject to great variation; 2, that urea exists in large quantities in the blood (which has been proved long since), and that there appears to be no relation between the amount of the urea and uric acid; 3, that the kidneys are always deficient in their power of throwing off urea, but that, with regard to the uric acid, their excreting function is sometimes much injured, at other times little affected.

In conclusion, the author thought that the results detailed in the communication led to the inference, that uric acid is not a product of the action of the kidneys (as has been often supposed), but that it is merely excreted from the system by these organs: also, that the excreting function of the kidneys, for the solid portion of the urine, is not simple, but that the urea and uric acid are separately eliminated, and that one of these functions may be impaired or destroyed, the other remaining entire; it appears, also, probable that, as in albuminuria, the "urea excreting function being chiefly impaired, we find a vicarious discharge of this body in the dropical effusions;" so in gout the "uric acid excreting function" being defective, the tophaceous deposits are produced by a similar vicarious discharge of urate of soda. Gout would thus appear to depend on a loss of power, temporary or permanent, of the "uric acid excreting function" of the kidney; the premonitory symptoms, and those also which constitute the paroxysm, arising from an excess of the acid in the blood, and the effort to expel this "materies morbi" from the system. Any undue formation of this compound favours the occurrence of the disease; hence the connection between gout and uric acid calculous disease, and the influence of high living, want of exercise, &c., in inducing it. Thus, also, the hereditary nature of gout, and its frequent occurrence in low states of the system, can be explained—facts which were generally regarded as militating against the humoral pathology of the affection. The above researches appear also to remove acute rheumatism from gout, and to render it probable that they are only analogous in affecting similar structures.

LINNEAN SOCIETY OF LONDON. Feb. 15, 1848.

Reported by Dr. W. H. BROWN, F.L.S.

The Lord Bishop of Norwich, President, in the Chair.

The following works were announced as having been received since the last meeting, and thanks were voted to their donors:—"Abhandlungen aus dem Gebiete der Naturwissenschaft," vol. 1, presented by the Natural History Society of Hamburg; No. 13 of "The Quarterly Journal of the Geological Society," presented by the society; vol. 17, part 2, of "The Journal of the Royal Geographical Society," presented by the society; "Monografia delle Pleuroleme Fossili del Piemonte," presented by the author, M. Luigi Bellardi; part 1 of "The Entomology of Australia," presented by the author, G. R. Gray, Esq., F.L.S.; part 8 of "The Elements of Conchology," by Lovell Reeve, Esq., presented by the author.

Robert Hudson, Esq., elected January 18, attended, and was formally admitted a fellow; Charles Cogswell, M.D., of Halifax, British America, was balloted for as a fellow, and elected. A paper was read "On the Early Stages of Development of Lemania Fluvialis," by G. H. Thwaites, Esq., lecturer on botany and vegetable physiology at the Bristol Medical School.

The author accounted for Lemania fluvialis escaping the observation of botanists by its similarity to *Trentepohlia pulchella*, not only in colour and appearance, but also in situation of growth. It is found towards the end of November covering the surface of stones with a dark-olive coating, and adhering by means of its minute roots so intimately as scarcely to be removable without incurring destruction. The plant, examined minutely, consists, in the early stage, of numerous filaments, about a line in

length, slightly branched. Each of these is about $\frac{1}{1000}$ in diameter, and consists of a single row of cells, containing colouring matter of a blue-green colour. So far its structure is similar to a minute conferva, but it bears merely the same relation to the mature lemania that the confervoid shoots do to the perfect moss, or the mycelium to the fully developed agaric. Kützting, in his "Physiologia Generalis," has described and figured a species (*Lemania torulosa*) strongly resembling the one under consideration. From a cell near the base it emits a branch, differing somewhat from other branches, which, having pushed its growth to an extent requiring greater support and nutriment than that derivable from the parent part, it emits roots which establish for it a separate existence. The paper concluded with a recommendation to botanists to study the development of the *Algae*, the result of which must be the acquisition of many new facts interesting and important alike to the physiological and to the systematic botanist. It is highly probable, the author considered, that very many of the structures now classed with the *Palmettes* are merely immature states of more complicated species; and that there are, perhaps, many others of the same character which we at present look upon as being in the condition of complete maturity. The minuteness of the investigation, however, renders both a practised eye and a good microscope indispensable.

REVIEWS.

Elements of Natural Philosophy; being an Experimental Introduction to the Study of the Physical Sciences. By GOLDING BIRD, A.M., M.D., F.R.S., F.L.S., &c. 12mo. pp. 552. London: John Churchill, 1848.

Dr. Golding Bird's work on natural philosophy again appears before us, and now in its third edition. In 1839 the first edition was published; in 1844 the second; and now, in 1848, we have the third. This circumstance alone, of a work on natural philosophy, published in a series, with other volumes of a purely professional character, and which gives the whole series more or less of the same tone, going through three editions in so comparatively a short space of time, is in itself a sufficient guarantee of its value.

We think that the volume before us is second to none of the useful set of manuals with which Mr. Churchill has furnished the profession, either as it regards the learning and research of the author, or the care he has taken in putting the subject before his reader in a clear and intelligible light.

Dr. Bird's knowledge of the scientific portion of the subject upon which he writes is not greater than his literary acquaintance with it, and his pages are replete with the interesting history of the progress of natural philosophy.

The author never omits to make liberal acknowledgments of the sources from which his information is obtained; and these must necessarily be numerous, considering that the work is the product of a physician connected with a large hospital, and in busy practice; for, to expect much originality would be absurd under such circumstances.

The return of the volume to the hands of the author has not been neglected by him, and he has in this edition made several improvements, and which make his work quite up to the present state of science. Of these additions, the most important are an excellent epitome of Dr. Faraday's discoveries on *magnetic induction*, which were a little more than two years ago communicated to the Royal Society, and a well-digested abstract of Professor Matteucci's investigations of the subject of *organic electricity*; and he also shows that a considerable portion of the latter had been anticipated by Professor Aldini, of Bologna.

Dr. Bird has managed in a very short space to sum up the principal part of Dr. Faraday's "Observations on Magnetic Induction;" he writes:—

"Hitherto, when a body, not itself possessing

magnetic properties, has been alluded to as obedient to the action of the magnet, we have found that it is equally *attractive* by both poles.

"Dr. Faraday, however, discovered the remarkable fact that a vast number of bodies are mutually *repelled* by both poles. And thus, when formed into bars and suspended by means of a long and slender thread between the poles of a powerful magnet, they vibrate, and ultimately come to rest in a line equidistant from both poles, and perpendicular to the lines of magnetic force: a direction, consequently, at right angles to that taken by a bar of iron."

The author, after stating that an electro-magnet is the best, because the most powerful, instrument with which to try these experiments, goes on to say, that, upon suspension over the magnet, "the iron bars instantly become powerfully magnetic, and the body placed in the cradles will either be attracted by both poles and assume a corresponding position, or be repelled by both, taking up a position at right angles to the line connecting them; or, lastly, be quite unaffected. A bar of iron will illustrate the first condition, one of bismuth the second, and a tube full of air the third."

"These bodies, which are attracted, however feebly, by the poles, Dr. Faraday proposes to call *magnetic*, according to the general custom; those which are repelled he terms *dia-magnetic*; whilst those which obey neither force are regarded as *indifferent*."

Further on he writes:—

"To produce the effect of pointing across the lines of magnetic force, the form of the *dia-magnetic* body must be long. A cube or sphere will not thus point, but two or three placed side by side in a paper tray will. But portions of any shape are repelled. Thus, if two fragments be suspended between the poles parallel to each other, they will appear to attract each other, in consequence of being simultaneously repelled by both poles."

Flint-glass, heavy glass, cylinders of phosphorus, sulphur, caoutchouc, ether, alcohol, oils, water, and blood, are all *dia-magnetic*.

"Animal flesh is thus acted upon; hence, as Dr. Faraday has observed, if a man were suspended over the poles of a sufficiently large magnet, he would be repelled, and point east and west."

"Among the metals the following were found to be the most energetically *dia-magnetic* in the order in which they are placed:—

"Bismuth.
Antimony.
Zinc.
Tin.
Cadmium.
Mercury.
Silver.
Copper.

"Bismuth is very readily thus acted upon, and a small bar of it two inches long and half an inch wide is perfectly fitted for the exhibition of the phenomena now described."

Dr. Bird concludes this notice of Dr. Faraday's labours by very properly observing that, though La Bailif had some years ago discovered that bismuth and antimony acted on the magnetic needle, and Coulomb shown the same relative to certain organic substances, still our own distinguished countryman is the philosopher who has alone elaborated these discoveries.

Our author, whilst taking an historical view of the subject of organic electricity, adduces evidence to show that many of the most important facts relative to these remarkable phenomena have long been known, and that for them we are indebted to Aldini, a nephew of Galvani.

It is strange, however, that, though the discoveries of Aldini have been published ever since 1803, they do not appear to have been noticed by subsequent authors who have written on this subject.

Relative to Professor Aldini, Dr. Bird makes the following interesting remarks:—

"He was inspired with so much zeal in defence of his uncle's theory, that he travelled through

France and England for the purpose of demonstrating the truth of his views; and, in presence of the medical officers and pupils of Guy's Hospital, he, in the year 1803, supported and defended a series of propositions so satisfactory and conclusive that he was presented by his auditors with a gold medal commemorative of his labours.

"Professor Aldini's propositions and conclusions are so important and of such high interest, that I shall now briefly refer to some of them, as they appear to demonstrate in a most satisfactory manner the existence of free electricity in animals, and, as will appear to all conversant with this branch of physiology, most remarkably anticipate the late researches of his countryman, Professor Matteucci.

"Prop. 1.—Muscular contractions are excited by the development of a fluid in the animal machine, which is conducted from the nerves to the muscles, without the concurrence or action of metals." (a)

"Exp. (A).—In proof of this statement, Aldini procured the head of a recently killed ox. With the one hand he held the denuded legs of a frog, so that the portion of the spine still connected with its lumbar nerves touched the tip of the tongue, which had been previously drawn out of the mouth of the ox. The circuit was completed by grasping with the other hand, well moistened with salt and water, one of the ears. The frog's legs instantly contracted; the contractions ceasing the instant the circuit was broken by removing the hand from the ear.

"The intensity of these contractions was much increased by combining two or three of these heads, so as to form a sort of battery, just as Matteucci, forty years after, found to be the case with his pigeon-and-rabbit battery.

"Exp. (B).—Aldini, having soaked one of his hands in salt and water, held a frog's leg by its toe, and, allowing the ischiatic nerves to be pendulous, he brought them in contact with the tip of his tongue. Contractions instantly ensued from a current of electricity traversing the frog's leg in its route from the external or cutaneous to the internal or mucous covering of the body. By this very interesting experiment Aldini demonstrated the existence of the musculo-cutaneous current, and completely anticipated its rediscovery by Donné some five-and-thirty years after.

"Exp. (C).—The proper electricity of the frog was found by Aldini to be competent to the production of contractions. For this purpose he prepared the lower extremities of a vigorous frog, and, by bending up the leg, brought the muscles of the thigh in contact with the lumbar nerves. Contractions immediately ensued. This experiment is now a familiar one, and has been repeated and modified lately by Müller and others.

"Exp. (D).—A ligature was loosely placed round the middle of the crural nerves, and one of the nerves applied to a corresponding muscle: contractions ensued; but on tightening the ligature convulsions ceased."

We cannot conclude our notice of Dr. Bird's work without referring to one more improvement he has added to this edition, namely, a copious index of ten pages. We found the absence of it a source of inconvenience in the last edition, especially in cases of reference.

In conclusion, we would strongly recommend our readers to possess themselves of this little volume, which they will find an admirable digest of the subject of which it treats up to the present date. It is a book that should not only find its way into the libraries of professional men, but of all who would enjoy a liberal education, and which no one can justly be said to have attained who is ignorant of the philosophy of nature.

"Ingruas didicisse fideliter artes, emollit mores, nec sit esse ferus."—OVID.

The typography of this book is of the same excellent description as the rest of Mr. Churchill's

(a) Aldini. "An Account of the late Improvements in Galvanism." 4to. London, 1803.

duodecimo series; but we must confess that in the woodcuts we cannot trace the artistical genius of Mr. Bagg, which adorns some of the others.

THE MEDICAL TIMES.

SATURDAY, MARCH 4, 1848.

THE NEW SETTLEMENT.

OUR age is epidemic. Potato-rot, Influenza, Cholera, Revolution, successively pass through the world, as if governed by one and the same atmospheric law; and scarcely has Paris yielded to the last disease making the great European tour, before its well-known symptoms, "liberty, equality, and fraternity," spreading with more than influenza rapidity, show themselves even in the halls of our old medical institutions. As a first result, Medical Reform ceases to look insuperable!

When representatives of the physicians, the surgeons, and the general practitioners can meet (without bloodshed) and unite (without a fee) on all the essentials of a legislative measure, where is the word "impossible?" It is as much erased from the dictionary as it was supposed to be in the first French revolution. There is a commencing wonder in the peaceful meeting and fraternal concurrence which annihilates all others, and makes even medical legislation look like a thing that may be.

And yet, perhaps, our surprise should be, not that the "different interests" are at length unanimous, but so late. It was people's prejudices that were irreconcilable, more than their interests; and the treaty of alliance, offensive and defensive, detailed by us last week, shows that even Medical Reform may have its uses for all the contracting parties—the most prejudiced corporation not excepted. It preserves the surgeons—a service they could by no means do for themselves—and it serves—most opportunely—the physicians from availing themselves of the new bankruptcy facilities; and, finally, it gives a habitation and a name to those unfortunate member-licentiates who, disowning one corporation and disowned by the other, rove the professional world like nestless cuckoos, or those *manes* of the unburied dead known to mythological faith.

Whatever may prove its actual uses to the profession, it is not the less an excellent *corporative measure*. It gives funds, permanence, and character, just where these things are needed; and nobody pays for the useful advantages but that nobody for whom none of us care—the man that comes after us. "Après nous le déluge." We have studied, been examined, have our diplomas; and if those behind us, while getting less for more money, contribute a trifle for an additional convenience or so (*to us*), there is a consolatory proverb to meet their misfortune—"The — take the hindmost!" Medical Reform is not to be settled save at somebody's expense; and like that national expenditure which has conserved for this country a breed of thorough-blood gentry, on whom can we put the load with so little trouble (to ourselves) as the next generation?—a body whose feelings we are unquestionably not bound to look to on any special score of personal interest or gratitude.

With our best wishes it could hardly have been otherwise; unfortunately, those who undertook to settle Medical Reform for us have not those two

favourable conditions to honest labour—a clear stage and no favour. Unlike the three or four writers who have just been surprised out of obscurity to the government of the French empire, they are not privileged with a *carte blanche* on which to try at will their legislative hand. If they please to legislate, they must legislate to please; and the rudiment of success would appear to be, that their pleasure-giving shall commence with the corporations. Bribe the physicians, surgeons, and apothecaries into content, and if, consistently with that *sine qua non*, you can do something for the general practitioner, legislation is possible. That seems the problem of which the scheme of last week is the solution; and that, under such all but insuperable difficulties, the result is so much a treaty and so little a capitulation; is the highest honour we can pay those who negotiated for the general practitioners.

The main result they have won for us is, unquestionably, the new College; and what is its value? Just this:—

1. It clears the body of general practitioners from the taint of apothecaryship. The public will no longer disparagingly attribute to them, as their *alma mater*, the dingy, trading, drug concern in one of the back lanes of Blackfriars. That worshipful company of unsavoury odour will no longer stand between the popular wind and our professional respectability.

2. It unites in one compact, non-dissentient body every individual who has a fair claim to be recognised as a general practitioner. There is strength in such an aggregation.

3. It adds one diploma more to those already possessed, and may thus operate not unfavourably on public confidence.

4. It gives general practitioners an opportunity of governing themselves, and of educating and examining the future members of their body.

These are sufficient advantages, or we are mistaken, to make the new measure not unwelcome; but it is not to be disguised that a very cursory view of the scheme demonstrates, on the other hand, that the infant College will find prepared and organized for it no trifling drawbacks or difficulties.

It will not possess the thief, perhaps sole, attraction of the Apothecaries' Society—its compulsory clause. There will remain no means of preventing either the surgeon or the physician—English, Scotch, or Irish—from dispensing his own medicines; and from this and other causes time may, perhaps, show that there will be more general practitioners, but unavowed, connected with the College of Physicians as licentiates, and with the College of Surgeons as fellows, than with the college to which, legitimately, they are supposed to be attached. The Colleges of Physicians and Surgeons may be entered through Dublin and Edinburgh, as through London: one fee too will cover admission; but as the College of General Practitioners seems to be more especially adapted to an English education alone, and as its members, while paying the customary diploma fee to its support, have another of twenty guineas to pay the College of Surgeons, formidable disadvantages stand in its way, *only to be surmounted by raising for the new College a high—a very high—examining reputation.*

THE JUSTICE AND LIBERALITY OF CORONERS' JURIES.

It has been the fashion from "time immemorial" for the public to expect, whenever the services of a medical practitioner are required, that he

should give them, whether there is a prospect or not of having his labours sweetened by reward. He has submitted, till lately, to this unjust requirement, either from fear of receiving an unmerited castigation, if any untoward event should arise, or because he has been taught that, his profession being a benevolent one, he must, *volens volens*, keep up its character. His charity, however, in order to be acceptable to the public, must never begin in that place where a well-known proverb says it ought to begin—physic being supposed to have connected with it an inexplicable something that yields to the doctor profit without pay.

It is the misfortune of medicine that no paralytics are supposed to exist between it and other callings. No people are so foolish as to imagine that the divine with a love for souls can live upon the mere marrow of divinity, or the lawyer by simply digesting "Coke upon Littleton;" the one receiving for a charity sermon the accustomed offering as a small acknowledgment of his piety and eloquence; the other, an established fee whenever a client solicits advice. Whoever expected a provision-merchant, for the love of God, to furnish any hungry man with food necessary to support him; or a tailor, moved by the same illustrious motive, to clothe one who possessed nothing but a few rags on his back? And it would be a novelty even for a coroner's jury, accustomed to do very extraordinary things, to append to their verdict a censure upon Messrs. Bacon and Cheeseman for refusing to furnish, when requested, an unfortunate deceased with the necessary food to save him from starvation; or upon Mr. Snip, for having objected to give a suit of clothes on demand.

Yet we have instances frequently occurring in which medical practitioners are expected to give their medicine and services whenever required, though they may not have the most remote prospect of obtaining pecuniary remuneration for their trouble. Dr. Berncastle has been persecuted for resisting so monstrous a requirement, and, had it not been for the efforts of the medical press, would have been ruined for his temerity. Within the last fortnight an inquest has been held at Sunderland on the body of an unmarried female, of the name of Mary McKenany, who died shortly after her confinement. According to the newspaper statements, the neighbours sent for Mr. Gregory, Mr. Johnson, and Mr. Potts, surgeons, to attend her, but none of them went. As a last resource, Mrs. Bell, a midwife, was applied to, but the child was born prior to her arrival. The deceased was then very weak. She was put to bed, and about ten o'clock the same morning was again visited by Mrs. Bell, who, it is said, again sent for the surgeons, but they refused to come. The woman gradually sunk, and expired the same evening. The jury returned a verdict of "Natural death;" and added that they felt compelled, in the discharge of a public duty, to reprehend the conduct of Messrs. Gregory, Johnson, and Potts, for refusing to attend deceased during the time of her labour, although they had been requested to do so; and Mrs. Bell was highly commended for the prompt attention and assistance rendered by her to the deceased.

These sapient gentlemen of the jury were, no doubt, brim full of benevolence, and it must have been satisfactory to them to give vent to their feelings in the local newspapers. This would cost them nothing, while their zeal in the

cause of humanity would be applauded by their neighbours. We have some serious misgivings, however, that if any one of the gentlemen had been applied to, at the time the patient was in labour, for only a portion of the fee required, that his charity would have lacked the bathos needed to touch the bottom of his pocket. Would either of them have been ready to have paid the fee? With as much justice the neighbours might have gone to them for it, as to the surgeons for the needful attendance.

But, while the jury were so anxious to make a display of their humanity, it was unfortunately done at the expense of justice. The neighbours or the midwife condemned the surgeons, but these gentlemen, it appears, were not present to defend themselves, and it never occurred to the jury that the accused ought to be acquainted with the charges brought against them. Upon a one-sided statement a verdict was returned, and Mr. Johnson has since written a letter to the *Sunderland Herald*, saying that he did not refuse to attend the patient, and that a second application was never made to him.

Coroners' juries are frequently guilty of travelling out of the path of duty, that they may censure individuals—those whom they suppose have been guilty of some dereliction of duty; and medical men have suffered greatly from this abuse of power. It will be found, however, that jurymen often only express certain opinions which exist in the public mind; and, if this be true, we can see the sentiments commonly entertained of what a medical practitioner ought to do whenever he is summoned to attend a patient. The question of remuneration, it is thought, ought to be a secondary consideration in his mind; and numbers of unprincipled persons take advantage of this circumstance to evade the payment of a surgeon's bill.

The members of the medical profession have been instrumental themselves, to a great extent, in bringing about this state of things. They have been too ready to afford their "advice gratis"—too anxious to supplant those who have been their rivals; so that the public have understood that, in a case of emergency one surgeon refused to attend, another could be found who would undertake the required work, and who also, if need be, could be made an instrument to chastise his offending brother. Many in the profession have, in times past, been so anxious to appear benevolent in the eyes of the world, that now the selfsame world would have all, whenever it requires, work for love. It may yet be taught a lesson of justice, and the members of the profession must be the teachers. Dr. Berncastle was right in resisting the Croydon Board of Guardians, and his example will exercise a powerful influence among his professional brethren.

While we regret that the young woman at Sunderland lost her life (though there is no proof whatever that it resulted from the want of medical attendance), we commend the surgeons for maintaining their right to just remuneration when services are required. If the patient could not pay for the requisite attendance, the parish should have provided it, and the proper officers should have been applied to before the expected travail. The members of the profession, in asserting their rights, detract nothing from their moral dignity, and they have only to be true to themselves to secure a larger amount of respect from the world.

MR. THOM'S REPORT ON CHOLERA.

Our readers will perceive, from the proceedings

of the House of Commons, that the important report of Mr. Thom, as publishing in our columns, has attracted the honour of parliamentary notice. On the motion of Mr. Thomas Wakley, the House ordered that there should be printed for it, a "Return from the Army Medical Board of a copy of any report received from Alexander Thom, Esq., surgeon of her Majesty's 86th Regiment, relative to the causes, character, and treatment of spasmodic cholera, as it occurred in her Majesty's 86th Regiment at Kurachee in June, 1846."

The compliment thus resulting from our publication of his paper must be very gratifying to Mr. Thom, and this not the less because so well deserved by the worth of his investigations. We publish the second portion in this day's journal.

PROFESSIONAL EXONERATION.

* * The following are the documents which, according to our correspondent (noticed last week), we are bound to publish, in fairness to the member for Finsbury, as forming the satisfactory answer to the extravagant rumour noticed by the plaintiff's counsel among the public details of the Hope Insurance case (reported in our pages). While redeeming our pledge of offering no obstacle to publish the following zealous and friendly exoneration by the very well-known ex-Sheriff Parkins (an exoneration which, though unnecessarily diffuse, we have thought it not fair to curtail), we may at the same time add that, if Mr. Wakley desires it, we will readily do him the further justice of opening our columns to him for any certificate from the respectable Mr. Rothwell (the other sheriff), or from his deputy (Mr. Turner), to whom, no doubt, applications were also made, and whose means of information, from their more active interference, would appear to be, if possible, even more conclusive than those of ex-Sheriff Parkins.—ED.

(From the Annual Register, 1820. Sept. Vol. lxii., part I. page 441.)
Kentish-town, Sept. 21, 1820.

SIR,—From the period of my late catastrophe in Argyle-street, to add to my anxiety, I have been currently charged by a multitude of malignant slanderers as being the person who decapitated Thistlewood and his deluded companions in May last.

Your official contradiction of this disgusting falsehood, as sheriff of London, will confer a lasting favour on,

Sir, your obliged servant,

THOMAS WAKLEY.

J. W. Parkins, Esq., Sheriff of
London and Middlesex.

No. 10, New Bridge-street,
Sept. 25, 1820.

SIR,—In answer to your note of the 21st instant, I feel myself bound to comply with its contents to the utmost of my power; but I am sorry to inform you that the whole of the disgusting business to which it relates was conducted with so much privacy and pertinacious concealment from me, that I was not even made acquainted with the order for the execution until the day after (Sunday, when I went to Newgate, accompanied with a clergyman) it had been determined upon, and orders given for erecting the scaffold, &c., by the Lord Mayor Bridges and my colleague, Mr. Rothwell, who, accompanied by his deputy, had, I understood, been the previous day at the Secretary of State's office arranging the same; and as to the man who decapitated the unfortunate Thistlewood and his companions, he was procured for that purpose by the prison surgeon, and his terms, £20, agreed for by Mr. Turner, Mr. Rothwell's deputy, and which wages Mr. Turner told me were repaid to him by the Home Department, as also £5 he paid to the man who held up the heads. I did not see the man who performed the duty until he appeared on the scaffold masked and dressed as a sailor. By the notice I then took of him (which was very particular) I perceived him to be in height about five feet five or six inches, and, in answer to my inquiry the other day (in consequence of your note) who the fellow was, Mr. Turner informed me that he was a resurrection-man, who obtained bodies for the hospitals;

and that, when he asked him if he could perform the task of cutting off the heads, he replied, "Oh yes! that he could do it very well, as he was in the habit of cutting off nob's (heads) for the purpose of obtaining nackers (teeth)."

I am glad, for the honour of our country's humanity, that it was no person of respectability, but a most illiterate and degraded being, as was also the wretched individual who held up the heads of the unfortunate men.

In addition to the above, I am credibly informed that the individual who decapitated Thistlewood and his companions was engaged by the under-sheriff from Yorkshire, to go there for a similar purpose; but in the performance of which sanguinary work, thank Providence, he has been disappointed.

I cannot conclude this letter without bearing testimony to the humane disposition of your heart towards the depraved young man who robbed you of your watch on the fatal night when crossing the road and bleeding from the wounds inflicted by the assassins and incendiaries who set fire to your house in Argyle-street.

I hope this assurance will convince every one, even the most malignant of your enemies, that it was totally impossible any one could mistake a gentleman of your appearance and height (which I consider to be about five feet ten inches) for the person (five feet five or six inches) who performed the sanguinary duty on Thistlewood and the others in May last.

I am, Sir, your most obedient humble servant,
J. W. PARKINS, Sheriff.
Thos. Wakley, Esq.

ANALYSIS OF "THE PROVINCIAL MEDICAL DIRECTORY."

[To the Editor of the Medical Times.]

SIR,—Not being aware that any analysis of the medical directories has been published, I have ventured to send you one of "The Provincial Directory" for this year. It may not be quite correct, but it is near enough for any practical purpose. I think it strongly shows the necessity of some new enactment for the protection of the qualified practitioner, and that the interests of some of the different medical corporations are not so deeply involved in the change as many have supposed. The necessity for some protection is shown by the large number of the unqualified (nearly 1500) enumerated in "The Directory;" and this number does not comprise the whole: there are several in my immediate neighbourhood whose names are not mentioned in the list; but, assuming them to be 1500, and that each of them realizes an income of £100 per annum, the medical profession is thus robbed of an annual income of £150,000, which, divided amongst the legally qualified, would exceed twenty pounds each. But their earnings will be double, if not thrice, that amount, for they invariably get prompter and larger payments than the regular practitioner. The public, also, instead of being benefited, is injured, as the greatest proportion of them have had but small opportunity of acquiring any knowledge of medicine, and, knowing the unsafe ground on which they tread, are ever ready to humour the prejudices of their patients. Every country practitioner knows how difficult it is to get a patient in whose family one of these gentlemen has ever been in attendance to follow his simplest directions. The amount of life that has been lost, and the permanent disease that has been entailed upon many, by these ignorant pretenders to the knowledge of medicine is incalculable. If the sum I have mentioned was divided amongst those who have only recently commenced their career of practice, it would prove a stimulus to their useful exertions; but how many are there sinking in despair for want of employment, or whose funds having been exhausted in the acquirement of their education, are forced to accept a remuneration for their services which the common labourer would scorn!

The noise about medical reform has been loud and long, and the difficulties have been represented as insurmountable. How often has the coroner said that a registration bill was all that could be hoped for at present; yet he has never made a successful effort to carry one through the House! Why did he oppose so strongly the bill of Sir James Graham? Why: to prolong the squabble and smuggle its chief provisions in a mutilated form into his own bantling. You said then, and said it truly, that if that opportunity was lost, medical reform would be deferred for an indefinite number of years.

In my opinion, nothing is more easy than the preserving of the interests of the different corporations;

if they would lay aside their jealousy of each other, and confer amicably, I think that they would soon come to the conclusion that the interest of one is the interest of the whole. What obstacle is there but this jealousy to hinder the College of Surgeons and Society of Apothecaries from becoming one college, and giving a joint diploma which would entitle its holder to practise as a general practitioner? The fee for the joint diploma might be the same as it is now for the two single ones, and the amount cannot be considered too large, if it is properly spent for the benefit and protection of the profession. The diploma of the College of Physicians and the fellowship of the college might be reserved as further honours to be conferred on those who had benefited medical science by some useful discovery; or who, after being in practice for some years, had no objection to have their acquirements tested by a second examination; and on those who had pursued an extended course of education. This plan would preserve the interests of the English colleges. Edinburgh might grant degrees for Scotland, and Dublin for Ireland. Of course a provision must be made for those persons who are already practising in England, and who are in possession of a proper qualification, although it may not be strictly a legal one. Your efforts have been great for the cause of the general practitioner, and I feel confident that we shall yet reap the harvest of your great exertions, which I hope you will persevere in till the wished-for goal is attained.

I am, Sir, your obedient servant,
Feb. 19. H. A.
Since writing these remarks I have had the pleasure of reading your announcement that the colleges are already in amicable conference. I am sure every member of the profession will join you at the approaching consummation of our wishes, and in hoping that no captious objection or petty interest will again defer it.

ANALYSIS OF "THE PROVINCIAL MEDICAL DIRECTORY."

In practice before 1815, many being members of the College of Surgeons, surgeons in the army or navy, or in the possession of other qualifications	613
Licentiates of the Society of Apothecaries, many being in possession of Scotch or other qualifications in addition to their certificate	1004
Fellows and members of the College of Surgeons, many being in possession of other qualifications, but not having the certificate of the Apothecaries	1072
Members of the College of Surgeons and licentiates of the Society of Apothecaries, some of them being in the possession of other qualifications	3634
Members of the College of Physicians, or of the Universities of London, Oxford, or Cambridge	141
Members of the University of Edinburgh, some of them possessing other qualifications, but no diploma or licence from any English institution	334
Licentiates of the College of Surgeons of Edinburgh	110
Members of the University of Glasgow	62
Members of the Faculty of Physicians and Surgeons of Glasgow	26
Members of the University of Aberdeen, one practising in 1815	4
Members of the University of St. Andrew's, one having been an army surgeon, and another practising in 1815	5
Practitioners in possession of Irish qualifications	23
Practitioners in possession of foreign qualifications only	12
Practitioners placed in the qualified list, but without any qualification annexed	25
Total qualified	7055
Unlicensed practitioners	1488
Total	8543

THE NEW BILL.

[To the Editor of the Medical Times.]

SIR,—I am inclined to think that, if your account of the scheme of medical reform resulting from certain late conferences be correct, it will not prove so universally acceptable as you imagine.

You talk of mutual concessions, but I confess I see nothing of the sort—nothing but the old game of putting money into the coffers of the College of Sur-

geons. Get money, no matter how—only get money, is the one principle, and ought to be the motto, of that immaculate corporation; and I cannot conceive a plan better adapted to its purpose than the one now before me. Not content with its own business of making "pures," it is to have a finger in the manufacture of every general practitioner as well—a power which it has not hitherto enjoyed.

Allow me also to put one question. Does the college propose to confer its fellowship upon all those of its members who do not choose to enter the "lower grade" of the profession represented by the new corporation, or are they to be left without a "home"?

Depend upon it that, without this "concession," the scheme will turn out a failure. The council may think that the charter is all blown over and forgotten, but they will find themselves mistaken.

I am, Sir, your obedient servant,
Feb. 28. ECHO VERITATIS.

THE POOR LAW.

[To the Editor of the Medical Times.]

SIR,—The Croydon case has called forth some of the most splendid leading articles and letters in the *Medical Times* which I ever remember to have seen written on the subject "of the injustice of the present system of poor-law medical relief;" and I would recommend every one of your readers, if they are labouring under any present or past severity from boards of guardians, to come forward and publicly record it.

What does not the Croydon case bespeak? A bad state of public feeling, an indifference of boards of guardians towards us, a want of sympathy towards the poor; it tells us our present position is a false one; that, so long as we can defend them from a charge of dereliction of duty—so long as we can come in at the nick of time to save their credit—all is well; but if we cannot ward off a blow directed at them by a coroner's inquest, then we are sacrificed at the altar of opinion, whilst they remain unseared. Medical men know more of the working of the poor-law than any other class in the kingdom; they know how oft the poor man pines in flesh, and health, and spirit, before he sinks into the grave, for want of timely sustenance. We may dilate upon the inhuman theme for years if we do not find a remedy; that remedy must consist in the abolition of limited local rates, and taxing instead property of all descriptions, so as to create an adequate fund for the relief of the poor. I would make a difference between the sick, who should become an especial charge of the rate; whilst the destitute, from want of work, should be provided for by the parishes, who always have means of employment at their disposal—cleansing, draining, road-making, if they are compelled to exert themselves for the public good. The rate-payers' pence should not, as now, be drained by lawyers, and the poor purged by Epseom salts. Poverty is a national calamity, not a local one. The *millionaire*, residing in a fifty-pound house, is not taxed sufficiently, perhaps not even at all. If one penny in the pound were collected, like the property-tax, and devoted to the proper maintenance and assistance of the poor, how few would die from want, how many would recover from disease! I would urge upon Government strenuously to take the whole medical relief into their own hands—the sole direction of the medical poor-law staff—the just remuneration of its officers, according to their districts' population average. Another body of men should be called into existence who can fashion our medical relief into a palatable sustaining principle; for how many human beings sink with our meat, rice, tea, sugar, even at their bedside! A different order of things must be established, and speedily; a different order of beings to administer the laws relating to the poor in sickness must be created; at present there is bad physic, bad attendance, bad dietary, bad nursing, and a hecatomb of victims sacrificed solely from the fact that a limited rating carries necessarily with it a grinding selfishness.

I remain, in haste, your obedient servant,
Bulwell. ALFRED EBSWORTH.

DR. BERNCASTLE AND THE GUARDIANS OF THE POOR OF THE PARISH OF CROYDON.

At a meeting of the surgeons of the parish of Birmingham it was unanimously resolved,—
"That this meeting considers that the conduct of Dr. Berncastle, in his attendance on the woman

Hopkins, at Croydon, in January last, was highly commendable and humane.

"That the board of guardians, having refused to allow her to be a parochial patient (most unjustly, we believe), had no authority to interfere subsequently in the case under any circumstances.

"That such refusal having caused the cessation of Dr. Berncastle's attendance upon the case, his responsibility immediately ceased, and, whatever consequences might be attributed to such non-attendance, the blame must rest with the guardians and not with him, hence the charge of neglect against that gentleman, and his consequent dismissal, were entirely the result of his obedience to their own instructions.

"That after a careful consideration of the evidence adduced at the inquest, there is not the slightest foundation for any charge of neglect against Dr. Berncastle, or for the unmanly and oppressive conduct of the guardians towards him, or for the extraordinary and illegal verdict of the jury.

"That the ingratitude evinced towards that gentleman for his gratuitous attendance on a poor woman in a case of emergency is calculated to have considerable influence in preventing the gratuitous services of the medical profession towards the poor generally."

DR. ROBERT LEE AND HIS DISCOVERIES.

[To the Editor of the Medical Times.]

SIR,—Dr. Robert Lee was an old class-fellow of mine at the College of Edinburgh, and I recollect those days with such pleasure that I have been at a loss to express the sorrow that I feel for the cause of the severe chastisement he has lately received from the Royal Society of the metropolis. At the time I speak of, Robert Lee was a student at our divinity class, and was intended to be a preacher of the gospel; and it was then the custom of many of our young ministers to attend a few of the medical classes, so that, in the event of their being placed in parishes where a doctor was not always at hand, they might lend their assistance until better advice could be obtained. At that time there were so many young men studying for the Kirk that they could not all soon expect employment; and I believe that Robert Lee was tempted from his sacred situation, and from having never been very earnest in his serious pursuits, to give up the Kirk, and to finish his medical studies, that he might try and earn a livelihood as a doctor. Since he left our college I cannot pretend to know anything of Robert's backslidings, excepting only what I have seen and heard of in the public prints. He has permitted a vain-glorious ambition, I grieve to say, to overcome his better judgment, and has involved himself in all kinds of worldly broils and disputes which his pious early education should have guarded him against. But I do fervently pray that my old class-fellow will, for the future, "mend his ways," and that his conduct in making a rash and fruitless endeavour to mislead his professional brethren will be a useful and profitable lesson to all young men, and show them the danger and evils that befall us weak mortals whenever we dare to venture out of the straight path of truth.

Trusting that this letter will come under the cognizance of Robert Lee himself, through the pages of your useful and widely-circulated journal.

I remain, your humble servant,
PASTOR.

Dalkeith, near Edinburgh, Feb. 10.

LARYNGOTOMY. — DR. S. MERRIMAN'S COMMUNICATION TO MR. CORFE.

[To the Editor of the Medical Times.]

DEAR SIR,—I beg leave to forward you parts of several communications which Dr. S. Merriman has done me the honour to address lately to me, in corroboration of my report of the cases brought forward in my remarks on laryngotomy.

I am, dear Sir, yours faithfully,
Middlesex Hospital, Feb. 23. G. F. CORFE.

After expressing himself in very obliging terms on the subject of the papers now appearing in the *Medical Times*, Dr. Merriman goes on thus:—

"I have experienced much pleasure, as well as information, in reading the papers as they have successively appeared, and hope you will continue their publication for some time yet to come. On referring to the account I wrote down of the case at the time it occurred, I find that it differs in some respects from yours; I have, therefore, made an extract from

it, thinking that you may be glad to have the particulars.

"Oct. 11. Removed into Green Room last night. Return of stridulous breathing, with increased severity; became delirious about three A.M., and comatose; at seven A.M. was covered with clammy sweat; at eight breathed about twice in a minute; pulse constantly intermitting; pupils closely contracted; quite insensible; countenance cadaverous. As no time was to be lost, a large trocar and canula were introduced through the crico-thyroid ligament, and the canula left in. A rush of air was heard to enter the lungs, and from that moment life took a new lease. I firmly believe that three minutes more would have closed the scene altogether. In about half an hour consciousness had returned, and she breathed easily through the tube."

"Elizabeth Slack, aged forty-six. Oct. 13, 1839. Ordered calomel, gr. v. ter in pulv.

15. Bowels reported purged; still breathes through the canula. To rub in blue ointment.

16. Mouth rather sore. Omit mercury.

19. Tube has been removed; opening remains patulous; cold air hurts her trachea, she says. Tube obliged to be again inserted at night. To resume the powders.

20. Bowels purged. Omit powders. Tube again withdrawn.

22. Can now breathe with ease through the larynx. Hydr. c. creta, gr. v. o.n.

24. Wound smaller in size; breathes easily, but makes a loud croupy noise during sleep; can be heard plainly by me in room underneath; can swallow solid food.

27. Rusty fluid expectorated; bowels much relaxed; gums slightly tender still. Pt. pulv. alt. nocte.

28. Hst. scillæ co. ter. pil. cupri sulph. c. opio j. 6tis; emul. lyttæ thoraci.

30. Ext. lactucæ, gr. x. o.n.

31. Expectoration still rusty, but not viscid; bowels quitted by the pills.

Nov. 1. Vinl rubri, f. 3ij.; inf. lini opiat, c. vin. ipecac., m. vj. 6tis.

2. Cough, &c., better; opening in larynx not yet healed.

12. Much better; feels herself hungry.

24. Aperture in larynx closed for about a week; still croups at night, but makes much less noise; more comfortable since aperture closed than before.

Jan. 22. Discharged. Still makes noise during sleep, but I can only hear it when I listen for it; lies flat in bed; rather short-breathed in damp weather, but health much improved.

Dec. 8, 1841. I have recently heard of her having come to the hospital some time after discharge quite well; no hoarseness or other complaint."

The same gentleman thus refers to another of our cases:—

"Sydney Easton, aged fifteen, chimney-sweep; Oct. 12, 1838; Dr. Wilson. Brought at night to hospital, breathing with great difficulty, and at each inspiration making a croupy sound; speaks in a whisper; has been affected in this way for eighteen months; says it came on suddenly during the night; has never been quite free from it since; always worse at night; prevents both himself and others in the room from sleeping; complains of pain in larynx on pressure and when he swallows. Ordered, bal. cal. and eight leeches. These relieved him, and the leeches were applied again on the 16th and 20th.

23. Breathing continues much the same. To take pil. hydr., gr. v., bis die.

Nov. 2. Pt. pil. ter die.

14. Mouth sore.

Dec. 1. Much the same. Surgeons consulted, who advised the larynx to be mopped daily by a solution of argenti nitrat., gr. x., in f. 3ij.; which was done at first once, and afterwards twice, daily, for about three weeks, with some relief at first, but not so much latterly.

14. Says his breathing is better, but he cannot speak so well; has been much troubled with cough and expectoration.

Jan. 14. Since last report two issues have been made, one on either side of larynx, without benefit; is at present much worse than he has been lately; tracheotomy performed.

16. Breathes easily through the tube; ate some bread and meat yesterday for the first time; looks and sleeps better.

26. Continues to breathe better; tube still in; spits a muco-purulent fluid; has wine, f. 3ij."

I left the hospital on March 12, and soon afterwards heard of the death of this poor boy. In the post-mortem examination considerable ulcerations, I

believe, were found in the trachea, and tubercles in the lungs.

I beg to sign myself yours, very faithfully,
S. WM. J. MERRIMAN.
34, Brook-street, Grosvenor-square.

GOSSIP OF THE WEEK.

WAR-OFFICE, Feb. 25.—40th Foot: Edward William Clemishaw Kingdom, M.D., to be Asst.-Surg., vice Brummell, promoted on the Staff.

THE WESTMINSTER HOSPITAL SCHOOL.—A meeting of the governors of the Westminster Hospital, numerously attended, was lately held for the purpose of considering a communication, signed by all the medical officers, except Mr. Hale Thomson, with reference to the establishment of a medical school, the former school being required for the purposes of the Westminster Improvement Commissioners. The Hon. P. P. Bouverie in the chair. It was resolved that it is highly expedient to establish a school in connection with the hospital, and the following gentlemen were appointed a committee to consider the matter and to report to a special meeting of the governors:—The Hon. P. Playdell Bouverie, the Dean of Westminster, the Rectors of the parishes of St. Margaret and St. John, W. Whately, Esq. Q.C., Sir Thomas Phillips, Wm. Foreman, Esq., J. C. Wood, Esq., Mr. Alderman Johnson, and two of the medical officers to be chosen by their colleagues; those selected were Dr. H. Roe and Mr. B. Phillips. It is understood that the committee have very carefully considered the matter, and, with one exception (Mr. J. C. Wood), have agreed to a report recommending that permission be granted for the construction of the necessary buildings on the ground in the rear of the hospital. It is said that there is a party who will oppose that recommendation. So be it. But we can scarcely believe that the governors will seriously listen to them; and we, therefore, congratulate those of the medical officers who seek to place the hospital in the situation it ought to occupy, on the success which has attended their exertion. They have only to persevere in the same course, and they need not fear defeat.

MORTALITY TABLE.

For the Week ending Saturday, Feb. 26, 1848.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES.....	1145	1107
SPECIFIED CAUSES...	1143	1102
Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	308	184
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	38	59
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NOTICE.

SUBSCRIBERS IN ARREAR are respectfully requested, in conformity with the terms of their subscriptions, at once to forward their remittances to the office.

TO SUBSCRIBERS.

The subscription for the stamped edition of the *Medical Times* is 15s. for the half-year, and £1. 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 Carfax.

TO CORRESPONDENTS.

THE CHART.

In transmission of the Chart through the Post-office, the beauty of the lithograph is impaired, for the creases unavoidably made in folding a sheet of so large dimensions cannot be smoothed without danger of disturbing the colours. This detracts from the value of an engraving destined to a permanent and ornamental position in the study and the laboratory. We have, therefore, to announce to the annual subscribers on our roll, that we defer the delivery of the Chart through the Post-office, in order to afford to those gentlemen who have not received the Chart an opportunity of providing for its receipt, where possible, through their connections in town, or, when more convenient, their wholesale druggist. Where this suggestion is not acted upon we shall send the Chart with the next number by post.

To meet the convenience of gentlemen wishing to possess the Chart, all annual subscribers entered on our roll during the month of March will be entitled to a copy.

The Chart is also published separately, price half-a-guinea.

"A Subscriber" will find an answer in a former notice about the Chart.

"A Medical Officer."—Lord Ashley's resolutions will come on on Tuesday next. The Committee is paying the greatest attention to them.

"A Student" is thanked, but his offer is declined. Falsehoods from so infamous a quarter are neither unexpected nor unwelcome. They are the conclusive assurance of successful worth.

The letters of "W. B., an American Physician," and "Titus Oates," are not suited to us.

Mr. Hastings' letter to Lord Ashley contains the precise arguments which the Convention have pressed, and are pressing, on the attention of his lordship. It will, therefore, be unnecessary to publish it.

"Amicus" has our best thanks. "Fais ce que dois, arrive que pourra."

"A Licentiate of 1835" writes, in reference to the arrangement which has been entered into by the two Colleges and the Apothecaries' Company for the settlement of Medical Reform—"I have long been anxious that something should be done, that the different branches of the profession may be united and consolidated. There has been, however, a marked disposition in the pure physicians and surgeons to depreciate the talents and usefulness of the general practitioners; and they must, therefore, be vigilant to prevent the question of Reform being settled to their disadvantage. I am a licentiate only—though I have received a regular surgical education—and I am anxious that those who, like myself, possess only the certificate, should not be placed in a less honourable position than that which we now occupy. As general practitioners, we are sanctioned and protected by the law, and we have an advantage over those who only possess the College diploma. Our privileges can only be quietly resigned for the benefit of the whole, by being permitted to hold the same privileges in the new College as any other member. It behoves the Company to look to their licentiates, or the latter to be ready to assert their rights immediately, if any attempts should be made to act unjustly towards them."

"Nemo."—We believe that a charter for the new College is in preparation. The registration of the members of the profession is not, as in Wakley's bill, to be a yearly tax, as all persons who wish to continue their names on the register have only to send their names and residences to the council, without the payment of a additional fee.

"Cerberus."—We cannot insert the strictures on Lord Morpeth's Sanitary Bill, as they are written in a too censorious spirit. It is an imperfect measure, but contains many good points. We agree with our correspondent's remarks on the window-tax, "that it is injurious to the health, morals, and happiness of the poorer classes of society."

"Medicus."—The charter of the London College of Physicians is of little value. Time has rendered many of its claims obsolete, and disarmed others of the terrors they once possessed. We are not aware that the officers of the College ever made many attempts to suppress quackery amongst the members.

"A General Practitioner, Mile-end," informs us that he has received a circular from the new Association for the Suppression of Quackery, and wishes us to communicate our opinion upon its merits privately, to an address forwarded. We cannot accede to his request, and we have already stated that, if the officers of the association wisely manage its funds, the profession may be benefited by its establishment.

"A Lover of Justice."—The curricula of the various licensing medical corporations in the United Kingdom differ considerably. Under a new order of things this defect will be remedied. We are not disposed at present to draw a comparison between the Scottish and English systems of education.

"A Young Member of the Profession."—We think that his petition would be favourably received at the East India-house. The expense of passage would be about a hundred pounds. As regards the outfit, much will depend on taste and discretion.

"F.R.S."—We know of no scientific explanation of the phenomena.

"Omieron."—The communication cannot, at present be published.

"M. Green."—The oxide is not affected, but facilitates the decomposition of the chlorate.

"Lady Douglas, 5, Stophord-terrace, St. Helier's, Jersey."—The request shall be attended to.

"Hamlet."—Through a bookseller.

"An Old Surgeon."—Dr. Simpson still maintains his opinion that the girl Greener's death was produced by the brandy and water. Some one must have misinformed our correspondent.

"M.D., Ch."—A physician. The fees are not recoverable by law. Our correspondent, practising as such with a proper qualification, must forego the loss of the ten guineas as the patient refuses to pay.

"E. L." asks "Messrs. Simpson, Fife, Meggison, Snow, &c., to what cause they attribute the death of the shop-boy who took the vapour from mere gratification; and the death of the guinea-pig at the Royal Institution?"

"M.D., Dublin."—We do not see that the establishment of a republic in France will affect the medical profession there. It will still occupy the same position in reference to the present Government as it did to the former one.

"An English Surgeon."—The fee for the diploma of the Royal College of Surgeons, Ireland, is £31. 10s., and a licentiate of three years' standing is admissible as a member by ballot when he becomes possessed of corporate rights. The education of fellows differs from that of the licentiates; but the latter, at the expiration of ten years, may be admitted to the examination on furnishing evidence satisfactory to the council that they have conducted themselves honourably in the practice of their profession.

"J. M."—We know not of a good opening in the metropolis for a young medical man.

"Dr. Marshall."—The copy shall be forwarded as requested.

"Galen."—The liquor anodynus mineralis of Hoffman is similar to the compound spirit of sulphuric ether of the London Pharmacopoeia.

"Le-nard G., Cardiff."—The preparation, if genuine, is not dissolved by water, unless mixed with an acid, but readily dissolved by alcohol. It alters the colour of turmeric, has a bitter taste, and is totally destroyed by heat.

"Be a."—The office cannot be held without the double qualification.

"Mr. Pinkstone" is thanked for the parcel forwarded. We noticed a week or two since, in the column for Correspondents, the circumstances referred to.

"A West-end Subscriber."—Testimonials would be necessary.

"A Three Years' Student, Bartholomew's."—A provision would be made in any new law to meet particular cases. The certificates will do.

"M. F. F."—We cannot give the information sought. "Alpha" has been duped. The persons are impostors, and old hands in their work.

"Lector."—Chelius is a valuable author.

"John Simple."—We do not know why the article is retailed in the materia medica. It is more useful to the cook than the doctor.

"A Dublin Subscriber."—The colleges will not be able to do as they please if the present arrangement should be made a law, as it is contemplated, to empower the council to disallow any new by-law which may be made.

"Pater."—The sum mentioned would not be sufficient to complete the medical education of a youth. Twice the amount would be required.

"Medico-Chirurgus."—The virtues of creosote have been too highly exalted. It was discovered by Reichenbach in 1830.

"Mr. Edmondson."—The papers on Sanitary Reform have been received.

"Leech."—The medical galvanist professes more than he can accomplish. It would surprise us if such advertisements were to mislead a member of the profession.

"Felix."—The reviewer was correct on the point referred to.

"Truth-seeker."—The secretary of the College of Surgeons will, on application, furnish the information required.

"Carolus."—The fee cannot be recovered at law.

"Mr. R. L. Sprague."—The trial came too late for insertion in the current number.

Mr. James Baker, 1, Dorchester-place, New North-road.—The petition against the income-tax is received.

"A Subscriber."—A physician possessing an Edinburgh, Glasgow, or Dublin diploma cannot legally practise in London. The College of Physicians, however, would not dare to prosecute.

"Mr. Kay, Royal Marine Barracks."—Communication received.

"Mr. W. A. Close, Manchester."—Mr. Goodman's case shall be inserted when the papers are complete.

"Dr. George Johnson, King's College."—The promised communication will not be acceptable.

"A Well-wisher."—The copies shall be forwarded according to request.

"Mr. Henry Butler, Westminster Hospital," is thanked for his communication.

"Dr. Clay, Manchester."—The paper on the "Removal of a large Steatomatous Tumour" has been received.

"A Botanist and Subscriber."—The master of the Apothecaries' Company will grant admission to the society's gardens, at Chelsea, on application.

"E. L. asks the following question?"—"A. B. is a M.R.C.S. of London. He has an Aberdeen, or a St. Andrew's, or a foreign diploma of M.D. (He is a non-resident fellow of the Royal College of Physicians, Edinburgh, perhaps, as well). He practices as a general practitioner. How will he register? Can he register as an M.D., and continue a general practitioner? If so, and he calls himself Doctor, can he recover in law? If he be a licentiate of the Apothecaries' also, will that alter the case?"

"Mr. T. M. Greenhow, Newcastle-upon-Tyne."—Petition received.

"A Constant Reader."—The lectures and hospital practice must be attended in the order required by the Apothecaries' Company and College of Surgeons. The regulations may be obtained on application to either of the secretaries.

We are compelled to postpone the publication of Dr. Gavin Milroy's letter, from a press of matter.

"Mr. Thomas Kudd, Ennisecorthy."—We will endeavour to gratify our correspondent at an early opportunity.

"A Licentiate."—We think they will be entitled.

"Mr. G. H. Jenkins, Cardiff."—We regret professional differences, but the medical gentleman who received the fee is bound to divide it, if the circumstances are as stated.

"A Fourth Year Pupil."—We can give no specific advice.

"Medicus."—We would be glad to know if, in the event of the Medical Bill becoming the law of the land this session, of which he is doubtful, if those parties, who have practised for a number of years under the cognomen of surgeons, be obliged to take their names off their doors; or will the act, as in the penny days of 1815, possess a saving clause in favour of those parties who have for many years been engaged in the practice of surgery, medicine, and midwifery, but who possess no diploma—only a certificate, and will such be able to register under the new bill?

"W. H. R." writes us:—"In reading over the proposed plan of Medical Reform contained in the *Medical Times* of last week, I perceive there is no allusion made in reference to apothecaries, as to the title they are to hold under the proposed charter. Will you be kind enough to say in your notices to correspondents whether or not it is intended that apothecaries not members of the College of Surgeons, and surgeons not members of the Apothecaries' Society, shall be registered as members of the Royal College of General Practitioners, and obtain equal privileges with those who have the double qualification? This seems to me an important point, and involves a principle for which the National Association have contended from the beginning. I wish to be clear upon the subject myself, as there seems to be provision made in the registry for members of the College of Surgeons, but no allusion whatever to the licentiates of the Apothecaries' Society." [We think both parties are entitled to register as members of the Royal College of General Practitioners.]

Letters and communications have also been received from A Subscriber; A Medical Officer; A Student; Amicus; A Licentiate of 1835; Nemo; Cerberus; Medicus; A General Practitioner, Mile-end; A Lover of Justice; A Young Member of the Profession; F. B. S.; Omieron; M. Green; Lady Douglas, 5, Stophord-terrace, St. Helier's, Jersey; Hamlet; An Old Surgeon; J. D., Ch.; E. L.; M. D., Dublin; An English Surgeon; J. M.; Dr. Marshall; Galen; Leonard G., Cardiff; Beta; Mr. Pinkstone; A West-end Subscriber; A Three Years' Student; Bartholomew's; M. F. F.; Alpha; Lector; John Simple; A Dublin Subscriber; Pater; Medico-Chirurgus; Mr. Edmondson; Leech; Felix; Truth-seeker; Carolus; Mr. E. L. Sprague; Mr. James Baker, 1, Dorchester-place, New North-road; A Subscriber; Mr. Kay, Royal Marine Barracks; Mr. W. A. Close, Manchester; Dr. George Johnson, King's College; A Well-wisher; Mr. Henry Butler, Westminster Hospital; Dr. Clay, Manchester; A Botanist and Subscriber; E. L.; Mr. T. M. Greenhow, Newcastle-upon-Tyne; A Constant Reader; Mr. Thos. Kudd, Ennisecorthy; A Licentiate; Mr. G. H. Jenkins, Cardiff; A Fourth Year Pupil; Mr. Gibson, Ulverston; Mr. Stanley, Kuncorne; Mr. Hore, Shoreham; Mr. Chepnell; Mr. Boyl, Bromore; Mr. Ashwin, Abergavenny; Mr. Browne, Painsford; Mr. Rutherford, Channellkirk; Mr. Dougan, Glasgow; Mr. Hanson, Cambridge; Mr. Blythmore, Swinton; Dr. Edmondson, Carrick-on-Suir; Mr. Davies, Ponty Pridd; Dr. M. Carthy, Bantry; Mr. Brown, Norwich; Mr. Robinson, Newbury; Dr. Farrar, Bradford; Mr. Wraith, Darwen; Mr. Williams, Manchester; Mr. Burges, Fethard Tip; Mr. Lacey, Poole; Mr. Elliott, Kingstbridge; Dr. Peppard, Pallas Kenry; Dr. Stokes, Cahir; Mr. Haselhurst, Claverley; Mr. Harrison, Braintree; Mr. Price, Gwentnach; Mr. Julliffe, Crewkerne; Mr. Jones, Chesterfield; Mr. Croome, Middleton; Mr. Salt, Rugely; &c.

No. 441. SUMMARY. MARCH 11.

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ORIGINAL LECTURES.

LECTURES ON SOME OF THE MORE IMPORTANT POINTS IN SURGERY.

By G. J. GUTHRIE, Esq., F.R.S.,

Read by Mr. HANCOCK, Surgeon to the Charing-cross Hospital, and Lecturer on Anatomy and Physiology at the Royal Westminster Ophthalmic Hospital.

LECTURE VI.

ON WOUNDS AND INJURIES OF THE CHEST.

Dr. Maclean's cases of empyema; conclusions respecting the operation of paracentesis thoracis; Dr. Edward Barry's operation for puncturing abscess of the lung; performed successfully by Mr. Tutchy; revived by Dr. Hastings; Sir Henry Marsh's case; pneumo-thorax; symptoms and consequences of pneumo-thorax; signs by succussion and percussion; tintement metallique; Mr. Kelly, of Leith, the first person who operated for pneumo-thorax; Dr. Davy's case; case of Mr. Cormish; Dr. Roe's case, reported by Dr. F. Bird; case of Lord Beaumont; Dr. Houghton's opinion respecting the cause of the tintement metallique in pneumo-thorax; the operation only palliative when the pneumo-thorax is caused by a tubercular abscess; curative when it has been induced by a local injury.

I am indebted to Dr. French, the deputy inspector-general of hospitals at Chatham, for the three following cases treated there, by Dr. Maclean, staff-surgeon. They are highly creditable to the ability of Dr. Maclean, and show the care and attention which is taken of sick soldiers, when not too numerous for the doctors employed. The last case is particularly interesting from the manner of recovery.

CASE 22.—Private Patrick Kenny, aged nineteen years, 86th Regiment, admitted 12th of April, 1847, with pleuritis.

Had been ailing for several days previously to his admission; complained chiefly of general febrile symptoms, and of pain on the left side of the chest. The following day he was bled freely from the arm, with immediate relief. This treatment was followed up with a full dose of calomel, antimony, and opium. He passed a good night, but in the morning the pain in the side returned, situated under the left mamma, and extending backwards to the subscapular region.

On the third day of his admission, acute pleuritis was for the first time diagnosed, and was treated accordingly, with general bleeding, calomel, antimony, opium, and counter-irritants. Up to the 1st of May he had been twice bled from the arm, which was followed with marked relief. On the 3rd of May he is reported free from all pain; breathing easy and natural; general appearance healthy.

He continued in a convalescent state until the 8th of the same month, when he had a return of all his former symptoms, with frequent cough. Percussion elicited a clear normal sound on the right side, and, on the ear being applied, the respiratory murmur was distinct and louder than

natural. On the left side, in the sub-clavicular region, it was also clear; but beneath this, and extending downwards and backwards, there existed a decided dullness on percussion; and on applying the ear to the stethoscope, the respiratory murmur was heard as if from a distance. The dullness extended towards the mammary and sub-axillary regions, and round towards the posterior parts, as far down as the tenth rib. His general health became considerably affected by frequent attacks of diarrhoea, which continued for some time, with occasional relief from the exhibition of the different remedies. From this period, however, the pleuritic effusion of the left side became every day more distinct; although he complained very little of either pain or cough, yet his breathing was becoming more hurried, and his recovery more hopeless.

On the 15th of May, the operation of paracentesis thoracis was proposed to the patient, but he would not consent to it. He continued, therefore, from the above period, to be gradually losing ground; but, being free from pain, he fancied himself getting better. In the mean time, wine and generous diet were given, with the view of supporting his strength.

On the afternoon of the 10th of June, he became so ill that he sent for me, and said he was willing to submit to the operation. Accordingly, after satisfying myself first that the right lung and pleura were still in a healthy state, and feeling assured of the collection of a considerable quantity of pus, I introduced a large trocar and canula between the eighth and ninth ribs, at the posterior angle, drawing the skin forcibly upwards, in order to make the opening valvular; and immediately on removing the trocar a full stream of laudable pus, of a cream-colour, issued from the canula, flowing in jets corresponding to the contractions of the chest. Of this fluid fourteen ounces were withdrawn, when it was thought advisable to close the opening, and apply a light bandage. The patient bore the operation well, and expressed himself greatly relieved. The breathing became more free and easy, and the natural expression of his countenance returned. The pulse increased in strength and fulness, and he passed a better night than he had done for many weeks.

On the 17th, the side was again opened, and thirty-two ounces of pure pus withdrawn, with increased relief. The wound was treated as before, and allowed to heal by the first intention. The diarrhoea now entirely ceased; his bowels became regular, and appetite much better; breathing easy; pulse 90, and easily felt; tongue clean and moist.

18. Passed a good night; no cough or expectoration; says he feels easy and comfortable; breathing natural; bowels regular; asked for a piece of beefsteak for breakfast, which he ate with a relish; urine clear and natural. For the first time since the operation an examination of his chest was made—the left side still remained dull, though in a less degree. On applying the stethoscope to the chest a loud amphoric sound was distinctly heard; no gurgling accompanied

this sound, and it was, therefore, supposed to arise from a small opening from the bronchial tubes, into the pleural cavity, above the level of the fluid.

19. Continues to improve in every respect. In the evening, his breathing was observed to be somewhat hurried; the side was again opened, and eight ounces of thick pus evacuated, after which he appeared much relieved, and passed a good night.

20. Appears easy, and much stronger. On the bandage being removed from the wound, and a director introduced, no pus flowed; half an ounce of castor-oil was given, and in the evening twenty-five drops of sol. mur. morph.

21. Slept well; countenance expressive of ease and cheerfulness; breathing easy; appetite good; bowels open; pulse 86, of better strength. —Vespere: not so well; breathing rather hurried. The chest was again opened, and one pint of pus taken away, with the most marked relief.

22. Passed a good night, and looks well; has taken his breakfast with relish, consisting of coffee, bread and butter, with two eggs; no pus withdrawn to-day.

23. Looks very well, and slept well during the night; but his bowels are rather free, having acted four times before breakfast. Hab. tinct. opii, m. x., tinct. catechu, 3j.—Vespere: has been sleeping a good deal all day, but still his appetite and spirits continued good, and his general appearance much improved. At eight o'clock he said he felt hungry, and asked one of his comrades to boil him an egg; on his coming back with it boiled, the patient was dead.

SECTIO CADAVERIC, HORAS VIGINTIQUATUOR POST-MORTEM.—*Head.* Brain and investing membranes healthy.—*Thorax.* The right lung presented throughout the appearance of general acute bronchitis; pleura healthy. The left lung was firmly bound to the walls of the chest, at the apex and lower half, by recent thick adhesions; the substance of the lung was compressed to about half its normal size, but remained throughout permeable by air; the pleura was much thickened throughout, by a layer of coagulable lymph, covered with purulent matter, and formed by the adhesions at the lower border and apex, a large cavity containing pus; at the lower part of this cavity the opening existed through which the fluid was evacuated; the heart was slightly enlarged, but otherwise healthy; the liver, and other abdominal viscera, quite healthy.

CASE 23.—Private Michael Donohoe, 29th Regiment, aged eighteen years, admitted 18th of June, 1847, with pleuritis.

The general febrile symptoms appear soon to have given way, under the exhibition of sol. antimonii tart. and saline purgatives, and the pain of the left side appears to have been successfully treated, by the application of a few leeches and a blister. The patient is reported to have been going on favourably up to the 10th of July, 1847; on which day he is stated to have contracted a slight catarrhal affection, accompanied with diarrhoea.

Upon the 12th of August, 1847, I found the patient suffering from constant diarrhoea, with watery, slimy evacuations, loss of appetite, and general debility. He complained of slight tickling cough, accompanied with scanty seromucous expectoration; pulse 120, weak and irregular; breathing observed to be short and hurried. Said he felt acute pain on the top of the left shoulder, and a sensation of great weight over the precordial region; no pain of left side.

On examination of his chest, found extensive and complete dulness of left side, commencing from the sub-clavicular region, as far down as the ninth rib, which continued round posteriorly, to within a short distance of the spinal column. On the application of the stethoscope over the same space, the respiratory murmur could not be heard, and was only slightly audible in a small space, in the subscapular region, where it was accompanied with loud bronchial respiration. The heart's sound and impulse were very obscure over the precordial region, but were heard and felt distinctly on the right side; the entire left side appeared bulged out, and was so oedematous that it was with great difficulty the ribs could be felt or defined; and between the scapulae scaphophony was distinctly heard, but no sound on succussion could be elicited, which was supposed to be owing to the pleural cavity of the affected side being filled with pus; the right lung and pleura appeared healthy; respiration puerile.

On the 13th of August, the operation of paracentesis thoracis was performed between the seventh and eighth ribs, and forty ounces of healthy creamy pus flowed through the canula in eight minutes; it was then withdrawn, and the wound closed. The patient expressed himself greatly relieved by it. His pulse fell from 130 to 96; his breathing became more free and easy, with complete relief to the pain of his left shoulder. No medicine. Was ordered to have two gills of wine during the day, and beef-tea.

14. Has passed a good night, and slept well, without any anodyne draught; bowels once moved since the operation; breathing easy and natural; no pain or discharge from the side, the oedema of which is greatly diminished; pulse 90, soft and regular.

15. Slept well; breathing easy; countenance cheerful; appetite improving; great dulness still on percussion. The trocar and canula were inserted between the eighth and ninth ribs, and two pints of healthy-looking pus withdrawn. The patient expressed himself much relieved of the oppression at his heart, and the pain of the shoulder; pulse 94, weak.

16. Passed a good night; breathing easy; bowels regular; appetite good; and the dulness on percussion is much less; but the respiratory murmur is only heard in the sub-scapular and dorsal regions. Was ordered to take a draught, composed of the infusion of gentian, with the sesquichloride of iron twice a day, and a mutton chop in place of the beef-tea, with two gills of wine.

From the above date to the 20th of September, 1847, he continued to make considerable progress in his general health and appearance, notwithstanding that, from time to time, large quantities of pus were withdrawn, according as his breathing was affected, and the dulness on percussion was increased.

On the 21st of September, a sudden change took place in the weather, from very fine and dry to cold and wet; and without any other apparent cause the patient was attacked with acute bronchitis of the right lung. At this time the left side was clear on percussion, and slightly tympanitic; and the respiratory murmur was heard over a larger space posteriorly. His breathing easy and natural; appetite good, and bowels regular; pulse 90, of moderate strength.

From this period the patient became rapidly worse, and, notwithstanding the means employed, the bronchial affection of the right lung still continued, and brought the case to a termination upon the 27th of September,

1847. The quantity of pus taken away altogether measured twenty-four pints three ounces.

SECTIO CADAVERICIS, HORAS VIGINTIQUATUOR POST-MORTEM.—*Thorax.* On removing the skin and attenuated fibre from the left side of the thorax, the sterno-clavicular articulation was found loosened and partially dislocated; the edge of the fifth rib was ulcerated, and the cartilage of the third rib was separated from the rib itself by ulceration; the left lung was found about the size of a large spleen, bound down and compressed against the spinal column; its structure healthy and permeable by air. The pleura was covered with a thick layer of lymph throughout, and its cavity contained eight ounces of pus; right lung slightly bronchitis, otherwise healthy; pleura also healthy. The heart was found pushed to the right, otherwise healthy. The abdominal viscera were all found in a natural condition, with the exception of the caput coli, which showed marks of inflammation and slight ulceration.

CASE 24.—Private Michael Quinlan, 94th Regiment, admitted 29th of April, 1847, with fever.

The febrile attack was of a severe character, principally affecting the brain, which became so far excited that for several days he was in a state of high delirium, and was placed under antiphlogistic treatment, with a free application of leeches to the head. The urgent symptoms were subdued, when, after an imprudent exposure, he was attacked on the 5th of June, 1847, with well-marked pleuritis of the right side, being, at the time, in a debilitated state from the effects of his late attack of fever. The treatment was confined to local depletion and counter-irritants, which removed the acute symptoms, but were followed by those of a chronic character, attended with marked deterioration of the patient's general health and appearance. He complained of frequent cough, especially in the morning before getting up, with a free expectoration of a seromucous character.

On examination with the stethoscope, the vesicular murmur could only be heard in a very indistinct manner, and on percussion over the same space the sound was perfectly dull, with increased resonance of the voice. The left lung and pleura appeared quite healthy, but the action of the heart was somewhat increased, and its impetus could be felt over a much larger space than is usually found in the healthy state.

He continued getting worse up to the 17th of August following, during which time there did not appear much change in the physical signs, as described above. Both sides were measured, but only the slightest possible increase could be detected in the right. The only part of the affected side where the respiratory murmur could be heard was a small space between the dorsal and sub-scapular regions. The patient, feeling conscious of his sinking state, consented, after much persuasion, to the operation which he had hitherto always declined, and a large trocar and canula were introduced at the posterior angle, between the eighth and ninth ribs, drawing the skin forcibly upwards to make the opening valvular, when a quantity of fetid thick pus was withdrawn, which came away with difficulty. The patient experienced the most marked relief in his breathing; which, before the operation, amounted to orthopnea. He bore the operation well, and said he scarcely felt it. His pulse fell from 120 to 90, and increased in strength; sol. mur. morph. m. xxv. h.s. He passed a good night, but awoke suddenly, about five o'clock the following morning, with a sense of suffocation, which terminated in a fit of coughing, when suddenly a large quantity of thick pus flowed out of his mouth, which on being measured exceeded four pints. The relief the patient experienced surprised himself and everybody else. His breathing became easy and natural; pulse 90, and of moderate strength; bowels open and regular. The following morning the bandage was removed from the wound in the side, but no appearance of any discharge showed itself. On examination with the stethoscope, loud amphoric breathing was now heard over

the right mammary region, and the respiratory murmur was audible over a larger space than before the operation. He said he had little or no pain in his chest, with hardly any cough. Two ounces of the infusion of gentian, with the sesquichloride of iron, were given twice a day, and, according as his appetite increased, a liberal diet with a little wine was allowed. On the three following days after the operation, a small quantity of pus was viable with his sputa, which afterwards disappeared. The respiratory murmur over the affected side gradually extended itself from above downwards, with less dulness on percussion. The amphoric breathing remained distinct for many weeks, without apparently affecting the progress in his general health, which continued to improve during the whole time he remained in hospital.

He was discharged to duty upon the 8th of November, 1847, on which day the following remarks were made:—"Appears in perfect health, and since the 1st of October has expressed himself entirely free from pain, weakness, or inconvenience. On examination of his chest, there is a considerable amount of dulness on percussion over the lower and anterior portion of the right lung, and over the same space the vesicular murmur is only indistinctly heard. Left lung healthy, but the respiratory murmur slightly puerile; heart's impulse somewhat increased; pulse 86, soft, and natural; bowels open; tongue clean and moist; general appearance perfectly healthy and natural; limbs muscular."

He has, since the above period, continued performing his drill and duties as a soldier, and on the 16th of January, 1848, when last seen, he said he was quite well, and never felt better in his life.

A. Maclean, M.D., staff-surgeon 2nd class:—

"I have been acquainted with a gentleman for five and twenty years, whose lungs have been declared during that time, by French, English, and Italian stethoscopists, to be reduced to nearly nothing, who, independently of an ordinary cough and muco-purulent expectoration, suffered from a more or less acute attack occasionally, which ended in his spitting up in a similar manner half a wash-hand basinful of pure pus. This I have seen and known him do several times, and his life was in all probability preserved by an opening taking place from the lung into the cavity of the pleura containing pus; after the evacuation of which, each time, he rapidly recovered, contrary to all expectation. He has been in Ireland for the last six or eight years."

It may be concluded, from the foregoing observations, that in cases of paracentesis thoracis, for a medical disease, the operation for the removal of the fluid effused should be done early, before the lung is permanently compressed and bound down by the formation of false membranes to the spinal column; that the operation should be a puncture between the fifth and sixth or sixth and seventh ribs, made by a very small trocar and canula, and the whole of the fluid should be evacuated, unless there be reason to believe its sudden removal might deprive the heart and great vessels of a degree of support necessary for their safety. The puncture should be immediately closed, and the admission of air may be prevented as much as possible, even if it should do no harm, although a time may arrive in which, after future operations, particularly if the discharge becomes purulent, it will be desirable to enlarge the small wound thus made, and keep it open. In a surgical empyema, the operation done is often that which has been called "by necessity," or at the spot where the opening into the chest originally was, or the matter now protrudes. When an operation is necessary, in consequence of a foreign substance being contained in the chest, which it is desirable to remove, in opposition to the more simple case of serous or sanguineous effusion, it should be done by incision, at the lower part of the chest behind, and requires the particular consideration which will be given to it in a future lecture.

(To be concluded in our next Number.)



LECTURES ON GENERAL PATHOLOGY

DELIVERED TO THE

FACULTY OF MEDICINE

DURING THE PRESENT YEAR,

By PROFESSOR ANDRAL.

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

SECOND SERIES. CHAPTER VIII.

CONVULSIONS AND PAIN.

Muscular action may not only be abolished, it may also be perverted; convulsions are constituted by involuntary and violent alternations of contraction or relaxation of the muscles of the body, whether permanent or transitory.

Convulsions may be accompanied by loss of consciousness; they may exist alone, or be attended with other symptoms. We now consider them as solitary expressions of disease. In childhood they are observed as maladies, are brought on by trifling causes, and often leave no anatomical alterations in the organs; but in the adult they are symptomatic of various disorders, result from considerable general disturbance, and usually leave evident anatomical changes to account for their production. The predisposing causes of convulsions are numerous. Thus a great volume of the head, increased irritability of the nervous system, a fair complexion, disturbed sleep, previous ill health, are considered as such in infancy. Also acute diseases, great mental emotions, instinctive imitation, hereditary predisposition said to be handed down from hysterical mothers to their children—possibly emotions experienced during gestation—may influence the production of convulsions in the child. Diseases of the encephalon, meningitis, morbid productions within the brain, acute encephalitis, must be taken into account, particularly in childhood. The causes of convulsion should be sought for elsewhere: various disturbances occasioned by the evolution of the teeth, gastro-intestinal inflammation, the debility which follows chronic enteritis, foreign bodies in the intestines, *e.g.*, retention of fecal matter, worms, &c., may also produce them. Feverishness alone does not cause convulsions in the adult, but is frequently their origin in the child; one form of pernicious intermittent fever is marked by their presence, a plethoric state; and also, perhaps more frequently in the adult, anemia, excessive hemorrhage—for instance after parturition—syncope, must all be ranked amongst the causes of the symptom which now engages our attention. Some poisons, such as saturnine emanations, also occasion them; ergotism not only occasions gangrene and inflammation of the gastro-intestinal tube, but sometimes also a convulsive form of disease, which the progress of public hygiene now-a-days renders more rare. Convulsions have followed transfusion of blood, and are said to result in some children from the peculiar qualities of the milk of their nurses (Brachet and Sumner). Excessively abundant secretions, too rapid growth, irritation of the skin—such as that produced by pins incautiously placed in the swaddling-clothes of infants—the influence of cold, are counted amongst the predisposing causes of convulsion. This symptom ranks amongst the most serious which may appear during the first stage of eruptive fevers, and is still more important when it follows the disappearance of the eruption, usually denoting at that period internal inflammation. With regard to the organs of generation, we find many of their diseases amongst the causes of convulsions; for instance, dysmenorrhoea, the difficult establishment of the menstrual functions, the accidental suppression of the catamenia; in hysteria they are frequent, onanism may bring them on, and they are occasionally met with during pregnancy and after parturition.

Motion may be perverted in a different manner: morbid muscular contractions may be permanent, as in tetanus. In this disease we cannot possibly admit the constant existence of alterations in the nervous centres, although they co-

incide sometimes with the malady. In some climates wounds of the skin cause frequently tetanus, and a congested state of the nerves and neurilemma in the vicinity of the wound is certainly not a constant appearance. The spinal chord, also, has been found diseased; but the tetanus in such cases was the result, not the cause, of the alteration. Some muscles may be affected with permanent contraction, hence a change of form or of position of the part may arise. Muscular contraction may also be a sign of cerebral or spinal softening, but never of mere hemorrhage. In hysteria it is not uncommon to notice a partial contraction in various parts of the body; it appears and ceases suddenly, or returns without any apparent cause, imitating shortening of a limb, or spinal deformity, and exists only in certain positions. The contracted parts may be swollen and painful. We have seen this symptom last as long as eight months; we have never noticed it in the male sex, nor in women over forty or under twelve years of age. Another form of convulsion which you are well acquainted with is hiccough.

We now come to the consideration of another sign of the maladies of the nervous system, viz., pain. Pain varies in intensity, in nature, and in seat: let us examine it under these three aspects. With regard to its intensity, we find that the nature of diseased tissues exercises a considerable influence. Compare, in this respect, the pain of inflammation in serous or in mucous membranes. The peculiar form of disease also modifies the violence of pain. Inflammation is usually accompanied with great suffering, particularly when any constriction exists in the diseased part. Neurosis is often unattended with pain; neuralgia, on the contrary, is always very painful. In acute disease more pain exists than in chronic affections: in advanced age, and in the male sex, less suffering is usually complained of during the course of maladies than in youth and in women. Weak subjects and nervous temperaments are peculiarly subject to pain; and in this respect idiosyncrasy creates a considerable difference between individuals. With regard to the nature of pain, it is sometimes comparable to a sense of weight; in other cases it is attended with throbbing, as in some inflammations, and also in hypochondriasis and hysteria. Lancinating pains are usually referred to cancer, although they seldom accompany visceral cancer. Pain varies in its seat; it may occupy an organ or a nerve. In neuralgia, for instance, the entire course of a nerve is the seat of a constant and dull sensation of numbness, whilst some peculiar spots are the nuclei from which irradiate from time to time violent lancinating pains. In sciatica, patients often complain of a distressing sensation of cold about the foot and leg, and in such cases the application of the thermometer has demonstrated to us the positive diminution of the temperature of the limb. Pains may be fixed or movable, continuous or with paroxysms; they may be intermittent or occur only at night, as it frequently, but not exclusively, happens in syphilis.

Pain must now be examined in the various regions of the body as a sign and a symptom of their diseases. In the head, pain may occupy the cranium or the face. Pain of the cranium may be general or partial, being limited to the frontal, temporal, or occipital regions. Headache may be indicative of disease of the skull or brain, or be symptomatic of maladies seated elsewhere. Pain may be observed on pressure of the scalp in many cases. In the same region a neuralgia is noticed, as in hemicrania and clavius hystericus. The cervico-occipital region is frequently occupied by neuralgia. The dull, permanent pain in this neuralgia chiefly exists in three points, viz., at the point of emergence of the occipital nerve, below the mastoid process; in the space which separates the anterior edge of the trapezius muscle, and the posterior margin of the sternocleidomastoid; and on the parietal prominence. The entire lobe of the ear is sometimes painful, and the suffering may spread to the eye, face, and meatus auditorius externus; it has been even propagated to the shoulder and arm. Head-

ache may point to disease of the bones of the skull; in acute meningitis intense headache is one of the earliest symptoms. When tubercular deposits exist in the membranes, pain is complained of long before any other symptoms; during the progress of acute inflammation, infants manifest their suffering by a special cry, and by raising their hand towards the painful region. Congestion of the brain, and hemorrhage, are not usually attended with pain: in softening, pain is usually observed in the neighbourhood of the diseased part of the cerebrum. Headache may, we have said, be produced by maladies which do not primarily affect the head. Thus in feverishness, particularly in that which attends pyrexia, it is almost constant. Thus, in the incipient stage of smallpox and of typhoid fever, headache is one of the most prominent symptoms. Disturbances, even slight, of the gastric functions cause headache. Pains of the face usually occupy the branches of the fifth pair, and seldom both sides together. The inferior maxillary branch and its divisions is that which is most subject to neuralgia.

Pains in the body may be observed in several regions; in the spine, for instance, whether caused by maladies of the envelopes or of the substance of the medulla spinalis, spinal meningitis more frequently occasions suffering than myelitis. Pain on pressure or motion is also commonly met with on the sides of the spinous prominences, and sometimes at the same time is accompanied by suffering along the course of the spinal nerves in the neck, chest, or abdomen. This pain and spinal tenderness seem connected with neuralgia (Valleix). Dorsal-intercostal neuralgia is more frequent on the left than on the right side, and is chiefly noticed in the fifth, seventh, eighth, and ninth intercostal spaces. Although a dull sense of numbness exists throughout the course of the affected nerves, the patients complain chiefly of one painful spot in the vicinity of the sternum, of another at the bral column, and of a third on the course of a line extending from the centre of the axilla to the crista illi. In some subjects the pain spreads to the epigastrium, or extends to the arm, forearm, and fingers. Concomitant oppression and palpitations may induce the erroneous belief in a disease of the heart or lungs, which do, however, predispose to this form of neuralgia. Dr. Bassereau considers intercostal neuralgia as invariably connected with a morbid state of the uterus; an opinion which we do not by any means adopt. This disease is more frequent in women; it may last a long time, and baffle the skill of the medical practitioner. We are disposed to admit that angina pectoris and this dorsal-intercostal neuralgia are one and the same malady. It may accompany disease of the heart or of the aorta, and in general we must say that the name of angina pectoris has been imposed upon a great variety of very different affections. Muscular rheumatism is observed also in the thoracic walls. As to the pains which accompany internal thoracic disease, we have described them when treating of maladies of the respiratory organs and those of the circulation.

The abdomen may be the seat of pains of various natures. The walls, being of a muscular texture, are occasionally invaded by a very distressing sort of rheumatism. Phlegmonous inflammation of the parietes also occasions pain, and this symptom is often met with in incipient spinal disease. The pains of peritonitis and of enteritis have been already noticed in another place.

Pains of the extremities may be idiopathic, as in rheumatism, inflammation, disease of the bones, &c., or symptomatic; the latter only claim at present our attention. At the beginning of acute disease, chiefly of fever, the limbs are the seat of a painful sensation compared to severe contusion. These pains were known to Hippocrates, who says, "Spontaneae lassitudines morbos annunciant." The same is observed frequently in hypochondriasis and hysteria, and also in general disturbances occasioned by alterations of the blood, plethora, scurvy, saturnine

intoxication, &c. Softening of the brain and diseases of the spinal chord frequently cause them. In diseases of the digestive tube pains are often noticed in the limbs, and also cramps. They are often induced, for instance, by "embarras gastrique," by diarrhoea, and their existence is usually noticed in Asiatic cholera. It is not so in diseases of the respiratory organs, but they are frequent in maladies of the circulation. In gangrene of the extremities, connected with vascular obstruction, patients complain in general of very violent pain in the limbs.

ORIGINAL CONTRIBUTIONS.

A REPORT ON THE CAUSES, CHARACTER, AND TREATMENT OF SPASMODIC CHOLERA AS IT OCCURRED IN HER MAJESTY'S 86TH REGIMENT, AT KURRACHEE, IN JUNE, 1846.

By ALEXANDER THOM, Esq.,

Surgeon of the Regiment.

Communicated to the *Medical Times* from the Army Medical Board.

(Continued from p. 376.)

Influence of High Temperature.—By a wise arrangement of Providence, the human body is capable of bearing great ranges of temperature, without any serious injury to the healthy action of its functions. Indeed it appears that the sudden transitions from heat to cold, and *vice versa*, are much more injurious than a long continuance of either. Yet there can be no doubt that a lengthened exposure to high temperature has a gradual tendency to undermine and debilitate the constitution of those who have been reared in, and accustomed to, the colder regions of the globe. It may, therefore, be presumed, that men living in tents from 96° to 100° of Fahrenheit were more predisposed to disease than they would have been at 86° or 80°, to say nothing of a lower range. I do not mean to say that a dry and heated atmosphere is in itself an ostensible cause of cholera, but only becomes a concomitant, followed by, and in connection with, humidity and absence of wind.

It is, in fact, to this last combination of circumstances that we assign the diathesis of the system which becomes cholera from other exciting causes connected with food, dwellings, locality, habits, &c. A moist state of the atmosphere is, in all countries and seasons, one of the most remarkable and certain causes of sickness of different kinds which we can seek for. Yet it would not appear to be a cause of cholera, unless when existing in an atmosphere at a high temperature, absolutely, or comparatively, perhaps. Nay we are disposed to think that, even in a hot air charged with vapour within a few points of saturation, the human body might escape active disease, so long as the air is in rapid motion, and uninterrupted, by day or night, even for a few hours, by ill-constructed buildings or sheltered places. But, if such an atmosphere becomes stagnant for any length of time, I believe it is demonstrably likely to be a cause of cholera, even without undergoing any chemical change or alteration whatever, without that intangible miasma called malaria, or those invisible animalcules which the Russians affirm to be the cause of cholera. I will immediately point out the accessories which, in the 86th Regiment, tended to aid the atmospheric causes in producing a virulent epidemic.

Chemical Change in the Air during Cholera.—Elsewhere (page 17) it has been shown, that with an increase of temperature and moisture, there is also an augmentation of the bulk, and diminution of the specific gravity, of the air; so that a volume which fills the lungs contains a proportionately less quantity of oxygen than it otherwise would do. This would be the case even in a dry hot air; and, in all probability, to this may be traced the origin of certain diseases peculiar to such a state—as the "apoplexy" of hot winds—and not to mere elevation of tem-

perature acting on the skin. Now, the introduction of a large quantity of aqueous vapour, absolutely yielding no oxygen, into such an air, although it in some degree lowers the temperature, renders it even still more unfit for respiration, by its occupying a considerable proportion of each volume inhaled. From these phenomena, I calculate that, at the lowest rate, with the thermometer at 90°, and dew-point at 83°, a given bulk of atmosphere contained one-eighth less oxygen during the month of June, than it did in January and February. In temperate regions, two pounds eight ounces of oxygen are daily consumed by the lungs; but, instead of this, only two pounds three ounces would have been inhaled at Kurrachee, even if the number of respirations per minute were as great in hot as in cold climates, which is not the case. We also know that the soldier's ration is the same at all seasons, and he consumes as much animal food in summer as in winter—ay, in an Indian summer or Canadian winter—and that animal diet requires more oxygen than vegetable, to render it fit for assimilation. In India, during the hot season, the just balance between these necessities of life is lost, and a tendency to morbid change must always exist in a more or less degree, according to the intensity of the predisposing and exciting causes.

Changes in the Blood dependent on the Climate.—Yet we admit that this is not alone sufficient to produce those death-blasts which pass over India in certain seasons, but that it is merely the first link in the chain of causation. The result is a carbonaceous state of the blood, diminished formation of fibrine and albuminous matters; while the crude matters from which these necessary elements are formed, require unusual energy of the system to throw them off. The liver acquires increased action to remove the carbon; while the skin, in consequence of the renal secretion being diminished in hot climates, has not only to carry off the fluid, albuminous, and saline parts of the blood, but the nitrogenized matters also.

That such a condition of the blood existed at Kurrachee in June, was evident in every case where it was examined, whether in cholera or other cases; nor is this new or unexpected, although an important fact. In men, previously sound in health, the immediate evils arising from this are, no doubt, very frequently averted by the adaptation of our functions to relieve Nature in many ways that must ever elude our scrutiny. But it must be pregnant with danger, while extraneous or trifling sources of irritation must tend to produce open disease; and the preservation of health under such circumstances must depend on an uninterrupted activity in the hepatic and cutaneous excretions.

Congestion, along with Deteriorated Blood.—Let us suppose any sudden or unusual congestion to take place in a system already impregnated with so much grave, although latent, germs of disease: I mean simple congestion, unconnected with any specific poison inhaled by the lungs or received by contact. It is almost needless to observe that such a phenomenon would lead to the most dangerous and fatal results—such, I firmly believe, as our regiment experienced. I am not prepared to say that the altered function of some organ may not produce a diseased secretion, which may act as a deadly poison by getting into the blood, and be the immediate cause of death; all I contend for is, that even this is but a consequence or part of the series of morbid actions merging into cholera.

Congestion Fostered by Moist Air.—The next point which forces itself on our notice is the presence and agency of phenomena during and preceding cholera, which were eminently favourable to a morbid congestion of the circulating mass, whether previously deteriorated or not; these I consider to be undue moisture in the air, and a deficiency of the ordinary currents or winds: both being equally unfavourable to the process of evaporation.

The Air.—At the time when cholera existed, the dew-point was from 82½ to 83°; every cubic

foot of air contained twelve grains of aqueous vapour; and, had the external temperature been the same, all evaporation must have ceased from the skin and lungs; but, as the latter was at 96° in tents, this salutary process was not wholly arrested, although the quantity of vapour carried off from the skin must have been utterly disproportionate to the necessities of the system at such a time. At night, however, when the air fell to 85° or 86°—within two or three degrees of the point of deposition—this must have been almost entirely arrested, and no doubt was so under some circumstances. The cutaneous exhalants may even be in activity, and pour out their contents on the surface of the body; here, however, the perspired matter will remain, clogging the pores, congesting the extreme capillaries, and, with the body thus bathed in deteriorated fluid, the oxygen of the air is excluded from the skin, and the heat accumulates, which ought to be steadily removed by evaporation. The first stages of this state are rather active, but, if prolonged, passive congestion is the result, and a train of signs indicative of a cholera diathesis ensues.

Effects of a Calm, Moist Air.—It is probable that this state of the climate would have been corrected in a considerable degree by strong and steady winds, which usually prevail at Kurrachee in the hot months; for, if the air was so loaded with moisture as to oppose active evaporation, yet this would be partly compensated by any force that would rapidly remove the layers next the body as fast as they become fully saturated. This has been shown by experiment, which, applied to the case before us, gives this result, that from a surface equal to a disc of six inches in diameter, with the dew-point at 83°, and temperature at 90° in the shade, the evaporation per minute would be equal to half a grain in a calm, 1·40 in a moderate breeze, and 2·10 in a brisk wind: thus making the quantity of fluid removed from the system to be nearly three times as much in a moderate breeze, and upwards of four times so in a fresh wind, as in a calm or stagnant state of the atmosphere.

Cutaneous Exhalation.—It is scarcely necessary to allude to the vital importance of evaporation from the skin, and escape of vapour from the lungs, or by the renal excretories, in all climates and countries; and every one, without knowing why, can appreciate the exhilarating and elastic feeling caused by dry winds, and languor and depression induced by humid ones; and in no country is this more perceptible than in India, even when there is very high temperature. The quantity of liquids, in one form or another, which is introduced into the body in hot countries exceeds that of cold ones by at least one-half, and in many individuals to double or treble the amount. The nature of things requires that it should be so; but it is equally important that this superabundant fluid should be carried off as quickly as possible, before it is replaced by a fresh supply of this necessary element, to become, in turn, the vehicle of extra heat and effete matters. I do not overrate the quantity of drink used by a soldier living in a tent at 90° or 96°, who consumes his ration of animal food, and takes draughts of arrack, in stating it to be at least ten pints in the day; whereas, during a calm, even if the body was without any covering, the air could only carry off from six to seven pints; and, the secretion from the kidneys being too insignificant to compensate for the loss of the cutaneous action, a portion of this must accumulate in the vascular system, and produce congestion; that, by daily increase, and by gradually disordering the functions, would create additional thirst, and add to the primary evils. It happens, however, that the body is more or less covered with clothing, and shut up in close tents or confined barracks at night, all tending to arrest the circulation of air and evaporation of the cutaneous exhalations during the night-time, when the thermometer falling from 90° to 86°, or within 3° of the dew point, would lessen the amount of fluid removed from the body to nearly three pints, or less than one-half. This is, in all pro-

bability, connected with the fact of many more men being attacked at night, or towards morning, than in the daytime.

United Action of Morbid Agencies.—If, then—with constitutions long exposed to a bad climate, enervated by high temperature, and the qualities of the blood gradually changed by a deficiency of oxygen in the atmosphere—bodies of men become exposed to another and equally influential morbid agency, humid air, such as we have essayed to explain, we must anticipate the occurrence of much mischief. Simple congestion, if general, in a hot season, is alone sufficient to endanger life; for every tissue becomes engorged, and every function disturbed or altered. The arterial, venous, and lymphatic vessels and capillaries all participate in the disorder; the respiratory process is enfeebled and slow; the heart is oppressed, and unequal to its load; the brain and nervous system become torpid; the chylopoetic viscera lose their tone; and the portal system, being in a great measure removed from the general circulation, is affected by this universal obstruction in a very marked degree. The sudoriferous vessels on the surface are in an atonic state, and passively allow their contents to escape on the skin, which is so profusely bathed in moisture as to lead to the supposition that this secretion is increased, while in reality it is, comparatively speaking, diminished; but from the non-evaporating state of the air it is not imbibed, and leads to this mistaken idea.

Latent Condition of Cholera.—The state of the system first referred to, as resultant on chemical change of the constituents of the air—in which carbon is accumulated in the blood, and fibrine and albumen diminished—will vary in degree according to idiosyncrasies, habits, and constitution, so that certain numbers of a community will be affected to an extent bordering on, or breaking out into, open disease. Noxious agencies, whether of atmospheric origin acting on the skin and lungs, or as poison introduced through the assimilating functions, when applied in a minute degree, but steadily kept up for a length of time, have a tendency to produce effects that are called accumulative. Their action is latent, but not the less certain, till all of a sudden it is developed as if the whole had been suddenly concentrated into one overwhelming dose.

Connection with Scurvy.—The scorbutic diathesis furnishes a forcible example of this; and sudden death is not only induced by slight causes of excitement, in men labouring under it, but even those who have exhibited no alarming signs have been equally affected. This is exceedingly applicable to cholera, between which and scurvy there is a great analogy in the state of the blood; and on the former subsiding, the latter appeared in our regiment, and also in other corps.

Sudden Climax to Accumulative Morbid Changes.—If, then, by a sudden increase of all the causes of this latent diathesis, a state of the weather, inducing universal congestion almost approaching to obstruction of the vascular system occurs, can we be astonished that life will, in many, be abruptly cut short, as if some lethiferous draught were suddenly swallowed? Such, I am firmly persuaded, is the only rational way of accounting for those numerous cases of cholera which terminated fatally in a few hours; with few of those symptoms which Nature usually exhibits in a salutary effort to remove local or general congestion. Sound blood might circulate slowly without destroying the nervous power; but, if it is deprived in a great measure of its vitality, it is quite impossible that it can be delayed in the brain without producing rapid dissolution.

Analogous to other Noxious Agencies.—When individuals are exposed to an atmosphere from which burning charcoal has removed a part of the oxygen they are struck down suddenly; yet the change which leads to this is gradually produced. This I have personally experienced in Portugal, when using one of the charcoal-burners common to the country, in a close room. Several of us sat for some hours in the deteriorated air, and were unconscious of its effects till a certain point, when all complained simultane-

ously; and the first attempt to run out produced distressing feelings, which lasted for many hours after being in pure air. A minor degree of exposure, but much longer continued, to an undue proportion of oxygen, would most likely produce similar, if less sudden, injury to the blood; at all events, place the system in readiness for the accession of mischief arising out of congestion, and unitedly produce fatal consequences.

That a choleric diathesis may often exist in a latent degree, among bodies of men, is more than probable, and may be often on the very verge of bursting forth into a pestilential epidemic by a trifling cause of excitement or aggra-

vation, or long continuance of the remote causes; while, on the other hand, a few precautionary measures, or a favourable change in the weather, or other subordinate agencies, may be the means of preventing evils that would otherwise be great, and perhaps only a few solitary, but well-marked or, as is sometimes said, "suspicious cases" of cholera may present themselves.

It is by no means my object to insist on the nature of the remote causes of cholera being exactly that which I have endeavoured to explain: it is merely the connection that in some way exists between the disease and the state of climate adverted to, which seems to be demonstrable; and the changes effected thereby in the

(Tables B. and C. referred to in page 375).

TABLE B.

Meteorological Observations for June, 1846, at Kurrachee.

Daily Admission of Cholera in H.M. 86th Regt.	Day	Thermometer.			Dew-point.		Winds.		GENERAL REMARKS.
		6 A.M.	3 P.M.	9 P.M.	6 A.M.	3 P.M.	A.M.	P.M.	
..	1	82	88	86	78	79	West	West	Cloudy all day.
..	2	82	89	86	78	78	West	Calm	Cloudy all day.
..	3	83	89	85	77	77	West	N.W.	Cloudy. Heavy dust-storm.
..	4	83	90	86	77	78	W.S.W.	Calm	Cloudy. South-west monsoon setting in.
..	5	82	89	85	77	78	S.W.	N.W.	Do. do.
..	6	84	90	86	77	78	S.W.	N.W.	Do. do.
..	7	85	88	86	77	78	S.W.	N.W.	Do. do.
..	8	84	88	86	77	78	West	N.W.	Do. do.
..	9	84	88	86	78	80	West	W.N.W.	Cloudy mornings and evenings.
..	10	84	88	87	80	82	West	N.W.	Do. do.
1	11	85	88	86	81	82	W.N.W.	Calm	Cloudy, muggy, oppressive. Light winds at night.
2	12	86	89	88	82	83	N.W.	S.W.	Muggy, oppressive. Wind falls at night.
3	13	87	90	89	82	83	S.W.	S.W.	Do. do.
1	14	87	90	88	82	83	S.S.W.	South	Cirrus a.m.; cloudy, sultry, and oppressive p.m.
47	15	87	92	90	82	83	S.S.W.	Calm	Light wind; muggy, exceedingly oppressive.
105	16	87	90	90	81	83	S.W.	Calm	Do. do.
104	17	87	91	88	83	83	S.W.	N.W.	Fresh breeze; cloudy, muggy nights.
49	18	87	91	88	81½	82	W.S.W.	N.W.	Do. do.
23	19	88	90	88	81	82	S.S.W.	N.W.	Light wind; close and sultry.
25	20	88	92	87	81	82	North at night	S.W.	do. do.
20	21	86	89	86	81	81½	North.	S.W.	Cumulous clouds; a few drops of rain. Thunder at night, heavy rain, squalls, and lightning.
5	22	83	86	85	81	81	W.N.W.	Calm	A gale; cumulo-stratus. Light rain all day.
3	23	84	88	86	81	81½	W.S.W.	Calm	Cloudy a.m.; a clear sky p.m.
3	24	84	91	88	81	82	S.W.	N.E.	Calm at night, close and oppressive.
2	25	86	92	89	82	83	S.W.	N.E.	Calm; stifling sensation.
..	26	86	96	88	82	83	N.E.	N.W.	Calm a.m.; a fresh hot N.W. wind p.m.
..	27	88	95	88	82	82	S.W.	N.W.	Fresh breeze; low dense clouds; muggy.
..	28	89	86	84	81	80	Var.	N.E.	A dust storm p.m. Heavy rain and thunder from N.E. A cool air followed.
2	29	86	94	88	80	79	East	S.E.	Wild cirri-cumulus. Rain p.m.
5	30	85	85	84	80	80	South	S.W.	Cirri-cumulus; rain a.m.; Very heavy rain p.m.

TABLE C.

Meteorological Observations for July, 1846, at Kurrachee.

Daily Admission of Cholera in H.M. 86th Regt.	Day	Thermometer.			Dew-point.		Winds.		GENERAL REMARKS.
		6 A.M.	3 P.M.	9 P.M.	6 A.M.	3 P.M.	A.M.	P.M.	
1	1	86	89	85	79	79	West	West	Clear; sultry.
2	2	83	90	84	78	80	Calm	W.N.W.	Clear a.m.; cloudy p.m.
3	3	84	88	84	79	80	N.W.	W.	Cloudy p.m. A thunder-storm from N.E., and heavy rain.
4	4	84	87	83	80	79	N.S.E.	South	Stratus. Heavy rain a.m.
5	5	84	88	84	79	80	S.W.	West	Cirrus. Gloomy; light rain; fresh breeze.
6	6	84	86	84	79	80	S.W.	West	Do. do. do.
7	7	84	86	84	79	80	S.W.	W.S.W.	Cloudy; drizzling rain. Cool.
8	8	85	86	84	79	80	W.S.W.	S.W.	Slight drizzling rain. Hot, muggy.
9	9	83	88	85	79	80	S.W.	S.W.	Do. light rain; wind falls at night.
10	10	84	88	84	79	80	W.S.W.	W.S.W.	Do.; cool wind all night.
11	11	84	87	84	78	79	W.S.W.	Calm	Cloudy. Do. do.
12	12	84	90	84	77	78	S.W.	Calm	Clear; a light haze. Hot, calm, close, oppressive night.
13	13	85	89	84	78	79	Calm	Calm	Gloomy. Stratus.
14	14	84	89	85	78	79	Calm	Calm	Clear, hot, oppressive. Light wind.
15	15	84	90	86	78	79	N.W.	Calm	Cloudy in the evening; cool night.
16	16	85	90	86	78	79	N.W.	Calm	Do. do.
17	17	84	89	84½	78	79	N.W.	Calm	Clear. Cool night.
18	18	83	90	85	78	79	W.N.W.	Calm	Do. do.
19	19	83	90	85	78	78	W.N.W.	Calm	Do. do.
20	20	84	91	84	78	79	N.W.	Calm	Do. Hot day; cool at night.
21	21	84	90	84	78	79	W.N.W.	Calm	Cirrus. Do. do.
22	22	84	88	86	79	80	S.W.	West	Cirri-cumulus. S.W. drift.
23	23	84	89	86	78	79	N.W.	Calm	Clear.
24	24	84	90	85	79	80	N.W.	Calm	Clear at day; cloudy at night.
25	25	84	91	85	79	80	N.W.	Calm	Cirrus. A high N.E. current of air.
26	26	84	90	85	78	80	N.W.	Calm	Cirri-cumulus. Do.
27	27	84	88	86	78	80	N.W.	S.W.	N.N.W.
28	28	84	88	85	78	80	S.W.	N.N.W.	Cloudy. Cool day and cold night.
29	29	83	88	85	76	78	N.W.	N.W.	Clear a.m. Cloudy.
30	30	83	88	85	77	78	N.W.	N.W.	Gloomy, cold, damp.
31	31	82	86	84	77	80	N.W.	N.W.	Light rain. } Many cases of fever admitted of a congestive type.

human system are such as appear to me to be near the truth, although I cannot go into all the details which the case might admit of, and which would be required in a report made more accessible to the reader by printing. That a *stagnant and humid* air, following on, or connected with, *high temperature*, is likely to be a cause, the *general cause*, of cholera, may be proved to be the same by direct observation, and substantiated by numerous analogies of the same causes operating in *different cases*; and even that, when the diathesis has been established in the hot months, it may be perpetuated by accidental circumstances, and cases may occur at other seasons of the year.

Circumstances Favoring its Development.—The native town of Kurrachee contains 15,000 inhabitants; 1,500, or 1 in 10, died of cholera in a month or six weeks; yet the same description of persons occupy the station bazaar in the cantonment, where about 1 out of 30, and upwards, died. Now, the former place consists of mud-houses, with mere crannies as windows or means of ventilation; while the houses are built so closely together, and the streets, barely wide enough to allow a loaded camel to pass, are so very tortuous and inaccessible to currents of air, that all ventilation must be arrested, unless during a perfect gale of wind. On the other hand, the bazaar is newly laid out in large compounds, divided by wide streets, straight and at right angles to one another, and the houses and stores are well built; so that the general ventilation of the place is secured, and tends to correct the pernicious influence of the narrow, close huts, occupied by the servants and lower castes, who were chiefly the victims of the disease.

When the cholera showed itself in Hydrabad, a little later than in Kurrachee, in forty-eight hours it carried off 96 out of above 400 prisoners who were confined in the gaol, and of course subject to more imperfect ventilation than the people of the town, who did not suffer in the same proportion as those of Kurrachee. The mortality among the 28th Regiment, on board the *Zenobia*, was most likely fearfully increased by a similar cause.

Cholera on Board Ship.—It is reported that almost every ship carrying Coolies from Calcutta to the West Indies was attacked with cholera in the first fortnight of the voyage. These poor creatures were, in all probability, labouring under a choleric diathesis *on shore*; but by sleeping in the open air, and thus exposed to free circulation of wind over the skin, they did not suffer, or perhaps should not have suffered, there. No sooner, however, were they cooped up on board a vessel, and hundreds of them shoved down into the "tween decks," at night at least, or in the daytime also, if the weather was bad, than they got cholera; and this prevailed till they reached the cool and fresh breezes of the S.E. trade-wind. It is not improbable that this also partly depended on the vessels having the wind (N.E. monsoon) right aft—always unfavourable to the health of troops on board ship—till they crossed the equator, and had a better and cooler breeze from S.E. blowing on the beam. It is a fact strongly in support of our views, that cholera on board ship, when going before the wind, has been wholly stopped by "hauling up," so as to have it on their side; for it argues that no specific miasma existed in the atmosphere, but that causes unfavourable to ventilation, consequently of cutaneous evaporation, were connected with the spread of the disease, and *vice versa*. In fact the history of cholera would furnish similar examples sufficient to fill volumes.

Casual Cases in Lower Seinde.—In October, 1846, a single case of cholera, but a pure and genuine attack, died in the 86th Regiment, at Kurrachee; but it never spread. In the European Bengal Regiment, which left Kurrachee to go to Sukkur in November of the same year, two or three cases died after the third or fourth day's march; but no further sign of the disease occurred during their subsequent journey to Bawalpore, at a lapse of two months. In February,

1846, a man of the 60th Rifles, and some women of our regiment, died of this at Kurrachee; but there was no further spread of the malady till the awful visitation of June. All this would indicate a diathesis being perpetuated in certain persons, which is liable to be developed by very slight causes, especially that of muscular exertion, subsequent feverishness, thirst, and sleeping in the damp stagnant air of jungly districts, through which troops generally march. It is equally opposed to contagion, being the mode by which the disease is propagated and favourable to an atmospheric origin, fostered by local circumstances, and excited by mental or physical exertion, or depression, such as we are about to point out.

(To be continued.)

ON THE EMPLOYMENT OF CHLOROFORM IN SURGICAL OPERATIONS.

[Mr. Robinson, the eminent dentist of Gower-street, has sent us some practical remarks on this subject. Having administered these agents in upwards of eighteen hundred cases, not only for purposes of dentistry, but preparatory to severe surgical operations, he says:—

Having observed, in several instances in which the chloroform has been exhibited to casual outdoor patients at our hospitals, that considerable excitement was produced during the inhalation, and that this was followed (at least when the chloroform was given to what may be called the operating point), after the operation, by nausea and vomiting, succeeded by temporary debility, and that these effects were confined exclusively to the class I have mentioned, the out-door patients; never, in a single instance, following its exhibition to patients who had been even a few days resident in the hospital preparatory to being operated upon by Messrs. Ferguson, Partridge, Thompson, Morton, Wakley, &c.; and having seen effects from the ether when inhaled soon after a full meal, or when the patient was under the influence of stimulus, my attention was directed more particularly to the subject.

Presuming that these effects might depend in some measure on an imperfection in the preparation of the chloroform itself, and wishing to ascertain how far this was the case, I communicated the facts to Professor Simpson, requesting him to order from his own chemist a sample of chloroform; prepared precisely according to Dumas's formula, of the proper specific gravity.

The professor kindly acceded to my request, and I received the sample I required accompanied by a communication on the purity of chloroform, from which the following is an extract:—"Of course it is of the utmost importance that the article employed should always be of the same strength and purity, as, if our materials are different, we shall unquestionably have different results. I have found no kind of chloroform exceeding in strength that manufactured by Messrs. Duncan and Co.; and I have before me a specimen manufactured at Liverpool, which is of a proper specific gravity, but that alone is not sufficient: it must also be of a proper degree of purity; and this specimen is deficient in the agreeable and fruity odour it should possess, independently of its containing some free chlorine, which would cause considerable irritation on inspiration."

The preparation forwarded to me, and which certainly possessed in much greater perfection the agreeable fruity odour referred to, was administered in nine cases: in three only of which did it cause nausea, vomiting, or much excitement; and in two of these it was afterwards discovered that the patient had taken a hearty meal a short time previously to its exhibition; and in the other that he had been "priming," as he called it, for the operation, by liberal libations of gin and beer.

I have frequently seen the same effects from the ether inhalation when taken soon after a full meal, or while the patient was under the influence of artificial stimulus; and it will generally be found that under these circumstances nausea

and vomiting will be the concomitants, and inhibition, invariably so if it be carried to the point necessary for operating.

Judging from analogy, the effects of ether and chloroform in producing insensibility appear to me to be precisely similar: we have the same fixed state of the iris, the same general relaxation of the muscular fibres, without the prolonged state of excitement; in short, in either case a state is produced in which any operation may be performed without the slightest pain on the one hand, or struggle or resistance on the other.

At the same time it may be as well to observe that, in administering the chloroform (as with the ether), the pulse at the commencement increases in frequency, but returns when the patient is fully under its influence to its normal state; should, however, its administration be continued some time after the iris has become fixed, or should the patient, from imperfect inhalation of the due proportion of atmospheric air, show symptoms of approaching asphyxia, the inhalation must be immediately discontinued, and again resumed after the interval of a minute or so, when these symptoms have disappeared.

I believe it is now generally acknowledged that the chloroform possesses many advantages over ether, not only being very pleasant to inhale, but, when properly exhibited, seldom producing much, if any, irritation; while, if a full quantity be administered, its effects are more persistent, and, if the iris be carefully noticed during the operation, the patient may be kept perfectly inanimate, unconscious of external impressions, and insensible to the pain of an operation for forty minutes; not, however, inhaling the agent during the whole time: when once the patient has been brought to the operating state, he can be easily kept in this state by occasionally permitting him to inhale atmospheric air. Immediately the operator observes the rolling of the iris he must again apply his inhaler, and so on at intervals until the operation is completed.

The effects of the chloroform are, more persistent, yet more evanescent, than those of ether, the patient recovering his sense of hearing, before he is able to articulate or use voluntary motion. And in no case that has fallen under my observation has the patient fallen into that state of semi-consciousness, or apparent drunkenness, so frequently observed in persons following the exhibition of ether; nor, in the generality of cases, is the consequent debility so great, or so protracted, though I have occasionally seen cases occurring in the persons of delicate females, in which great lassitude and even hysterical attacks have followed its exhibition. In these cases the exhibition of oxygen gas, diluted with atmospheric air, has been invariably successful. The quantity of chloroform necessary to produce the proper state of insensibility varies in different patients, some requiring only a drachm, while another will inhale three drachms, depending, perhaps, in some measure, upon the purity of the agent itself; but the average quantity is from one to two drachms.

The best method of administering chloroform has been made a matter of question.

Some prefer applying it by means of a sponge or handkerchief, urging, as an objection to the use of an apparatus, that many persons dislike to use an apparatus that had been indiscriminately used by others. This, however, is a very futile objection, as, by a parity of reasoning, the same persons might object to the removal of a tooth by means of the forceps that had been in the mouth of others, and yet in practice we never find such an objection urged or even thought of. Besides, it is well known that a piece of linen is placed around the edges of the face-piece, the only part of the apparatus that comes in contact with the face, and that is or ought to be removed on every fresh operation.

The objects in view are to administer the chloroform effectually without any unnecessary waste, or excoriating the skin of the patient; and when we consider this, and the uncertainty of the time that is required to bring a patient under its proper influence, it must be allowed that they

are cogent reasons for the adoption of a simple, efficacious, and portable apparatus furnished with the valves necessary for inspiration and expiration.

I have never failed, in a single instance, in producing the proper status for operating when an apparatus has been employed.

THE PHYSIOGNOMY OF DISEASES OR SEMIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

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

(Continued from p. 351.)

CLASS II.

DIVISION III. Thoracic derangement; Countenances of peculiar hues.

From Cardiac Disease (chronic).

- " Hydrops pericardii.
- " Emphysema pulmonum.
- " Oedema do. (engouement.)
- " Do. pleura (hydrothorax).
- " Bronchitis.
- " Hepato-Cardiac Dropsy.

It has been already observed that as all faces, all forms, and all created beings, differ one from the other, not only with respect to their class, their genus, their species, but also with respect to their individuality, so, in like manner, it may be affirmed of semeiology in general, that although the practitioner may be called to witness a disorder in two persons of the same kind, in the same stage, and of equal severity, yet in their rise, progress, duration, and result there will not be found in the two diseases which have run their course exactly alike, in which each one has not presented some striking peculiarities in pathology which were not common to both.

In the second division of this class we have diseases grouped together which alter the natural colour of the face, and give rise to a tint which is foreign to it, and thus a morbid colour of surface becomes a valuable diagnostic sign of the disease which is progressing within. But the varied shades of colour which the physiognomist has to notice and to learn are always attended with more or less alteration in the natural cast of features, so that not only is the change of hue in the countenance valuable in diagnosis, but the distress in the features, which usually accompanies that change, speaks such powerful language to the mind of the experienced practitioner, that the disease may be read accordingly. It is a matter of great importance, and which is, alas! sadly neglected in the present day, that, when a sufferer from some serious disease presents himself to our notice, he should not be allowed to influence the mind of the medical man by the frequent repetition of trifling or subordinate symptoms; and truly, if an experienced man is able to derive much information from medical physiognomy, the minor points upon which the patient may lay much stress will not have any corresponding weight in his mind. His first aim will always be this: Where is the morbid or deranged organ? And to what extent has that derangement gone? The countenance will at once declare this in almost all the serious diseases which affect our mortal frame, and where that disease exists in the thorax, the combined use of auscultation and heautophones will, for the most part, as fully detect the disease itself, both in its seat, nature, and extent, as though the morbid parts had been displayed before our naked eye.

It may be observed, then, that, generally speaking, the following change of colour in the face attends the diseases here grouped together. In the first place we have those which are ranked under the second division of this class, and I have also gathered together a few others, in order to show the varieties of tinge which different diseases exhibit in the physiognomy.

In Cardiac disease the countenance is livid.

" Emphysema " dusky.

In Hydrothorax the countenance is anxious and dusky.

" Hydrops pericardii " livid and anxious.

" Malignant disease " sallow.

" Icterus " yellow.

" Pneumonia " of a dingy flush.

" Pleuritis " pale and anxious.

" Bronchitis " dusky and livid.

" Oedema pulmonum " heavy and distressed.

" tubercular disease " wan and pale.

" Entozoa " wan and pinched.

Now, with respect to the varied stages of cardiac disease, whether those changes are in its muscular parietes, or in the valvular apparatus; whether the auriculo-ventricular openings are gaping or morbidly contracted in the alternate systolic and diastolic actions of this viscus; or whether its investing membrane is adherent to it, and its large vessels dilated and thin; yet one general observation holds good with respect to the physiognomy of individuals who suffer from disorder in the action of this important viscus, namely, that the features, as well as the hue of the face, sooner or later, undergo a marked change from a state of health.

The countenance of a person labouring under exo-cardiac or endo-cardiac inflammation is certainly oftentimes very peculiar to the disease itself; there is a greasy look about the face, and an expression of distress in the features, which is better known to, and sooner recognised by, a clinical observer than it is possible to describe; whereas, in the chronic forms of disease of this organ, the palpitation is both seen and felt by the medical man; and he may also notice the anxious, careworn, distressed cast of countenance, with livid or dusky-red lips and nose, the *alae nasi* acting on the slightest exertion, so that this engine of the circulation is no sooner disordered in its movements than the features exhibit the distress which arises therefrom. The patient, moreover, seeks an erect posture in bed; the eye is anxious; the cheeks are faintly tinged purple; the jugulars are permanently distended, by which I mean that they do not relax either in the act of inspiration or expiration; there is an oscillating movement of the carotids in the triangular space formed by the sterno-cleido and omo-hyoidei muscles (a). There is also a manifest bulging of the precordial region, and the whole pectoral muscle on this side feels fuller, larger, and more plump than on the right side.

I shall transcribe one out of the many instances of cardiac disease which I have in my possession, in order to show the progressive stages of endo-carditis, and its influence upon the several organs of the thorax and of the abdomen. The following case is the more instructive, inasmuch as we had the opportunity of watching it from its onset to its fatal termination:—

Mitral Valve closed to a mere Chink.—*Pulmonary Apoplexy.*—Dropsy.—Wm. Edsri, aged thirty-seven, a baker, admitted Oct. 6. Face bloated; lips and cheeks full and pinkish; *alae nasi* acting; hands livid and cold; slight yellow tinge under the eyes; orthopnea; dyspnoea occurring in paroxysms; abdomen full and with fluctuation; hardness and tenderness in the epigastrium; pulse 100, feeble and small; urine scanty, turbid, but contains no albumen.

Auscultation.—Free transmission of air

(a) This pathological condition of the large vessels of the neck depends upon a gaping auriculo-ventricular opening, so that not only is the mitral or tricuspid valve unable to close itself, and thus render the two chambers distinct and separate, but there is likewise, in consequence of this imperfect closure, a column of blood always remaining in the auricle and large vessels, by which means the latter are never capable of thoroughly emptying themselves.

throughout the lungs, attended with rhonchus and sibilus in the lower lobes. A loud rasping bruit attends the first sound of the heart, otherwise the heart is not noisy or forcible.

He states that, ten years ago, he was in this hospital, under Dr. Peter Mess Latham (a), for acute rheumatism; but although he had, at that period, no affection of his chest, yet just after he left the building he became sensible, for the first time in his life, of shortness of breath, though he had no palpitation. He received great benefit at this time by the application of leeches and cupping to the region of the heart and liver, together with the use of the salts of acetate and carbonate of potash in the compound infusion of scopolium. The *lin. hydrargyri* was rubbed into the side, and, although it brought on ptyalism, yet it afforded great relief to his symptoms, and the kidneys, which before were very obstinate, now began to secrete largely, and thus relieved him of the accumulated fluid in the abdomen, legs, &c., so that the orthopnea had greatly subsided. He was, therefore, made an out-patient, at his own request, in order that he might go into the country. The following note, however, was taken down before his departure, Nov. 18:—

"Auscultation.—Rhonchus and sibilus over both sides of the chest, heard chiefly during expiration. (b) Large crepitation over both lower lobes behind; expectoration frothy; the sound of the heart, which has never altered, seems more audible under the sternum than on the left side. Five beats of the heart occupy one respiration, the two beats that accompany the inspiration are more loud as to the "bruit" (which then becomes almost vocal) than the other three. Says he gets better every day; abdomen less tense, but still fluctuates; countenance bright; legs quite reduced in size; urine clear, acid, but no albumen; sleeps well."

The following January 15 he returned from the country, where he became worse in consequence of catching cold on the journey. Abdomen more swelled and painful; oedema of legs increased; dyspnoea severe; has pain in the right shoulder; pulse small, it is now, and always was, quite regular; urine thick and scanty; the "bruit" is the same. As he did not wish to remain in the hospital, but to return to his family, he was allowed so to do on the 19th; but information was brought to me in another week that he had died, after having spit a

(a) This gentleman was then physician to the Middlesex Hospital.

(b) These sounds, peculiar to bronchitis, are usually heard during inspiration; but where they are heard, as in the above instance, during expiration, it denotes intumescence or oedema of the whole mucous membrane of the bronchi, and is a much worse symptom than the former. This membrane is reflected from tube to tube, at their several bifurcations, just in the same manner that the skin, at the bases of the fingers, is reflected from the bottom of one phalanx to its adjoining phalanx, so that, whenever anyropy mucus is secreted from the membrane, it is driven upon this cedematous angle of the bronchus, and thus gives rise to these sounds, whilst the air is forced over them in expiration. I observed that it is a much more serious condition than rhonchus heard during inspiration, because the latter physical sign merely denotes slight irregularity in the bronchial surface from inflammation; whilst the former cannot occur without some effusion under, and thickening of, the membrane. I have frequently witnessed a sudden attack of suffocating dyspnoea supervene from this fierce irruption of bronchial oedema, and when it occurs in combination with cardiac disease, or with emphysema of the lungs, it frequently carries the patient off in a very few hours. The difficulty of breathing under such circumstances does not arise from any trouble to inspire, but from the inability to expire; the air cannot force its way out; so that the expirations are threefold more laboured and prolonged than are the inspirations.

large quantity of blood. Permission was readily granted to perform the *post-mortem* examination in twenty-four hours afterwards.

Thorax.—Pleuræ filled with citron-coloured serum, as well as the pericardium. Lungs not adherent, and healthy, except the whole lower lobe of the right, which was one mass of pulmonary apoplexy, cutting like damson cheese; there were also several isolated portions in its vicinity, and some few dispersed through the same lobe on the left side. (a) The heart was large; bead-like vegetations, or warts, were on the edge of the tricuspid valve; the left ventricle was not much increased in capacity, but a deposit of bone was found on that part of the mitral valve nearest the aorta, whilst, looking at it from its ventricular side, a thimble-like projection was seen, rendering altogether the aperture a mere chink, so that water only dribbled through. The semilunar valves were shaggy, with similar wart-like vegetations on their edges. Polypous clots were entangled in the cornæ calumnae.

Abdomen filled with the same kind of fluid as the pleuræ; some recent lymph gluing the diaphragm and liver together. The latter was large, with much congestion of the hepatic veins and biliary ducts; the congestion, however, was chiefly portal as we approached the surface of the organ. The kidneys presented a perfect specimen of "Bright's disease."

(To be continued.)

PROGRESS OF MEDICAL SCIENCE.

GUNSHOT WOUNDS.—A CLINICAL LECTURE BY PROFESSOR VILPRAU.

Gunshot wounds may interest the limbs or the body; we will first study them in the extremities. Of the abrasure of the surface of the limbs by shot we will say nothing, these wounds not presenting habitually any importance. They are said to be simple when the soft parts only have been injured; they are called compound when the bones, nerves, or vessels have suffered. Laceration of the nerves is a less severe complication than rupture of the vessels; and the latter has not so much gravity as fracture of the bones, unless, indeed, the divided arteries be of a large size. Fractures, complicated by ordinary wounds, have not by any means so formidable a character as those which are accompanied by gunshot wounds, on account of the destruction of tissues caused by the passage of the foreign body, the subsequent mortification, and the rupture of the bone into numerous fragments. We should also observe that the protracted suppuration which follows exposes the patient to the threefold peril—of purulent suffusion in the limb, absorption of pus, or fatal debility.

The wounds inflicted by firearms do not cause, in all parts of the body, fractures of equal gravity. The fracture of two bones in one part, the vicinity of a joint to the injured region, are most serious circumstances in the prognosis. A bone may be simply perforated by the bullet, or its surface grazed by the passage of shot, without

(a) This is one of those numerous proofs which we have of the true pathology of pulmonary apoplexy. A diseased and obstructed mitral valve on the one hand, and a consequent delay in the circulation of blood in the pulmonary veins on the other, invariably coexist in producing this morbid change. Portions of blood escape from the vessels the most remote from the heart, and the columns of inspired air force these extravasated portions from cell to cell, so that isolated masses of lung become solidified from such an escape of fluid into their texture, whilst the efforts of coughing dislodge other portions, and they are brought up with the expectoration. This judicious explanation of pulmonary apoplexy was first given and pointed out to me by our late physician, Dr. Watson, who speaks of it in his valuable Lectures on the Practice of Physic.

complete fracture; in these cases the peril is not great. Fractures of the inferior extremity are far more severe than those of the upper; the most dangerous of all are those of the thigh: the form of the bone, and the nature of its tissue, cause its fractures to be comminuted in almost every instance; besides, the deep situation of the bone renders purulent suffusion of the limb an accident of easy production.

In the treatment of gunshot wounds of the limbs the question of utmost importance to the practitioner is that of immediate or secondary amputation.

In order to solve that question as far as it is in his power, in each particular case, he should recollect that these wounds present three periods. The first, which lasts from twenty-four to thirty-six hours, is characterized by stupor, and is the result of the sudden disturbance occasioned in the nervous system by the wound received whilst the subject is in a high state of excitement. The second period is marked by inflammatory reaction, and is analogous to the stage of elimination of burns. The portions of tissues which have been in contact with the bullet are disorganized by the violence of its passage, and must be removed by the efforts of nature. During the first three days of this second period, swelling and inflammation are observed; they soon cause an ichorous and thin fluid to be secreted, and finally the formation of true pus.

Amputation should, if necessary, be performed during the period of stupor, and not during the inflammatory stage. The task of the surgeon is often very embarrassing, and it is most difficult in some cases to come to a decision, the deceptive hope of preserving the limb often inducing the practitioner to defer amputation until it is too late to save even life. Fractures of the thigh are, of all, the most difficult, appearing often not very serious, and yet melancholy experience informs us that almost invariably they require amputation. Such is, at least, the opinion of Larrey, Percy, &c. When these wounds are in the neighbourhood of a joint, the operation is imperatively commanded.

Between the first and second periods of gunshot wounds, hemorrhage or gangrene may take place: if abundant loss of blood follows immediately the stage of stupor, the limb should be removed at once. We will say the same if mortification shows itself, and we do not admit that the surgeon should wait for the limitation of the gangrene. In none of our cases have we used chloroform; we believe that it might increase in a dangerous degree the stupor of the nervous system already produced by the wounds.

(To be continued.)

APPOINTMENTS.—The Dean of the Faculty of Medicine, Professor Orfila, has been removed from his office by the Provisional Government, and Professor Bouillaud is appointed in his place. M. Orfila has rendered signal services to the School of Medicine, and his popularity is not diminished by the decision of Government: he received the warmest thanks of the faculty on his retirement. His successor, Professor Bouillaud—who was the first to acknowledge the obligations of the French medical profession to the late dean, and who moved the vote of thanks—was received by the pupils at first with some slight manifestations of displeasure, which were soon changed into unanimous applause when he explained, in a spirited address, that the honour now conferred upon him was not of his seeking, and that he had accepted of it only on condition that the choice of Government would be sanctioned by his colleagues and by the pupils of the school.

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

Successful Application of Electricity in the Cure of Diseases.—MM. Roggo, Manigrassi, and Pezzutti give the following cases as illustrative of the power of the galvanic current to remove certain diseases when other remedies had failed:—A physician, fifty-two years of age, originally of

sanguine temperament, but, in consequence of frequent illness, became lymphatic, had a scirrhus tumour of long standing near the inferior left rib. It had become adherent to the adjacent parts, causing lancinating pains on the corresponding side of the chest, and there was difficulty of lying down on this side. After various means had been employed without success, so that he was on the point of having it extirpated, he determined to try electricity. A galvanic pair of proportionate dimensions was applied to the tumour, and after four days its size was diminished, the adhesions destroyed, and the pains ceased. The patient shortly afterwards was entirely freed from his disease.—A child, eight years of age, had a strumous enlargement of the submaxillary gland, which was painful and adherent to the corresponding ramus of the lower jaw. It was totally cured in two months by the same means employed, as in the case of the physician.—A man, forty-five years of age, had, in consequence of hypertrophy of the liver and spleen, an old obstruction of the mesenteric glands, with disturbance of the digestive functions. He was cured by the same treatment after three months perseverance.—A patient, fifty years of age, was affected with a venereal eruption, which was attended with pain of the lower extremities; he had also a large node. Warm baths, mercurial fumigations, and many other means were employed without success. The galvanic couple was then applied. Five days afterwards all the morbid symptoms were relieved, the node had diminished one half, and had become mobile on every side. It continued to decrease, and when the report was closed the patient was nearly cured.

Rupture of the Fallopian Tube.—Mr. Russell presented to the Birmingham Pathological Society a specimen of ruptured Fallopian tube. He was sent for hastily, at half-past two P.M., to a young lady, about twenty-five, married four months. He found her in bed, in a state of great collapse; skin cold, pale, and bloodless, and she complained of intense pain in her bowels. She had been sick, and had had three purging stools; abdomen very tympanitic and tender. She had been in this state for two hours, without having been able to procure advice. He could obtain but little information from herself as to her previous state, and could not trace her having ever suffered any local pain. She did not think herself in the family way, as she had menstruated a fortnight previously, and had not experienced any symptom which would lead her to suppose herself pregnant. She referred her pain chiefly to the præcordia. Her pulse was scarcely perceptible. Fomentations, opium, ammonia, as she objected to brandy, were ordered. She somewhat recovered, but soon sank again, and died in great pain early on the following morning.—*Sectio Cadaveris.* On opening the abdomen, a quantity of thin fluid, tinged with blood, flowed out. At the lower part of the abdomen was a large clot, the size of a saucer, and on removing this the left Fallopian tube was found ruptured. The rupture was situated near the junction of the middle and inner third of the tube; the ruptured portion was distended by a mass of fibrine, about the size of a large hazel-nut, in which, however, no ovum was discoverable; the wall of the distended portion was very thin. The uterus was enlarged, and contained a deposit of decidua.

Blighted Fetus.—Mr. Hill presented to the society a blighted fetus, apparently about the fifth month, which was born thirty-six hours before a fully-developed healthy fetus. The patient, a middle-aged woman, was the mother of several children. It was thought at first that the shoulder presented; but upon a careful examination it was discovered to be the head of a child, apparently about four months. The membranes were ruptured, and the child expelled. The labour pains then subsided, and it was about thirty-six hours after that a second child of the ordinary size, and alive, was born. The placenta was double, and did not differ from that of an ordinary twin case.

Ice in Exhausting Diseases.—Ice taken internally

seems to be of great service in reviving powers fast sinking. The reaction it induces may prove curative in some cases, while in others, in which this is impossible, a marked temporary amelioration of the patient's state occurs. In the cases in question there is great atony and extenuation, and an extreme aversion to any food whatever, with or without a development of heat. A number of morbid states and organic lesions, having no other points in common, may induce this condition. Iced water does not succeed anything like so well as the administration of the ice in little lumps, which, by requiring time for their solution, ensure its gradual introduction. These impart great tone to the system, and revive the inclination for food in a remarkable manner.

The Treatment of Remittent and Intermittent Fevers.—Dr. Harris, of Bryan County, Georgia, U.S., remarks, in "The Southern Journal of Medicine and Pharmacy," that he has administered quinine in every stage of the paroxysm, and has never observed any unpleasant consequences, but, whenever any effect was visible, it was always beneficial. Some attention, however, must be paid to the condition of the system, as well as peculiar idiosyncrasies, not so much with a view to prevent unpleasant consequences, as to ensure its effects. When circumstances will permit, it is always preferable to prepare the system for it by depletion, either from the bowels or the circulation, and by counter-irritation if indicated; but these preparations are rather to be regarded as matters of convenience; and in moments of emergency we may combine the remedy with such others as may promote its sanative influence, and thus regulate its effects so as to ensure nearly all the advantage of previous preparation. Large doses of sulph. of quinine are more applicable to the remittent than to the intermittent form of fever, unless it be immediately preceding a paroxysm of the latter, or where small doses frequently repeated have failed to break in upon the morbid chain; the dose, however, is to be regulated by the urgency of the case. Two cases of intermittent yielded to a dose of fifteen grains administered an hour before the expected paroxysm, after having resisted the frequent repetition of two grains every two hours, during the pyrexia, for three or four weeks. This is the converse of Professor Dickson's observation; but the discordance is readily accounted for by those differences in idiosyncrasy which may render the system of one individual amenable to the repetition of gentle impressions only, while that of another may require decided and powerful influences. There is an analogy in one respect between quinine and opium which does not appear to have been noticed. Every one knows the difference in the effects of small doses of opium and what are called sedative doses; quinine, when exhibited in a single dose of from ten to twenty grains, does not develop that excitement consequent upon the exhibition of the same quantity in repeated one and two grain doses. It follows, therefore, that in the pyrexia the remedy, like opium, should be exhibited in full sedative doses. Quinine is the principal remedy in intermittent and remittent fever, and under circumstances favourable to its operation is an unfailing one, but it is by no means the panacea it has been supposed to be; it is not, singly, capable of curing fever in its complicated forms; on the contrary, its effects are materially promoted by adjuvants, such as calomel, tartarized antimony, morphine, and blisters, always of course taking into account any contraindication of either which may exist. The first of these adjuvant remedies is prescribed with a view to promote the secretions generally, which are always more or less interrupted in fever, as well as by its revulsive operation to divert and diffuse the nervous current reflected upon any particular organ; and the beneficial effects of quinine are particularly apparent when in combination with this article: in fact, they are mutually promotive of each other, and, where the event is desired, there is little doubt but that ptyalism may be accelerated by the combination. Tartarized antimony, where there is no irritation

of the primæ viæ, is a superior remedy, and if properly managed is perfectly safe; commencing with very minute doses—from 1-30th to 1-20th of a grain, and by gradually increasing it, so as to adapt it with the utmost facility to the peculiarities of a patient, besides avoiding any of the undue catharsis which sometimes follows its exhibition. In this way it may be alternated with quinine, and the effect is generally apparent in a cool, moist skin, and subsidence of vascular excitement. Morphia is best adapted in combination with the quinine during the pyrexia, or where the latter has occasioned wakefulness; and at the present day there appears to be much prejudice against blisters in fever. The French system of cupping and leeching has almost banished them from the list of remedial agents in fever. Local depletion is, like many other remedies, very good in its place, and, where it can be applied directly to the hyperemied or inflamed part, it subserves an excellent purpose by removing the offending matter; but in any other situation it is impossible that it can have any other than a revellent effect. Where the excitement is sufficient to prohibit the use of blisters, it is also sufficient to authorize depletion from the general circulation.

The Physiognomy of Yellow Fever.—Dr. P. H. Lewis says this is striking and remarkable. With some it throws a gloomy, melancholy shade over the countenance; with others the brow is furrowed, the lip compressed, and they frown defiance on all around. At other times it is so blended with a comic, lively expression of countenance as to give the patient a peculiar, variable, and singular appearance. Once displayed, no effort of the patient can dispel it; he may rise from his bed, laugh and talk with his friends, become exhilarated with wine, or joyous in anticipation of coming pleasures, but he cannot chase it away. There it sits enthroned upon the face, like the shade of a monster, smiling in contempt upon the efforts of the physician, mocking the assumed gaiety and levity of its victim. Nor is the eradle exempt from its visitations. Its gloomy, cheerless mantle is often placed on the infant brow, giving to it a sullen look not suited to its tender face. The symptoms attendant on this form of disease are very peculiar; for, during the first stages, there is less irritability of stomach and vomiting than in any febrile endemic of the State. The matter ejected from the stomach during the feverish stage most usually consists of the fluids received into that viscus; but if the irritability continues in the stage of calm, there is vomited a mucus containing particles of flocculi resembling bees' wings. If bile is vomited in the second stage, it constitutes good reason for questioning the character of the disease.

Propositions in Reference to Intermittent and Remittent Fever.—Dr. Harris maintains—1. That irritation, specific or common, is the proximate cause of all disease; and that it may or may not superinduce inflammation, according as the reflex function may be rendered by it comparatively active or inert. 2. That intermittent and remittent fevers are the results of a specific irritant impressing primarily the nervous system. 3. That the cold stage of fever is occasioned by the concentration and activity of the irritant at certain periods; and that reaction, or the hot stage, is developed by the consequent impressibility of the nervous system. 4. That the type of fever will be determined by the activity of the irritant, by the direction of the reflected irritation, and by the condition which may render certain organs obnoxious to irritation or inflammation. 5. That this irritant is, directly or indirectly, capable of modifying and rendering noxious the secretions, particularly the biliary secretion. 6. That, as in health the reflex function is a physiological law, so in disease it is a pathological one. 7. That all remedies address themselves, directly or indirectly, to this law, and affect the system favourably or unfavourably in disease, according as it shall establish, confirm, or divert a reflected current.

Rheumatic Inflammation of the Tunica Vaginalis Oculi.—The following case is related by Dr. S.

Jones, of Appling, Georgia:—A servant girl, fourteen years of age, of good constitution, and remarkably healthy, was, on the afternoon of the 6th of September last, stung by a hornet, on the first joint of the fore finger of the right hand; she did not complain of any pain in it until about eleven o'clock that night, when she had some fever, with considerable pain in the joint where she received the sting; the next day the pain was not so great as the night before. She had no fever until late in the afternoon; when her fever rose again, and with it the pain returned with redoubled violence; so exasperating was it, that she did not rest that night. The next morning the finger was swollen, and there was a painful spot on the instep of the right foot. Her mistress gave her about eight grains of calomel, and followed it in three hours with a dose of castor-oil, and applied alkaline poultices to the finger and foot; the medicine operated well, but afforded no relief. On the evening of the 9th, Dr. Jones found her with a hot dry skin; pulse about 95 and soft; tongue covered with a brown fur, and red on the tip and edges; the fore finger of the right hand swollen, stiff, exceedingly painful, and so tender that she could not bear it touched; a constant and excruciating pain in the right foot between the third and fourth metatarsal bones. This spot was not larger than a dollar; the foot was slightly swollen; the entire right side appeared to be affected; the spine was tender from the middle cervical to the middle lumbar vertebra. The bowels had been twice moved through the day; the stools were thin and watery. Ten grains each of calomel and Dover's powder were given, and a dose of castor-oil ordered the next morning, a blister the entire length of the spine, and if free of fever, two hours after she had taken the oil, to give her three grains of quinine every hour, until fifteen grains had been taken, as there was a perfect intermission in the fever every morning. On the 19th she was not much better; her fevers were not so high, nor her pain so excruciating, but her right eyeball projected at least half an inch; the cornea and iris were healthy in appearance, but vision was lost. The conjunctiva projected remarkably around the cornea and looked red; the eyelids were both swollen and red. The girl declared that she had not then, nor ever had, experienced the least pain in it. The spine on examination was found tender, and a blister was put on at once. The lids were scarified, a piece of linen kept moist with the mucilage of slippery elm or pith of sassafras to be kept constantly to the eye, and an anodyne taken. On examination the next morning at six o'clock, the conjunctiva was not so red as it was by candlelight, and it presented no traces of vascularity. The mucilage to be continued to the eye, leeches to the temples, and small doses of calomel and Dover's powder to be taken every six hours, the calomel to be withdrawn when the gums became sore; the blister had drawn well, and she had rested better than usual. On the 21st, symptoms much the same as the day before; she has been free of fever for the last twenty-four hours; treatment continued, and the bowels to be kept open with salts; an opiate at night, and after that day to discontinue the calomel, and give it only every other night; to renew the blister to the spine as soon as the first was well. On the 6th of October the eye had receded to its proper position; no pain in the finger or foot, but the joint of the finger on which the hornet stung her is stiff; general health improving. She is at this time in the enjoyment of good health.

Phlebitis of the Brain and Meninges in Puerperal Women.—According to Dr. F. M. Ducré, this affection in puerperal women is of rare occurrence, only five instances of it having occurred among 269 cases in which the head was examined after death. In one of these instances, the affection was not accompanied by any other cerebral disease; in the others, it occurred in combination with cerebral or meningeal inflammation. The first case was a woman, aged

nineteen, presenting the appearance and physical signs of phthisis, who was delivered of a male infant at the eighth month, and afterwards became affected with frequent pulse and a peculiar tremulous motion of the eyelids, lips, and tongue. At first there was no other symptom; but on the seventh day after delivery there was increase of the affection, with delirium, headache, and some convulsive movements of the limbs. On the ninth day the pulse and respiration were accelerated, jaws locked, tongue dry, articulation imperfect, but intelligence apparently unaffected. There was great feebleness of all the limbs, and nearly complete paralysis on left side. In a few hours the pulse fell to sixty, the respiration became slow and laboured; soon after she died. On dissection, the meninges and cerebello-hemispheres were healthy; but on section of the right side of the pons Varolii, and the cerebral and cerebellar peduncles of the same side, the vessels in the interior of these parts were found distended to the size of a large pin by firm dark clots, which, when extricated, appeared as dark brown cylinders of above a centimetre (nearly half an inch) in length. Around these the cerebral substance was of natural colour and consistency. The lungs were extensively tuberculated, and contained numerous caverns. On the right side of the uterus was found a vessel full of pus, surrounded by a slate-coloured induration of the substance of the organ, two millimetres (one line) in thickness.

The second case was that of a woman, aged twenty-five, who was delivered naturally, but soon after was seized with pains of the hypogastrium and limbs. These were followed by shivering, fetid diarrhoea, and colic pains. The milk was suppressed, and leech-bites on the abdomen supplicated. On the ninth day, the pains being mitigated, she had severe cough with crepitant rale at the posterior and lateral parts of the right lung. From the fourteenth to the seventeenth day the right buttock swelled, and became the seat of lancinating pain; a large quantity of pus, with fetid gases and sloughs of cellular tissue, was evacuated by incision. There had been watchfulness and delirium, with gradually increasing loss of intelligence, and moderate cephalalgia. She died on the twenty-seventh day. The pulse varied between 108 and 140, and the respiration between 28 and 48. On dissection, there was considerable subarachnoid effusion; the veins of the pia mater, on the convexity of the right hemisphere, were filled with firm, friable, adherent clots, of a whitish colour, extending in some places into the cortical substance, and being darker in colour there and in the anfractuosités. The cortical substance was somewhat softened, and of a reddish colour; white cerebral substance not altered. The lungs contained some tubercles, and the lower lobe of the right lung was the seat of lobular pneumonia; several of the vessels were filled with partially softened clots. The venous sinuses and lymphatics of the uterus were filled with pus; the broad ligaments were also infiltrated with pus. The cellular tissue between the sacrum and the left great trochanter was gangrenous and full of pus. The three other cases presented symptoms and morbid changes similar to those just described.

Aneurism of the Arteria Innominate spon- taneously cured.—*Obturation of the Left Common Carotid Artery.*—Dr. Wishart relates in "The Monthly Journal" the case of a labourer, of fair complexion, who complained of having caught a severe cold while at work, by which he had lost his voice. On placing the fingers over the clavicles, a most distinct murmur was perceived, extending also up the neck. Over the superior part of the sternum, a strong impulse, accompanied with a bruit, was felt, synchronous with the stroke of the heart. The pulse in the right wrist was barely perceptible. These symptoms indicated the existence of an aneurism. Along with it, the man had acute bronchitis, for which he was more immediately treated. His loss of voice, cough, and dyspnoea still continuing, he was admitted into Middlesex Hospital on the

27th of June, and discharged the beginning of August. On the 17th of this month, his symptoms were great dyspnoea, suffocating cough, inability to raise his voice above a whisper, moist râles over both sides of the chest, a strong impulse felt over the top of the sternum, and the pulse in the right wrist not perceptible. The treatment was directed towards the disease of the lungs, and he was kept on very low diet. He continued much in the above state for a month, after which he gradually improved. He was strictly confined to the house, and took small doses of acetate of lead daily, for several weeks. There was then only a very slight impulse to be felt over the sternum. He had had for some time back repeated attacks of hæmoptysis, connected with the state of his lungs, which were then in an advanced stage of phthisis. He lingered on in much the same condition until the middle of February, 1845, when he became much worse, and died on the 21st. A month before his death no pulse could be felt in either of the carotids. On opening the body, thirty-six hours after death, both lungs were found full of taberculous cavities. The aneurism, larger than a duck's egg, involved the whole of the arteria innominata. On laying open the aorta, the aneurism was found spontaneously cured, the innominata being entirely obliterated. The tunics of the vessel were dilated in all directions into an oval pouch, which was completely and accurately filled by compact fibrine, deposited layer after layer in such a manner as to fill the interior to the level of the aorta. The orifice of the innominata was dilated at this part to the diameter of a crown-piece, and the arch of the aorta was also somewhat expanded, in the coats of which there was an extensive deposit of atheromatous matter. The fibrine occupied a small extent of the interior of the aorta, so as completely to cover up the orifice of the carotid artery. This vessel, with the right carotid and subclavian, was entirely blocked up, and the circulation to the brain could only have existed in any considerable stream through the left vertebral artery, both it and the subclavian being somewhat enlarged in calibre. The circulation to the right superior extremity must have been carried on principally by anastomosis between the branches of the thyroid axis and vertebral arteries of the left with those of the right side. The right, common carotid artery was slightly contracted, and filled with fibrine for about four inches above the aneurism. The right subclavian, and the branches of the thyroid axis, vertebral artery, &c., were pervious, and of their usual calibre. The aneurismal tumour adhered firmly to the front and right side of the trachea, on which it pressed, and slightly diminished its size; the mucous membrane of this part of the tube was of a reddish-brown colour, and a few points about the size of pins' heads were raised, as if at one time the aneurism had showed a disposition to burst into the trachea. The pneumogastric nerve adhered closely to the coats of the aoe in front, and was considerably stretched.

Duration of Pregnancy in the Human Female and the Cow.—Dr. Lockwood, in "The Buffalo Medical Journal," gives the following tables as the result of his observations on this subject:—

IN WOMAN.		
Age.	Order of Pregnancies.	Duration of Pregnancy.
17	1st	270 days.
19	1st	272 "
30	1st	276 "
44	7th	284 "
IN THE COW.		
Number of Cases.	Duration of Pregnancy.	
56	Between 260 and 270 days.	
556	"	270 " 280 "
14	"	280 " 286 "
1	"	— " 290 "

APOTHECARIES' HALL.—Gentlemen admitted members on Thursday, March 2:—Edward Fitzwilliam Sankey, Dover; Arthur Robert Pedgrift, Loddon; John Evans, Sunderland; and Richard Marley.

REVIEWS.

Vision in Health and Disease: the Value of Glasses for its Restoration, and the Mischiefs caused by their Abuse. By ALFRED SMITH, F.R.S., Surgeon to the Bank of England, and Lecturer on Surgery, &c. Pp. 64. Price 1s. Moore, Thornthwaite, and Wood, Opticians, Newgate-street.

This small treatise contains four lectures delivered at the Central London Ophthalmic Hospital. The first lecture treats of the physiology of the eye, and the manner in which we obtain our knowledge of the form, distance, magnitude, height, position, relation, or the state of rest or motion of an object, of which we shall quote a few paragraphs.

USE OF DECOMPOSITION OF OPTIC NERVES.

"From the above facts we find that the inner part of each eye respectively sees that portion of the field which is not seen by the other eye. These remarks apparently militate against the views of physiologists, who dwell upon the importance of the doubleness of organs, though probably a compensation exists in the decomposition of the optic nerve. It is generally agreed by anatomists, that the outer parts of the two optic nerves pass to the brain without decomposition; but that the inner fibres pass over to the opposite side. Now, the two outer parts see completely the same object, and, therefore, if the inner portions of the nerve of each eye pass over to the opposite, a really double impression would be conveyed to the brain; that is to say, that the sum total of the field of vision would be duplicated in each side of the brain, where any farther combination might be effected."

SENSE OF MOTION.

"From what I have said of the functions of the eye, you will be prepared to ask by what means are these delicate angles known? and to this question I reply, that the angles are formed by the eyeball moving either downwards, upwards, inwards, or outwards, through the mechanism of the muscles. Now, these muscles, especially the internal rectus, are supplied by numerous nerves, and I can but think that it is by the consciousness of the action of the muscles through these nerves, that we know the angles which enable us mentally to obtain the measurements. Physiologists would reply that the third pair of nerves are nerves of motion, not of sense; but it appears to me that the idea of motive is obtained through the nerve of motion, and hence this pair of nerves would be nerves of distance and magnitude, besides their strictly motive power. This sense of distance and magnitude would not differ from our sense of other motions taking place in various parts of the body, though, perhaps, it forms one of the most exalted instances of this character. Besides the muscle of the eye, muscular movements of the hand, trunk, and other parts of the body have sometimes to be estimated by the brain."

ADJUSTMENT OF THE EYE TO DISTANCES.

"In reference to this adjustment, we may observe, without reference to minute forms, that the eye consists of the segments of two circles, united at the external edge of the cornea, and, moreover, we find that the cornea has a contractile power, which causes it to shrink when cut out from the eye. Now, if you watch the little images formed on the cornea by reflection, you will find that they are smaller when the eye looks at distant objects than when the eye regards near objects; consequently, the cornea becomes less convex, or has less refractive power, at that period. In conducting this experiment, you must take care that the comparison of the image is made on the same spot of the cornea, otherwise you may be deceived, inasmuch as the cornea is not a perfect segment of a sphere, but is probably an ellipsoid. From the above facts it is manifest that the form of the globe of the eye changes during the adjustment—an effect which may be readily produced by the ciliary processes becoming fuller of blood.

"Now, if the ciliary processes become fuller of

blood-pressure would be made in two directions: in the first place, pressure would be made outwards against the elastic spring of the cornea, and, perhaps, the ciliary muscle; and pressure would be made inwards, towards the centre of the vitreous body, which would produce a resistive force, having the tendency to carry the lens directly forwards, the cornea and back part of the sclerotic being either fixed or having a slight tendency to have their distance elongated.

"For adjustment to distant objects, the ciliary processes have only to discharge their blood, and thus the elastic force of the cornea would set upon the aqueous humour so as to produce a resistance which would carry back the lens, which is a really a passive operation, or one not requiring our own exertions."

"In the second lecture the various abnormal conditions of sight are considered, of which our author describes between thirty and forty distinct varieties. For lost sight, Mr. Smee strongly commends the use of false eyes; and the following extracts will illustrate this chapter:—

FALSE EYES.

"Great acuity is required in the adaptation of false eyes; but the artist so exactly imitates the colour of the sclerotic, which is whitish, bluish, or yellowish, the tinting of the iris, the size of the cornea, and centres it in so faultless a manner, that you must take care and not be deceived with the beauty of a false eye unwittingly, and afterwards find, to your astonishment, that the object of your choice ceaselessly puts by her soft and captivating eye in a little oblique way before retiring to rest. Do not think that I am in jest in recommending you to beware of a false eye, for I have just heard of a case where a fair lady was a false eye, which her husband never detected before marriage, and even up to the present time, when two years have elapsed, he has not discovered it. Before marriage she never dared tell him, and afterwards she feared to avow her concealment. I actually observed with a case, where a fair dame, having two eyes with irides of different colours, desired a false eye to cover the colour of that which she disapproved."

COLOURLESS VISION.

"White light should appear white, coloured light should appear of its normal colour; but instances occasionally occur where parties are unable to distinguish all the colours of the rainbow. Owing to visual defect, a person has missed a hole in a green coat with a piece of scarlet cloth, conceiving that it matched perfectly. Sir J. Herschel has ascertained, by examining with great accuracy a party so affected that the eye was acted upon by all the colours of the rainbow; and that, consequently, the disease must have its origin in the sensual organs being incompetent to distinguish the difference. This inability to distinguish colours might be called colourless vision. My excellent neighbour, Mr. Banton, the artist, informs me that he once met with a gentleman who, having perfect sight in all other respects, could not distinguish any colour, as colours only gave the idea to his mind of light and shade. Such a case is extreme and unusual; but had he been educated as an engraver, he, doubtless, would have greatly distinguished himself, as in that branch his defect would have been a benefit to him. I have also lately heard of a pupil who, on being desired to paint a green tree, made use of vermilion for the purpose, and was well pleased with his performance."

METHODS OF ADJUSTMENT.

"In my former lecture I entered minutely upon the consideration of the mode of adjusting the eye to vision, and mentioned that some little time was requisite to effect that change. I have now to mention that in some instances the adjustment is performed but feebly, and requires a much longer time for its performance; this, therefore, is a case of slowly adjusting sight. From physiological considerations we may infer that the adjustment to near objects takes place from the entry of blood into the ciliary body, and pathology shows that in feeble, weakly

states it takes place more imperfectly. Where slow adjustment exists, I generally find that quinine, iron, meat diet, fresh air, and exposure to the light of the sun, constitute the best remedies. It is an affection by no means uncommon.

"My optometer shows that it frequently happens that the power of adjustment either in one eye or in both takes place but partially, and even that this power may vary in the two eyes of the same individual. Sometimes this partial power is restricted to near objects, whilst distant objects are not perfectly seen. In other instances adjustment only takes place over a range more distant, whilst near objects are not perfectly seen; and, again, there are a third set of cases where the adjustment takes place in the middle part of the scale. These cases are important, because they are apt to be confounded with true short sight and long sight, which have for their origin a different cause. If we suppose four lines, one for normal adjustment, and the other three for abnormal, we shall be in a condition to understand how the range in both cases is contracted:—

Healthy adjustment	_____	
Near partial adjustment	_____	Far partial adjustment
Middle partial adjustment	_____	

These conditions are exactly similar to those of a camera obscura, which has its lens so fixed as not to allow the motions sufficient extent for the different adjustments. A fixed state of pupil does not interfere with adjustment, for I have found it to be quite perfect, or even slightly better than that of the other eye, when it has been universally adherent to the capsule of the lens.

"There are also cases, not so frequent as the last, where the faculty of adjustment to different distances is entirely lost or absent—a condition which has been called by the great Dr. Young immutability of sight. I have seen a few such cases at various times; but for all these conditions of imperfect vision, the unlucky patients consult rather the ironmonger, the pedlar, or other vendors of glasses, than the surgeon, who is rarely called in till the former worthies have rendered the case almost hopeless by improper glasses."

The third lecture specially considers the optical contrivances adapted to remedy the diseased conditions of vision.

THE VISUOMETER.

"The centre of each aperture of the frame should be exactly opposite to the axis of vision of its respective eye; and the adjustment of the exact centre of the glass to the optical centres is so important in practice, that I have contrived an instrument to measure the width accurately between these centres. It consists of two tubes, so arranged that they can play perfectly parallel, and admit of approximation and separation. At one extremity of each tube cups are fixed to fit the globe, and at the other a hole of about the one-eighth of an inch is left, through which vision is allowed. At the cup another aperture is made, as small as we can conveniently see through; and at the distant end a diameter is struck by a moving bar, which revolves on one tube, and plays into a revolving joint placed on the second tube, and from which the measurement can be read off to the one-twentieth of an inch. The apparatus requires to be made with considerable exactness, and care must be taken that all the parts are so firmly constructed that the motions of the tube are perfectly parallel.

"When we desire to measure the width of the eyes, the party has but to look through the tubes at any white surface; at that point where the two circles of light are most distinct the true width between the visual axes is indicated. This instrument, with even ordinary care, indicates the width with minuteness, and, considering the facility with which it can be made, and the little trouble required for its use, is an instrument, the employment of which we are not justified in neglecting in any case requiring the aid of glasses."

"I have called the instrument itself the visuometer, a term which may, perhaps, be objection-

able to the classic, because it is compounded of a Latin and a Greek root; though, in my opinion, it is preferable, on grounds which I need not now consider, to other names which I constructed from the Greek alone."

THE OPTOMETER.

"We frequently desire to alter the relation which exists between the power of the refracting humours and the distance of the retina; and for this purpose we employ lenses which magnify or diminish, or which, applied to the eye, lengthen or shorten its focal distance. Before any kind of spectacles are adopted which either magnify or diminish, it is very necessary that we should have a thorough knowledge of the optical properties of the eye the defects of which we seek to remedy by optical contrivances. To effect this object I have contrived an optometer, which should invariably be employed by the optician before spectacles are sold to the applicant. The instrument consists of a convex lens, to which a graduated scale is affixed, of such a length that convergent, parallel, and divergent rays may be brought within a reasonable scope, and thus the eye may be tested by it.

"To suit all cases of refraction, I employ a geometric series of lenses:—1 of 20, 2 of 10, 3 of 5, and 4 of 2½ inches focal length. The graduated bar is twelve inches long, and an adjusting plate is so contrived that a piece of small print may be inserted for examination. By calculation I have found the point at which vision should be most distinct for each case; and, if any deviation from that exists, a correction is required by some optical contrivance."

THE AMPLIFIER.

"It becomes practically a serious and important affair to get over the indistinctness of these reading-glasses; and by far the best mode with which I am acquainted is to place a large plano-convex lens in a tube about eight inches long, with its plane surface directed towards the object. The tube tapers to the ocular end, and has an aperture suitable for vision. The working men amuse themselves by calling these tubes ear-trumpets for the eye, because they fancy that they are somewhat of that form, but the name which I have assigned to the instrument is the amplifier."

CALOSCOPIC SPECTACLES.

"Short-sighted persons should have two pairs of spectacles, one to be used for near, the other for distant objects; and the glasses should be so arranged that the light from the object shall pass perpendicularly through the lens to the eye. Short-sighted glasses for reading should be directed towards a point about fifteen inches distant; for distant objects they should be on the same plane, or, to divide the error over every possible distance, a slight convergence may be allowed.

"These convergent spectacles I have before introduced to your notice under the term of caloscopic spectacles, and I believe that their extensive application will save the vision of hundreds. From my own experience, I should say that nearly two-thirds of all who use focal lengtheners, or concave glasses, practically employ but one eye, because their spectacles have been so made that they could only adjust one glass to the axis of vision. In the manufacture of these spectacles care should be taken that each glass converges equally to the part viewed; and for this purpose I have pointed out one or two contrivances, which I do not think it necessary to describe here. The necessity of this mode of arranging glasses must be immediately apparent if you look through the lens obliquely at a book; for in one position you will increase the length of the letters, and in the other you will separate them."

COLOURED GLASSES FOR HAY FEVER.

"For some years I have employed coloured glasses for that singular malady known under the name of hay fever. This curious disease is greatly aggravated by intense brightness of the sun, when combined with heat, and assisted by dust. Light will not cause the malady alone, heat will not produce it alone; but light and

heat appear to me to be the agents which operate most powerfully in producing it; and the presence of dust of every kind, such as the dust from the roads, the minute portions of chalk, or the pollen of flowers, much heightens the malady. You will find that a pair of dark-green spectacles will wonderfully alleviate the distressing symptoms which are incidental to this complaint. They should be worn only in the middle of the day, when the rays of the sun are unpleasantly powerful; and they should be studiously put aside whenever the sun is clouded."

In the fourth lecture, Mr. Smee treats of lights and their influence on vision, on which we shall quote paragraphs on the photometer and the arrangement of lights.

PHOTOMETER.

"To judge, at one time, of the relative illumination of any object or the power of any light, and, at a second, of the sensibility of our organs to equal lights, instruments are employed called photometers, of which several have at various times been devised. A rough one, which I have found useful at times, is made of gold leaf, so arranged between two pieces of glass that I could look through either one, two, three, four, or more layers. This instrument is perfectly abstract, as it marks the amount of an opaque body required to prevent the light from any object exciting the eye. In this country I do not remember to have observed that the direct light of the sun ever exceeded four layers, or somewhat less than the top of an inch in thickness.

"For abstract opacity I have also employed bromine; but it is such a substance for acting unpleasantly on the system, that I have almost entirely confined its use to experiments of comparison. I have a little flat cell made to hold it, and I find that half an inch of bromine is rather more than equal to two layers of gold leaf.

"Acting upon the idea of the bromine and gold-leaf photometers, I conceived the possibility of employing a piece of neutral-tint glass, the form of a wedge, a certain thickness of which should be equal to a certain thickness of these simple bodies; and by employing it we might be enabled to express the values of any light or any illuminated object by the value of the opacity of bromine or gold required to render it invisible."

ARRANGEMENT OF LIGHTS.

"The arrangement of lights is of considerable consequence. By the ordinary mode of proceeding we illuminate the ceiling and the walls of the room, and the part which ought to be properly lighted is generally completely in the shade. The light, from being vertical, passes with greatest readiness perpendicularly through the glass to the walls of the room, whilst those which attempt to pass obliquely to the table below are in great part reflected. To obviate this difficulty, it occurred to me that the light should be placed at about an angle of forty-five degrees if placed about the centre of the room, or, if placed near the ceiling, almost horizontal. In my own library I am using a star, with three fish-tail burners, so arranged that the gas passes out horizontally—a direction which causes the flame to assume a curve eminently calculated to illuminate the table. An enormous increase of light is obtained by these means; and chandeliers and other forms of lights are now sold upon this plan, at my instigation, by Mr. Smith, of Finsbury-pavement. From the very great superiority of the illuminating power obtained by this very simple arrangement, I feel but little doubt that it will be very generally adopted."

TESTIMONIAL TO MR. G. VARNELL, Demonstrator of Anatomy at the Royal Veterinary College.—The pupils of this institution, on Friday, the 3rd inst., presented to their demonstrator, Mr. G. Varnell, a testimonial expressive of their gratitude for the kind assistance they had at all times received from him while pursuing their anatomical studies, and the valuable information they had derived from his instructions. The testimonial consisted of a handsome gold watch and chain.

THE MEDICAL TIMES.

SATURDAY, MARCH 11, 1848.

DEATH AMONG DOCTORS.

"PHYSICIAN, CURE THYSELF," is a hard and unjust saying. It raises a test neither of the certitude of the science nor of the skill of the practitioner. Of all men we are the worst subjects of medical treatment. To have a "corpus vile" to experiment on is of as prime utility on the score of success to us, as of economy to the chemists. We know both too much and too little—too little to have certitude, and too much to allow an easy faith; and, with this psychological peculiarity against us, adding twenty-five per cent. to the chances of disease, we have the great physical disadvantage, that our health is always more neglected and more under par than that of any class in the community of equal standing. We are as heedless of disease as sailors of drowning. Habit hardens us into indifference, and the very propinquity of the danger shuts our eyes to the necessity of precautions. Who, while so liberal of his cautions to others, does so many imprudent things as the doctor? Who trifles more with incipient symptoms? Who neglects more minor maladies? Who more listlessly tolerates a deteriorating condition of health? Who perils more carelessly or handles more recklessly his own delicate mechanism? Yet, once struck down on the sickbed, who looks forward to the result more nervously, or weighs the resources of medicine less hopefully? We are, in fact, monuments of the truth that the most fixed opinions do not regulate conduct in other matters besides religion, and that the wisest men are more apt to follow the current examples they condemn than the best precepts they inculcate. There have been few prophets who have done so much credit to their powers of foreseeing or of wisdom as to escape the disasters they have foretold; and we, the best exponents of the laws of safety, incessantly falsifying the divine thing within us, are the easiest victims death make acquaintance with!

Ireland in most recent years, but particularly within the last, has offered us a striking illustration of a truth that must now seem commonplace. Dr. Gavin Milroy, who has recently recalled our attention to it in a letter lying before us, says:—

"The simple facts are these: that whereas the entire number of deaths among medical practitioners (about 2600 in all) in Ireland, for the four years preceding 1847, was 252, and, consequently, the average was 62 per annum; and whereas, out of these 252, there were 76 deaths from fever—an average of 19 per annum; no fewer than 191 have died during the past year, and of these, 123 from fever alone. One in about every fourteen of the medical men in Ireland swept off in the course of a single year!—a rate of mortality much exceeding that in the unhealthiest climates in the world. The majority, too, of these men were between twenty-five and fifty years of age—the very prime of life, when the physical and mental energies are in their full development. That the fatal disease was caught in almost every instance from attendance upon the sick, is just what we might expect; nor will any one wonder at the frequency of this result if he will for a moment realize to his mind the condition of a man, worn out, it may be, at the time with fatigue and anxiety, visiting the wretched inmates of an Irish hovel—the very focus of destitution and filth, even in the best

"of times. I verily believe that there is not a spot on the face of the wide world where medical practitioners have to undergo such exhausting and unremunerative toil, and are exposed to greater danger in the discharge of their holy mission—that of administering to the sick—than in many of the districts of Ireland when fever is epidemic through the land. Not to allude to other painful circumstances in their position, I will only mention that the distance between their residences is sometimes so great that, when one of our brethren has been overtaken himself with the pestilence, he has actually died without having received any professional attendance!"

The mind sickens into melancholy or misanthropy, or worse, before so revolting a picture of human infelicity. A decimation in one year of Irish medical practitioners! In some districts, where fever may have been more rife or fatal, more than a decimation! A bloody battle deciding the fate of empires, and whose murderous doings are the theme of panegyric to poets and of horror to philanthropists, is not nearly so fatal! With the doctor, too, there is no excitement of passion or pride—no hope of glory—no expectation of distinction or promotion—no booty, nor bulletins, nor decorations. He dies the unhonoured soldier of humanity—the uncanonised martyr of applied science! A gentleman tenderly reared—with hopes high as the best of our's—classically educated—his mind full of the wisdom of past ages—his heart expanding with the usual benevolence of the unspoiled man—he perishes in distributing the lights of a science which is life and health to the diseased multitudes around him—distributed, too, for an unworthy "hire" that bankrupts his comforts and much of his uses during the best part of life! Disappearing in some obscure region of a western province, all we know of the scholar, the gentleman, and the hero is, that he is No.—of one hundred and ninety-one items of professional humanity who met a hasty death somewhere in Ireland in the year 1847! The cold public hears of it as of an incident in antediluvian history; yet, unknown and unthought of in the inverse proportion of his usefulness, there is one, or perhaps more, to whom the death of this unconsidered man is as the passing away of a world. The funeral, with its ambitiously mean pageant, is often the first act of a domestic drama thus uncurtained for us by Dr. Milroy:—

"From the inquiries of Drs. Cusack and Stokes we learn that, in a large proportion of the deaths of dispensary medical officers in Ireland, their widows and children have been left in the most destitute condition. Let any one read the report of the medical committee in Dublin appointed to distribute the sum of £600, generously granted by the 'London Ladies' Relief Association,' among the families of those medical practitioners who have fallen victims to the prevailing sickness, and then say if he does not feel his heart burn within him to do something to mitigate such distress. Take, for example, such cases as these:—'A widow, far advanced in pregnancy, left with nine children, the eldest of whom is only eleven years of age, without any means of support.'—'The children, ten in number (no widow), of Dr. —, left without any provision, except a trifling salary which the two elder boys have from petty situations.' And so runs this detail of misery and suffering; the whole number of cases among which the above sum was distributed being twenty-two, and among these were no fewer than seventeen widows and ninety-four children.

"Now, the question that I would put to the profession in every part of the United Kingdom is—Ought we not, as a body, to inquire into this truly melancholy condition of the orphaned fa-

milies of so many of our brethren, in order that steps may be taken to afford them some temporary relief in the hour of affliction? There is a 'Benevolent-Fund Society' in Dublin, presided over and conducted by the leading physicians and surgeons in Ireland, the object of which is to relieve medical men under severe and urgent distress, occasioned by sickness, accident, or any other calamity; but the means at their disposal are utterly inadequate for the end in view. This society might be made the almoners of our general bounty; and, from the exact acquaintance which its members have of all who have most claim upon our sympathy, we should have the satisfaction of knowing that the funds committed to their care would be faithfully and judiciously applied."

Hopeless evil!—and still more hopeless cure! There is no balm in Gilead, no help in medicine—as now we have it—for the woes that, Lazarus-like, are thus brought to lie outside the professional gate. The beggar comes to beggars whose whole affluence is kindred-bred but useless sympathy. The munificence of our medical charities makes and keeps the belated donors paupers; and between free hospitals, cheap unions, and advice-gratis consultations, the destitute orphan and unprovided-for widow, the calamity of to-day for professional Ireland, is the calamity of to-morrow for professional England!

THE NEW REFORM.

In the plan, as published by us a fortnight ago, there was a mistake, as we anticipated, on one point; we now correct it. Under Section 4 the text should run thus:—

"That those persons shall be entitled to be registered as surgeons who shall have been admitted as fellows or members by the Royal College of Surgeons. *That the members of the College of Surgeons who dispense medicines, or supply medicines to their patients, shall be required to enrol themselves in the College of General Practitioners, and to be registered as surgeons and general practitioners;* and, after the passing of the act, members of the Royal College of Surgeons shall not be registered as surgeons unless they be also admitted as members of the Royal College of General Practitioners, and registered both as surgeons and general practitioners."

This correction is the more necessary, as a contemporary (the *Lancet*), in subsequently republishing the plan from our columns (without acknowledgment), omitted our statement as to a possible inaccuracy. Our readers will observe that the difference is important.

THE POOR-LAW CONVENTION.

THE Committee has continued, as usual, holding its weekly meetings; and the attendance has continued to be very full. Matters of considerable importance have come under discussion; but until the resolutions of Lord Ashley are disposed of by Parliament, before which they are expected to come on next Tuesday evening, it is obvious that a final decision, as to the course of action to be pursued, would be impolitic. Interviews with the Colleges of Physicians and Surgeons, the Society of Apothecaries, the Sanitary Commission, and Lord Ashley, have been held; and a deputation, there is no doubt, will speedily wait on Sir George Grey and Mr. Buller.

The following gentlemen attended the Committee on Thursday:—Dr. Hodgkin; Messrs. Lobb, Vallance, Lord, Bottomley, Ross, Cantrell, Peter Martin, Boulger, Stedman, Clifton, Mitchell, Barnett, Liddle, and the Hon. Secretary. Several of these came considerable distances from the country.

PROFESSIONAL WRONGS AND THEIR REMEDY.

In whatever country an educated medical profession has existed, its labours, philanthropy, and usefulness have always been of the highest order. The civilized nations of antiquity gave to those who excelled in the healing art the first honours; while kingdoms upon whom the light of science had feebly dawned rendered a grateful homage to medicine, and elevated its most renowned disciples to the rank of gods. While the efficacy of the healing art has in no degree diminished, and while men are in as much need as ever of its assistance, they have ceased to award to its disciples those honours to which the ancients considered them entitled.

The nineteenth century presents to our view the singular spectacle of members of the medical profession struggling to obtain that just position to which their learning, their talents, and their usefulness entitle them, and statesmen, in name the patrons of science, giving to them a doubtful approbation and support. How the spirit of the times was changed it is not our province now at length to inquire, but sad experience tells us that they are altered; so that, while men are ready to acknowledge the benevolence of the profession, they are very backward in rewarding its efforts. These remarks especially apply to general practitioners—a single class, it is true, of the profession, but the one which contains nine-tenths of its members. These are they who are employed as medical officers in the public services, in the parishes of the empire, and as the ordinary attendants of the middle and lower classes of society.

If we turn our attention to the surgeons in the army, we find that they are, of all officers, the most unjustly treated by the Government. This cannot arise from inferiority of education, or from their services in warfare being of little value. True, it is not their province to plan a battle, to manœuvre an army, or to command a battalion; but to restore to health and usefulness those who have been injured by the assaults of the enemy. To their country such services are of inestimable value, as they save many useful lives and a large expenditure of public money. Yet, within the last few months, when honours were awarded to the medical officers who served in the Peninsular wars, not a single decoration was considered necessary for any one of the army surgeons. Even to this day Guthrie remains without a title and without a riband, though he has toiled in numerous battles, and enriched military surgery by his literary productions.

In the navy, the medical officers experience, if possible, still greater neglect and insult. The assistant-surgeons are compelled to companion with boys in the gunroom—to eat at the same table, to study amid their noise; at night to swing in hammocks, like men before the mast. It would seem as if the Government had but one object in view—that of curbing their spirits and shackling their minds; nor has there been any concern exhibited to remedy these grievances, though the press has been loud in condemning them.

If it were possible to find an excuse for these insults to the profession, men in office might, perhaps, plead antiquity as their authority; this, however, will not avail them when a disregard to the profession is manifested in recent acts of the Government. Lord Morpeth has, within the last few days, introduced into the House of Commons a new bill for the preservation of the pub-

lic health, in which no special mention is made of any medical officer whose duty it is to carry out those measures which have for their object the discovery of the causes of disease, and the means of their removal. Most of the apostles of Sanitary Reform are to be found amongst the practitioners of medicine, and they have furnished the Government with those facts which have been made the basis of the bill now before Parliament. Here their labours are not acknowledged, nor is there any prospect for themselves or the other members of their profession obtaining official posts should this bill become law. Medical men have a right to expect honourable and remunerative situations for having laboured when there was no reward in view. It is very doubtful, however, whether they will obtain any employment under the new bill, though Lord Morpeth would not admit that the members of the medical profession were slighted by its provisions. The bill, he would have us understand, gave power to the Treasury of appointing such a number of superintending inspectors as might be thought fit, and, from the nature of the thing, a considerable number of them ought to consist of medical men, or *engineers*, as circumstances might require. Then the bill gave power to the local boards to appoint officers to carry out the provisions of the bill who *might be* medical men. But why, in the name of justice and common sense, is it left a matter of doubt? A pretty spectacle, truly, for engineers and lawyers to become the paid officers of a board of health, to the exclusion of men who, from their education and employment, are most conversant with all the business relating to sanitary reform.

The same disregard of the interests of the members of the profession is manifested under the poor-law system of medical relief. The guardians of unions are allowed to peril the lives and health of paupers, by refusing to pay an equitable sum for their attendance in seasons of bodily affliction. A burst of popular and professional indignation, however, has smitten this fabric, which injustice and tyranny combined to erect, and it now totters to its fall.

But is there not a cause that a profession—whose education is the most liberal, whose labours are the most important, whose influence is the most extensive—should be so unjustly treated? There is; and we view it as consisting in a defective medical polity. The profession has been misgoverned by corporations steeped to the lips in selfishness; for, while they sell their diplomas at a costly price, they afford no protection to the majority who possess them. The oppressions to which we have adverted are felt only by one class—the general practitioners—and these are the unincorporated. The two London colleges consider it their interest to keep them "subordinates." The College of Physicians was established for "pures," and it has watched over the interests of those who form its corporation. The College of Surgeons is also a college of "pures;" and need we tell the profession that all its actions prove that it is only the interests of them it seeks? A most unjust thing it is that this pure college should be supported by extracting money from the pockets of those upon whom it confers no corporate privileges and no professional protection.

These are the things the general practitioners require to give them that importance in the eyes of the Government and people to which they are entitled. It is a matter of satisfaction

tion to us to know that there is a prospect of a new incorporation being speedily brought into existence. Its enemies will endeavour to cripple it at its birth; but, judging from what has been stated in reference to its constitution, we think that it will confer on the general practitioners that which they have hitherto not possessed as a body—a name; it will consolidate their energies, watch over their interests, and shield them from many of those oppressions to which they have been hitherto exposed. The old colleges have treated the general practitioners as an "inferior grade," and the Government has, in consequence, thought them only worthy scurvy treatment and small pay. The new college, if properly constituted, will wipe out the stigma.

THE COLLEGE OF PHYSICIANS.

We understand that a deputation from the Provincial Medical and Surgical Association had an interview recently with the authorities of the College of Physicians, and expressed a very favourable opinion of the new scheme of Medical Reform.

EVIDENCE TAKEN BEFORE THE SELECT COMMITTEE ON MEDICAL LEGISLATION.

(Continued from page 395.)

(John Ayrton Paris, Esq., M.D., President of the Royal College of Physicians, London, called in, and Examined.)

MODE OF REGISTRATION.—The classes should be physicians, surgeons, and general practitioners: general practitioners being persons with the double qualification of surgeon and apothecary, and licensed by competent authority. General practitioners should have a diploma from the College of Surgeons, and at the same time have testimonials from the Apothecaries' Company. In order that the registration should be conducive to the public good, I would recommend that each corporate body should send to the Secretary of State annually a list of their members. The College of Physicians will undertake, without any expense to the members of the profession, to secure a perfect registration, so far as they are concerned; and no doubt the College of Surgeons are equally willing to do the same, and also the Apothecaries' Company; the three lists might then be published under the authority of the Government, if you please, and there is the registration.

AN ANNUAL TAX AN ANNUAL BORE.—Clause 6, which contemplates an annual tax for the certificate, is in every way objectionable; it is an *ex post facto* law; we have already paid very heavy fees in the form of stamps for the power of practising, which we supposed we held for life; and now we are called upon to pay an additional fee for the right that we have so long enjoyed, and for which we have already paid. Clause 6 renders an annual application necessary, as well as an annual payment, for the renewal of the right to practise, and there is a penalty if you do not apply for a certificate. As regards the feeling of the profession generally upon that clause making it penal to practise in this country without an annual licence, for which a tax is to be paid and a fresh annual application made, I think that there is but one opinion; however medical men may differ upon other points, there is but one opinion upon that, viz., that it is an extremely unjust and extremely unfair measure.

SECRETARY OF STATE NOT A PROPER PERSON TO REGULATE MEDICAL EDUCATION.—I am quite certain that that uniformity of qualification can never be attained by regulations issued alone by the Secretary of State; I think he is not likely to be a judge on the subject himself; he must, therefore, be entirely dependent upon the opinion and advice of other irresponsible persons. I do not think that will give such security to the public and to the profession as is now given by

licences granted to persons by members of their own profession, in the face of the public, who are responsible and competent to form an opinion. The Secretary of State, acting under advice unknown, or, if known, possibly not possessing the confidence of the public, would not be such a protection to the public interest as the licences now granted by the medical bodies acting in the face of the public. I would observe that the registration should be nothing more than a record of existing qualifications; it should give to no person any power which he did not previously possess; it should be merely a record of what the qualification of the individual is, and nothing more. With regard to the registrars themselves, it strikes me that they are intrusted with powers to judge and decide upon matters which would render them very responsible persons indeed. I can hardly suppose that the registrars would be capable of deciding certain subtle and nice questions which must necessarily come before them with reference to qualification; numerous questions must arise which I apprehend the registrars would be incapable of deciding, and to whom it should not be left for decision.

PHYSICIANS' FEES HONORARY.—Clauses 11 and 12, which gave to physicians the right, which they have not heretofore had, of recovering payment of charges for their attendance, we object to very much; we consider that the physician would, under those clauses, be converted into a tradesman; we should feel that we had lost caste by allowing those clauses to pass. As relates to physicians, we wish to stand on the same footing as members of the bar, receiving an *honorarium*, but without having a right of charge. Speaking for my profession, I am sure that the feeling is general among physicians in that respect. I think that they would consider the transference to them of this power of charge for work done as inconsistent with their position as members of a learned profession.

STRONG OPINION AGAINST THE BILL.—I have gone through many of the clauses of the bill, but, taking it as a whole, I think that it is destructive of the respectability of the profession; that is my decided opinion; and, if destructive of the respectability of the profession, the interest of the public in the result would be most seriously damaged. I am satisfied that I am now representing the general feeling of my part of the profession—of the College of Physicians of England.

PENALTIES AGAIN.—There now exists a real and effectual legal prohibition to persons to practise medicine without our licence. The prohibition is not really carried into effect; we are not in the habit of prosecuting all who practise without our licence.

DR. HARRISON'S PROSECUTION BY THE COLLEGE.—The last prosecution was the prosecution of Dr. Harrison, who is now dead; he was prosecuted for practising as a physician without authority. I have some difficulty in saying how long ago it was, but twelve years, perhaps. That was within the seven miles' circle. How long it is since any prosecution has been instituted against any party for practising beyond that circle without authority I do not remember; I know that there are cases upon record. The effect which our privileges produced depends upon public opinion, and not upon the penal part of the law; there is no doubt of that. I do not know that the doing away of penalties would very much destroy the salutary influence of the college; we depend very much upon public opinion. Without having the power, however, of prosecuting parties for penalties, the necessity of coming to our college is superseded at once, because no physician will take the trouble to come to our college when he obtains all he can require without it; I apprehend that the effect of this bill would be to annihilate our college; the bricks and mortar would remain, but nothing else.

DR. PARIS FURNISHED.—With reference to Clause 9, which does away with the penalties, restrictions, and prohibitions, I acknowledge to

be virtually obsolete, inasmuch as it is twelve or fifteen years since any person has been prosecuted within the circle of seven miles, and I do not know when a prosecution has been instituted in any part of England beyond the circle of seven miles; I, therefore, consider the penalties to which the 9th clause relates as already virtually abrogated. If they are virtually abrogated, no very ruinous consequence can follow from legally abrogating them. In that case, then, the first ground taken in this petition is abandoned; the words are, "That by Clause 9 the charter of the College of Physicians will be in great part, if not wholly, abrogated, and the college superseded in all its most important functions;" the objection to Clause 9 must be considered as withdrawn; but, supposing that those laws were abrogated, the moral influence of the college would still remain.

THE HEALING WATER OF BETHESDA.—The legal effect of our withdrawal of the licence from a person who should practise irregularly, like the gentleman who invented water from the Pool of Bethesda, would be to make him liable to penalties; if he continued to practise, we might prosecute him. But we have not done so. So that the effect of our censorship is, after all, a moral effect; it has arisen from the unwillingness of gentlemen to expose themselves to the censure of so respectable a body as the College of Physicians. If the legal privileges which we now have were taken away, the moral effect would remain.

FUDGE DISTINCTIONS.—The distinction can be defended which is made between persons practising within seven miles of London and persons practising throughout the rest of the country, and why a different rule should be imposed upon the man who practises at Chelsea and the man who practises at Norwich. Such is the present law. It appears to me to be reasonable; I think that a higher order of physicians should be secured for the metropolis; that has always worked very well, and it has preserved very much the dignity of the profession. In many parts of the country it is hardly to be expected that persons can be educated to the same extent that they are for metropolitan practice; you would not be able to secure the class of physicians for the remote provinces, suppose you equalized the character of their education; but, however, the fact is now that the same examination takes place for extra-licentiates (as they are called) as for licentiates. I do not conceive that the superiority and dignity of the profession in the metropolis are sufficiently explained, and would be always secured, by the circumstance that the greater prizes for eminent men must always be there; it is not the greatness of the prizes which talent and learning obtain in the metropolis, than any rule respecting a circle of seven miles, which has caused the London circle to draw to it the most eminent medical men in the kingdom. I conceive, then, that the cause of the superiority of the first class of medical men in London is that rule respecting the circle of seven miles.

FUNCTIONS OF GENERAL PRACTITIONERS.—The general practitioner practises in medical cases and, to a certain degree, in surgical cases. He does, in fact, all that the physician does and all that the surgeon does, but in a way generally not quite equal to the way in which the physician or the surgeon would do it; he treats medical and surgical cases to a certain extent. As regards the inferiority of the general practitioner, the preliminary education I apprehend is different. I apprehend that the education of a physician and the education of a general practitioner differ very considerably, and that the skill of the physician depends very much upon the preliminary education which he has received. I hold that the previous intellectual training through which a portion of the profession goes tends to add very much to that medical skill. If that be so, it is probable that a certain portion of those who devote themselves to medical science will also exert themselves with a view to obtain that preliminary education, if it be found by experience that a liberal education is the best

for medical science; it is probable that a certain portion who have the means will always endeavour to obtain that liberal education. They could not now do it if they had not the means of obtaining such an education. The point of dignity would be saved by a little difference of arrangement in the schedule, by putting three alphabetical lists: one of physicians, and one of surgeons, and one of general practitioners; that would be some improvement, no doubt. Merely dividing the list into three portions would remove one objection. The great objection entertained by myself and my college is to the examination under the authority of a gentleman almost necessarily ignorant of the profession, aided by a person either unknown to the profession, or without the confidence of the world.

MODE OF REGISTRATION.—I have stated, as our petition signed by myself and the censors also states, that I have no objection to a system of registration; I conceive that a registration, made alphabetically by each of the Royal Colleges, and by the Society of Apothecaries, as far as England is concerned, might interchangeably be subjected to the registrar-general, for example, or some other public functionary, and published in one general printed form, and remitted to the municipal authorities throughout England and Wales, and might be sold at a cheap price, thereby affording to the public authorities on the one hand, and to the great mass of the people, on the other, a ready access, so that they may know whether an individual residing in their particular locality be or be not registered in one of the three great divisions of the profession; such a plan of registration would answer every purpose; it would be necessary, also, that Oxford and Cambridge should send an account of the graduates passed there; and such lists respectively should be inserted, in the order of their dates, in the general list to be prepared by the registrar-general.

(To be continued.)

GOSSIP OF THE WEEK.

NAVAL APPOINTMENTS.—Surgeon: Robert Anderson, to the *Investigation*.—Acting Surgeons: Edward Adams, to the *Enterprize*; Thomas Littleton, to the *Vernon*.—Assistant-Surgeons: Henry Mathews, to the *Investigation*; William Dunbar, to the *Andromache*.—Acting Assistant-Surgeons: Robert C. Scott and John Murphy, to the *Vernon*.—Assistant-Surgeons:—William Ross, confirmed to the *Calliope*; Charles F. Williams, confirmed to the *Locust*; John A. Corbett, confirmed to the *Pluto*; Edward D. Auvergne, confirmed to the *Linnet*; William Evans (b), to the *Ganges*.—John Henry King dispensing-assistant, to the Royal Marine Infirmary, Woolwich.

ROYAL COLLEGE OF SURGEONS.—Gentlemen admitted members on the 3rd inst., viz.:—Messrs. J. H. Bennett, R. Turton, J. W. Cleave, T. R. B. Isaac, E. F. Sankey, E. B. Gaylard, G. Dunn, J. L. V. Gregory, G. H. Macnamara, and J. G. Wilson.

KING'S COLLEGE HOSPITAL.—Tuesday se'enight the annual general meeting of the governors and directors of the above charity was held at the board-room, Portugal-street, Lincoln's-inn, Mr. J. F. Twemlow in the chair. The report stated that the expenditure only exceeded the ordinary income by £47. The number of patients admitted during the year was 1253, exclusive of 106 remaining in the house on the 31st of December. The out-patients, in the course of the same period, numbered 17,901, being a very considerable increase over that of any previous year. The permanent fund of the hospital had been augmented by the munificent legacy of £1000 from the late Miss Colyer, of Farningham, Kent, and £50 from the late Mr. W. T. Praed. It was mentioned that the charity was still in debt about £200.

The election of an honorary surgeon to the North Dispensary, Liverpool, took place on Monday. Three candidates were nominated, Messrs. Whittle, Alanson, and Paterson. At

the close of the poll the voting was announced to be as follows:—Mr. Whittle, 99; Mr. Alanson, 55; Mr. Paterson, 54. Mr. Whittle was of course declared duly elected.

THE MEDICAL SOCIETY.—The annual oration was delivered on Tuesday, and the Fotheragillian medal awarded to Dr. Lever.

Mr. Charles Dixon has given £500 to the Brompton Hospital for consumption.

INTERESTING TO THE MEDICAL PROFESSION.—An action was brought in the Bath County Court by Mr. Sprague, medical agent, against Woodward, for the recovery of £20, viz., the balance of a sum of £25 due for work and labour done as a medical agent. The defendant formerly practised as a surgeon in Cambridgeshire, but eventually removed to Bath, into which city he was introduced by the plaintiff. There a misunderstanding arose between the parties, in consequence of Mr. Sprague refusing to take a bill of the defendant, who subsequently objected paying at all, and in consequence the present action was brought. In consequence of the original agreement between the parties being unstamped, the original sum was not recovered, but the judge awarded to the plaintiff the sum of £13, to be paid in a month. Mr. Fred. Woodward, it was stated, had been in the naval service of the East India Company, but subsequently it was discovered that no such person had ever been employed by the Company as a naval medical officer; and the name is not enrolled in the books of the Apothecaries' Company as a licentiate.

ALLEGED DEATH FROM IMPROPER MEDICAL TREATMENT.—On Friday an inquest was held on the body of Mrs. Ann Davies, the wife of a labourer, residing in Ashton-street, Toxteth-park. About seven weeks ago the deceased was taken ill, and, on the following day, the husband having obtained a note, Mr. Hobson, one of the surgeons of the South Dispensary, was called in. Mr. Newton, another surgeon connected with the same institution, subsequently lent his services. Mr. Hobson prescribed medicine, and, in about a fortnight afterwards, deceased exhibited symptoms of salivation. Her face swelled, and the left side of it was quite eaten away. She died yesterday week. Mr. Hobson burned in deceased's house the first prescription which he had written. Rumours were rife in the neighbourhood that the deceased had been improperly treated by the surgeons who attended her. Hence the inquest. Mr. Archer, surgeon of the Borough Gaol, who had, under the coroner's warrant, made a post-mortem examination of the body, stated, that the woman had died from *cancer oris*, cancer of the mouth, a disease which, though generally confined to infants, was sometimes found in adults. He did not think that any mercury had been administered to produce the diseased appearances which he saw, and he was of opinion that, throughout the whole case, the patient had been judiciously treated. Mr. Wm. Gilmour, the apothecary of the institution, proved that no mercury was contained in the prescriptions which he had prepared for the deceased. The medicines, which he named, met Mr. Archer's approval. The jury brought in a verdict of "Died by the visitation of God." In the course of the inquest Mr. Appleby brought an incidental charge against the medical officers of the South Dispensary, for transferring to parish surgeons patients duly recommended to them by subscribers. He produced a number of these notes, which had been purposely preserved at the Parish-office in Toxteth-park. The coroner promised to submit the matter to the chairman of the charity, to admit of its due investigation.

CORONER'S INQUEST.—An inquest was lately held before Mr. Wakley, M.P., at the Two Brewers public-house, St. Giles', on the body of Sarah Bransgrove, aged 47, who died shortly after undergoing an operation for strangulated hernia at King's College Hospital. It was alleged that the death was caused by the use of chloroform. It appeared from the evidence that the deceased, who was the wife of a porter residing in Little

St. Andrew's-street, St. Giles', died on the 23rd of February last. On the Saturday previous to her death she complained of severe pain in the abdominal region, and at her own request was removed in a cab to King's College Hospital. By her own consent an operation was performed while she was under the influence of chloroform. She was perfectly sensible after the operation, and saw her son and husband, but made no complaint of the treatment adopted. She died on the following Wednesday. Mr. Fergusson, the gentleman who performed the operation, deposed that he operated upon the deceased while she was under the influence of chloroform, making the usual incision and replacing the intestine. The case was not a bad one, but he had found, upon a post-mortem examination, that the peritoneal inflammation, which was the cause of death, existed prior to her admission into the hospital. After the operation she was treated for peritonitis, but without success. The administration of the chloroform had nothing whatever to do with the death, and the operation had certainly tended to prolong life. Some angry feeling was manifested by the relatives with reference to the post-mortem examination, for which it appeared, however, that permission had been asked and obtained. The coroner commented on the fact, that the incision made had not been sewn up before the body was sent to the friends. Such neglect was, he stated, very much calculated to cause angry feelings on the part of the relatives. Mr. Fergusson assured the coroner that he had ordered the incision to be secured in the usual way, and regretted that his instructions had not been attended to. The jury returned a verdict of "Natural death."

OBITUARY.—On the 12th ult., at his residence in St. Mary's-square, Bury St. Edmund's, aged 82, Thomas Smith, M.D., lately physician to the Suffolk General Hospital, and formerly to the Nottingham Infirmary. —On the 6th ult., Wm. Daw, Esq., M.D., of Chicklade-house, Hindon, Wilt., in his 89th year. —On the 20th ult., in Upper Beau-street, Everton, Liverpool, of consumption, aged 26, Mr. Joseph Seward, surgeon. —On the 20th ult., aged 60, Dr. Bedale, well known for his extraordinary feats in swimming. —At Hartford, on the 29th ult., respected and regretted by all who knew him, George Dickens, Esq., surgeon, in his 66th year.

MORTALITY TABLE.

For the Week ending Saturday, March 4, 1848.

Causes of Death.	Total.	Average of 5 Winters.
ALL CAUSES.....	1114	1107
SPECIFIED CAUSES...	1089	1102
Zymotic (or Epidemic, Endemic, and Contagious) Diseases.....	270	184
SPORADIC DISEASES.		
Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	49	59
Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	136	138
Diseases of the Lungs, and of the other Organs of Respiration.....	178	225
Diseases of the Heart and Blood-vessels.....	35	39
Diseases of the Stomach, Liver, and other organs of Digestion.....	79	62
Diseases of the Kidneys, &c.	16	9
Childbirth, Diseases of the Uterus, &c.	9	13
Rheumatism, Diseases of the Bones, Joints, &c. ...	6	8
Diseases of the Skin, Cellular Tissue, &c.	2	1
Old Age.....	40	79
Violence, Privation, Cold, and Intemperance.....	20	31

NOTICE.

SUBSCRIBERS IN ARREAR are respectfully requested, in conformity with the terms of their subscriptions, at once to forward their remittances to the office.

The subscription for the stamped edition of the *Medical Times* is 15s. for the half-year, and £1. 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 Carras.

THE CHART.

IN transmission of the Chart through the Post-office, the beauty of the lithograph is impaired, for the creases unavoidably made in folding a sheet of so large dimensions cannot be smoothed without danger of disturbing the colours. This detracts from the value of an engraving destined to a permanent and ornamental position in the study and the laboratory. We have, therefore, to announce to the annual subscribers on our roll, that we defer the delivery of the Chart through the Post-office, in order to afford to those gentlemen who have not received the Chart an opportunity of providing for its receipt, where possible, through their connections in town, or, when more convenient, their wholesale druggist. Where this suggestion is not acted upon we shall send the Chart with the next number by post.

To meet the convenience of gentlemen wishing to possess the Chart, all annual subscribers entered on our roll during the month of March will be entitled to a copy.

The Chart is also published separately, price half-a-guinea.

"Quibble" is right; but the subject-matter (Corydon) is not worth the notice. While there is such a figure of speech as 'irony' the epithet 'learned' cannot be misapplied.

"M.D."—We have already as fully noticed the subject as our pages permit.

"Young England's" contribution, "A New Historic Doubt," is very able, but very dangerous. Its proper place would be one of the morning papers.

"A Pupill."—The law remains the same.

"W. H. D."—The woodcuts were not sent.

The paper signed "Jack Ketch" is unsent.

"A General Practitioner."—It would be premature, as yet, to express an opinion.

"An Admirer."—All the numbers of the present volume may be obtained by an order through a bookseller. The publisher, also, will send them by post on receiving an order.

"P. D."—We have no agent there.

"Philo-Justitia," who sends us a long optical article on the reason why a sailor's clothing appears to shorten stout figures, forgot to send us his name. We have, besides, no room for his paper.

"Medico-Chirurgus" is thanked for his proffer.

Cambridge Union.—A correspondent writes that "One of the guardians of the Cambridge Union stated at a full meeting of the board, at which one of the Assistant Poor-law Commissioners was present, that a gentleman, who during more than thirty years has held the appointment of Regius Professor of Physic in the University of Cambridge, told him he considered that the union district officers were 'amply remunerated' for their services. Now, there are two districts to the Cambridge Union, to each of which a medical officer is attached. The population amounts to 25,000; the salary of the two district surgeons amounts to £175 per annum. In the year ending Christmas, 1847, the total number of cases attended were 2878, the number of attendances received by these patients being 16,500," which shows that the 'ample remuneration' amounts to the sum of 'two pence half-penny' for each attendance, including all 'requisite medicines, &c.' The late vaccinators were paid the 'amply remunerative sum' of one shilling per case. On receiving a letter from the clerk of the union, asking the reason of the few persons vaccinated in proportion to the number of births, these medical men had the 'inconceivable audacity' to state as one cause that the insufficient remuneration of one shilling per case prevented medical men making any very great exertions. Hereupon an end was put to their contracts. One shilling and sixpence per case was fixed, and tenders were advertised for! The late vaccinators sent in tenders. How many votes did they get? Not one!"

"Q. Q." asks if Ex-Sheriff Parkins is the same person who suddenly decamped from London to evade some monetary engagements, and subsequently lived and died in New York as a confirmed lunatic? We understand he is the same person.

"Pater."—The new bill provides for a very summary suppression of quackery.

"J. B."—Consult the secretary.

"A Foot Man."—We do not encourage the gratuitous advice system.

"A Constant Reader."—We are very glad if we have placed an extinguisher on the Free-Hospital operations. They were a blot on medical science.

"A Lover of Justice."—The paper on the recent doings at St. Bartholomew's should have been authenticated.

"Hermes."—A sufficient knowledge of the language, so as to be able to read the authors selected by the College examiners, is easily acquired. A grammatical analysis may be demanded, and hence the candidate should be prepared to give it.

"Iatros."—The diagnosis was incorrect, and the treatment improper.

"Chirurgus, Dartmouth."—Irritating substances applied to the part may have altered the character of the local disease. It is expecting too much from us, therefore, to offer an opinion on a mere written statement.

"B. S., Birmingham."—The negotiations are still pending, though there is a prospect of an amicable arrangement of the differences.

"A Professional Sufferer."—The Government having given up an additional per centage on the income-tax, it would be useless to publish the letter.

"One About to Emigrate."—It is necessary to undergo an examination at New York, before permission to practise in any part of the States. The presentation of an English diploma will be esteemed evidence sufficient of a proper medical education, and will be a passport to examination without undergoing the course prescribed by the American colleges.

"An Inquiring Reader."—The meteorological reports are furnished to the Registrar-General by Mr. Glaisher, of the Royal Observatory, Greenwich.

"Quiz."—The physician's education is not more expensive than that of the general practitioner, and can be completed in less time, though a candidate is not admitted to examination at the college in Fall-mall before the age of twenty-six.

"A Member of the National Association."—It is impossible for us to say who will be the first officers of the new College of General Practitioners, should a charter of incorporation be granted.

"Dr. Miles."—The Registrar-General will, on application, furnish, without expense, the weekly return.

"A Member."—The charter of the English College of Surgeons was granted about the commencement of the present century. The Worshipful Company of Barbers is still a City corporation.

"Medico-Chirurgus."—The statement is not true. A general practitioner is allowed by law to charge a reasonable sum for advice and medicine.

"Lux Nova" offers no new remarks upon an old subject. We must, therefore, decline publishing his long paper.

"James N."—I. Yes. 2. Success is doubtful.

"Celus."—We are not surprised, as it is an old trick to evade the payment of a medical bill. The objection will be overruled in court.

"A Dublin Surgeon."—If the bill should become law which it is proposed to introduce into the House of Commons in connection with the incorporation of a new college, Irish medical practitioners will be allowed to practise in England by observing certain requirements, without undergoing an additional examination.

"A Sanitary Reformer."—Lord Morpeth's bill does not expressly provide that medical men only shall be employed in certain offices which will be created if it become law. There is a danger that persons who have not laboured in the good cause will, notwithstanding, be made to taste the sweets of office to the neglect of the members of the profession.

"Mr. Hefford."—The letter should be addressed to the Secretary of the National Vaccine Establishment.

"Senex."—The bulky papers are left at our office. The facts are few, and might be condensed so as to be acceptable to the profession. We cannot undertake the work.

"An Eyewitness."—The revolting spectacle at Enon Chapel is one of the proofs among many of the necessity of a stringent enactment in reference to intramural interments. The press has frequently referred to the subject, so that a republication at the present time in our columns is not required.

"Accoucheur."—The offer is accepted.

"M. D., F.R.S.E."—We are unacquainted with the name; it is neither to be found in "The Medical Directory," nor in the three lists published by the English medical corporations. The governors have, in all probability, been deceived.

"An Operator."—The experiments are of little value, as they have not been conducted with sufficient care.

"A Licentiate."—The title will not be affected by the alteration at present contemplated.

"Anatomist."—The plates were executed by an accomplished artist. We are not acquainted with the price.

"Oxonian."—The numbers shall be forwarded as requested.

"Galen, Liverpool."—1. A fellow or licentiate of the Edinburgh College of Physicians is not allowed to practise pharmacy, the penalty being a forfeiture of all his rights and privileges, and an erasure of his name from the College list. 2. The fee paid by a non-resident licentiate is £25, which does not include certain other expenses.

"A Student."—Sir Patrick Dunn's Hospital, Dublin, is connected with the College of Physicians and the University. A student cannot enter after the 25th of November.

"An Old Friend and Subscriber."—There is an antidote that can be relied on. Electricity is not preferable to cold affusions.

"H. Hengel."—A magnet has sometimes been successfully employed in extracting such a foreign body.

"Microscopist."—The morbid growth, when sliced, is seen to be composed of innumerable white interlacing fibres, forming distinct partitions of a regular spherical shape. These vary from the size of a grain of sand to that of a pea, and are filled with a soft viscous jelly, of a greenish-yellow colour, which generally is clear and transparent,

but occasionally turbid and opaque. This matter is composed of albumen, and retains its transparency in alcohol.

"Dr. Fraser."—Communication received.

"A Country Practitioner" informs us that he recently exhibited chloroform to a young man who was desirous of having a tooth extracted, but that it produced violent convulsions which lasted upwards of an hour. On recovering his sensibility, he complained of violent pain in the head, which was relieved by the application of cold water.

"A Cambrian."—It is necessary to obtain the apothecaries' licence.

"Mr. B. Spurgin, Northampton," writes as follows, in reference to the income-tax:—"So dire, so unjust, so oppressive, and so odious a tax, I feel perfectly confident, affects no class of her Majesty's subjects so much as the medical profession. Tax real property if you please, but do not tax the hard earnings of such as never realise it, never pocket it; there is not a professional man in this realm but can state he has paid this tax upon what he will never pocket, over and over."

"J. Z., Bristol."—A provision will be made in the new bill to meet the persons referred to.

"E. P."—1. If the new arrangement should become law, the Apothecaries' Society will not be abolished, but it will no longer exercise the functions of a licensing medical corporation. 2. Yes. 3. Yes.

"S. W., Queen-street, Hackney-road."—We do not make it a point of recommending any particular medical gentleman.

"Dr. Malan, 7, Upper Seymour-street, Portman-square."—Communication received.

"Medicus," says—"For the information of J. J. G., under the head of Correspondence, page 535, Feb. 12, I beg leave to say that it is quite clear that any one might commence to practise as an apothecary at the age of sixteen, seventeen, eighteen, or nineteen, there being no law to prevent it prior to the passing of the monopolising Act of the 55th Geo. III. For instance, I began at the age of seventeen, and will defy the monopolists to put me down. In fact, similar cases have been decided against the old druggers of Rhuabarb-hill, in our courts of law."

"Mr. Sprague, Bath."—The request shall be attended to.

"Dr. Granville, Piccadilly."—Communication received.

"Dr. W. C. Fowler, Corstorphine, Edinburgh," writes us, in reference to a letter which appeared in the *Medical Times* of Jan. 15, signed "A Hater of Humbug," as follows:—"The whole letter is so coarse and ungentlemanly, and the part of it in reference to myself so garbled, and breathing insinuations so unwarrantable, that, at first, I thought it might be more becoming not to stoop to notice them. Upon reflection, however, I think it may be as well to state that, if this correspondent will have the honesty or the maunliness to give me his name, I shall undertake to prove to him, first, that he has published as an extract from the *Edinburgh Advertiser*, in reference to me, what was never in that respectable paper; and secondly, that he has acted the part of a secret slanderer in the observations with which he has compassed it. I suspect, although his youth and inexperience may have led him to perpetrate this attempt at injury, he will keep in the dark, and thereby shelter himself from the consequences of his conduct. If he is mean enough to adopt this course, I shall decline to correspond with him; and should he forward any similar notes into which my name is introduced, your numerous readers will understand that he is one who prefers to circulate anonymously what he has neither the candour to avow nor the manliness to give his name to."

"Mr. Thomas Stainthorpe, Hexham, Northumberland."—Case of "Compound Dislocation of the Tibia at the Ankle-joint" received.

"Mr. Fritchard's" papers "On Dislocation of the Right Thigh into the Ischiatic Notch, and Dislocation of the Left Humerus backwards," received.

"Mr. William Hallam, Newcastle, Staffordshire."—The paper on the "Use of Chloroform in Midwifery" has come to hand.

"One who is Interested, Leicestershire."—The system will either be modified or abolished.

"An Extra Licentiate."—The title of M.D. may be attached to the name.

"Dr. Brown's" paper will appear next week.

"A Friend" is thanked. We shall institute a searching investigation into the Free Hospital affair. Wee to those who fear the light.

"Medicus."—We are not aware yet of the name of the publisher of "The Series of Medico-legal State Trials."

"A. J. G."—We are much obliged by the information; but our correspondent omitted the servant's present address. Letters and communications have also been received from Quibble; M. D.; Young England; A Pupill; W. H. D.; Jack Ketch; A General Practitioner; Medicus; A. J. G.; An Admirer; P. D.; Philo-Justitia; Medico-Chirurgus; Cambridge Union; Q. Q.; Pater; J. B.; A Poor Man; A Constant Reader; A Lover of Justice; Hermes; Iatros; Chirurgus, Dartmouth; B. S., Birmingham; A Professional Sufferer; One About to Emigrate; An Inquiring Reader; Quiz; A Member of the National Association; Dr. Miles; A Member; Medico-Chirurgus; Lux Nova; James N.; Celus; A Dublin Surgeon; A Sanitary Reformer; Mr. Hefford; Senex; An Eyewitness; Accoucheur; M. D., F.R.S.E.; An Operator; A Licentiate; Anatomist; Oxonian; Galen, Liverpool; A Student; An Old Friend and Subscriber; H. Hengel; Microscopist; Dr. Fraser; A Country Practitioner; A Cambrian; Mr. B. Spurgin, Northampton; J. Z., Bristol; E. P.; S. W., Queen-street, Hackney-road; Dr. Malan, 7, Upper Seymour-street, Portman-square; Medicus; Mr. Sprague, Bath; Dr. Granville, Piccadilly; Dr. W. C. Fowler, Corstorphine, Edinburgh; Mr. Thomas Stainthorpe, Hexham, Northumberland; Mr. Fritchard; Mr. William Hallam, Newcastle, Staffordshire; One who is Interested, Leicestershire; An Extra Licentiate; &c.

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ORIGINAL LECTURES.

LECTURES ON SOME OF THE MORE IMPORTANT POINTS IN SURGERY.

By G. J. GUTHRIE, Esq., F.R.S.,

Read by Mr. HANCOCK, Surgeon to the Charing-cross Hospital, and Lecturer on Anatomy and Physiology at the Royal Westminster Ophthalmic Hospital.

LECTURE VI.

ON WOUNDS AND INJURIES OF THE CHEST.
(Continued from p. 386.)

Dr. Edward Barry, who was physician-general to the army in Ireland, published a book in 1759, "On the Digestions and Discharges of the Human Body, and the Diseases of their Principal Organs," in which he advises an opening being made through the wall of the chest into an abscess of the lung, which should appear to be incurable except by extreme measures. He says, page 409, "Such abscesses or ulcers in the lungs generally adhere by a large surface to the pleura; that when this membrane has not originally been engaged with an inflammation, and afterwards suppurated, it is greatly thickened and hardened; that purulent matter is always contained under that indurated part." The thickness and induration of the pleura he thinks a sign by which the operator may be guided after he has divided the soft external parts. If this is ascertained, he considers it a certain external mark of the seat of the internal disease; a fact which auscultation and percussion, followed by the use of the small trocar and canula, would, in the present day, certainly demonstrate in time to prevent the evil of opening the chest in search of a cavity which might not exist. He refers to one case in which the cicatrix of a wound from a sword was opened, and a large quantity of matter evacuated, the patient recovering. To a second, in which the patient was cured by an incision made on the seat of pain, and which patient he saw twenty-eight years afterwards. He mentions two operations of a similar kind, and followed by a successful result, performed by a Mr. Tucky on two soldiers in Dublin, under his direction. In a fifth case, in which it was attempted at a late period, the thickness of the pleura prevented the completion of the operation. The external wound afterwards healed, but reopened and discharged a considerable quantity of purulent matter. The body was not opened. In a sixth case, the opening was made an inch and a half below the cyst of the abscess, which contained eight ounces of purulent matter. "The rest of the lungs," Dr. Barry adds, "were sound. If the operation had been rightly directed he probably would have recovered." If the observation of Dr. Barry was correct, that the rest of the lung was sound, this was an abscess the consequence of inflammation, and such as I have said I had seen sufficiently often to establish the fact of their more frequent occurrence, in such cases, than had been supposed by modern pathologists.

The revival of this method by Dr. Hastings as a remedial one in phthisis has not yet been at-

tended by any great amount of success. However, one of Sir H. Marsh's cases, published in Dr. Hastings' volume on the Use of Naphtha, recovered, and was in excellent health some years afterwards. When a large cavity exists in the lungs, we are told that it is generally accompanied by smaller ones, as well as miliary granulations; hence, if the operation is to be successful, the latter conditions must be remediable by internal medicines; and in Dr. Hastings' work (page 118) a case is given, which, although not treated by himself, was put under the influence of naphtha, the patient dying from accident whilst under treatment; after death a number of tuberculous cicatrices were found in the lungs. Should such cases as the foregoing now and then occur, they will go far, Dr. Hastings thinks, to justify a more complete trial of this operation.

Pneumo-thorax, as a medical disease, means an effusion of air and of the matter of a tubercular abscess from a diseased lung into the cavity of the chest. It exists as a surgical disease when the chest is distended with air issuing from a wound in a sound lung; in other terms, it is emphysema of the chest. In the first instance it is the end of a disease—in the second, it is the beginning. A third kind may, however, occur as a surgical disease, in which it does not take place in the commencement, but follows after the lapse of a few days. It is then pneumo-thorax from an ulcerated opening, the consequence of an injury in an otherwise sound lung, and from which the patient may hope to recover. The essential difference between the first and the third kind is, that the lung in the first case is diseased.

This complaint, although frequently mentioned by the older authors, was never distinguished in an especial manner, until it was named pneumo-thorax by Itard, in 1803. It has been supposed that the air escaping through the bronchial tubes opening into the tubercular abscess must eventually excite inflammation of the pleura. It is, however, probable that, as air in emphysema does not always give rise to inflammation, it may not be the air, but the irritation caused by the rupture of the tubercle, and the diffusion of its contents, to which it owes its origin. Inflammation, once excited in this way, is followed by the effusion of a turbid, serous fluid, which ultimately becomes purulent, and by the formation of adventitious membranes, as in ordinary cases of pleuro-pneumonia, if the patient should survive the mischief long enough. The air which escapes into the cavity of the chest differs little from that which has been inspired, and usually occupies a much larger space than the fluid by which it is accompanied. When pneumo-thorax is the consequence of disease of long standing, the patient may be sensible of a sudden pain, which does not abate, and which is accompanied by an equally sudden increase of the difficulty of breathing, for which he cannot account. He feels relief by lying on his back, or on the affected side, rarely on the other, although the difficulty of breathing may increase, so as to render the further continuance of life doubtful, whilst the prostration of strength

is considerable. The muscles of respiration are all in rapid and powerful action, the heart is displaced to the right side, when the complaint attacks the left; and it will be displaced somewhat to the left when the right is affected; in some cases it even descends into the epigastrium, or is otherwise removed from its natural situation, even towards the axilla, although the left side is supposed to be more obnoxious to this complaint than the right. The pulse becomes exceedingly quick and small, countenance pale, nights sleepless. The affected side is oftentimes evidently dilated, and the intercostal spaces may be less marked, or partly filled up, when the respiratory motion given to the parts under ordinary circumstances is seen to be deficient. But these differences, as well as that which can be obtained by comparing both sides by measurement, are not so marked as when the cavity is filled by fluid.

The discrimination of the disease will be assisted by succussion, or shaking, which, when effected by an assistant, may show that fluid is effused, but not air; also by percussion beginning from above, which, in the erect position, will give, in cases in which it is ascertained that respiration is null, a clear tympanic sound, as low as the level of the fluid, when it changes abruptly to a dull sound, or that indicating its presence. If the patient be then placed in the recumbent position, the clear sound can be heard above, the dull one below, demonstrating the change in the situation of the air and of the fluid. An oedematous swelling of the side or back is by no means a common symptom when air alone is effused. Auscultation, in addition to the absence of respiration, when the chest is fully expanded, discovers no respiratory murmur; but a peculiar sound called by Laennec *tintement métallique*, or metallic tinkling, is heard at intervals, particularly on the patient's coughing, speaking, or breathing. It is imitated by dropping a pin into a large wine-glass. It, however, more nearly resembles the sound of a jew's harp in the hands of a child, and once heard cannot be mistaken. When this tintement becomes plainer and deeper in tone, it was called by Laennec "bourdonnement amphorique," because it resembles the sound produced by blowing into a decanter or large bottle, and is supposed to indicate the enlargement of the fistulous opening in the lung. The metallic tinkling is then a distinctive sound of pneumo-thorax; at all events, it is so in surgical cases.

The first operation of puncturing the thorax for the evacuation of air alone was performed by Mr. Kelly, of Leith, under the direction of Dr. Monro, sen., who had assisted Professor Meckel, of Berlin, in opening the body of a young soldier who had so extensive a pneumo-thorax that it had depressed the diaphragm so much as to cause the liver to descend into the pelvis; this led to the first idea in his mind of an operation for the evacuation of the effused air. Mr. Kelly's case was successful, and is related, with the case of Professor Meckel, by Sir A. Halliday, in his work on Emphysema.

CASE 25.—A soldier was sent home invalided from the West Indies, for hæmoptysis, which had succeeded a severe fall on the left side of the chest, received eighteen months previously. He was admitted into the Military Hospital of Chatham on the 9th of May, 1823. On the morning of the 13th, after a violent fit of coughing, symptoms of pneumo-thorax came on suddenly, and continued increasing till the 21st. "The most prominent of these symptoms were," to quote the words of Dr. Davy, "a feeling of extreme tightness about the chest and abdomen; rapid and difficult inspirations, between thirty and forty in the minute; great anxiety of countenance and agitation of mind, accompanied by a small pulse of 130; cold sweats frequently breaking out on the neck and face; considerable prostration of strength." On examining the chest, the left side was found more protuberant, and in all its dimensions larger, than the right; it was tense and, on percussion, sounded remarkably hollow and tympanitic, giving the idea of its being distended with air. The heart was found beating under the right mamilla. Under these circumstances, it was resolved, in consultation, to tap the chest, which was accordingly done in the following manner:—A trocar and canula were attached to an empty bladder, and the parietes of the chest punctured between the eighth and ninth ribs, the integuments and intercostal muscles having been previously divided with a scalpel. A little air only rushed out, and as it was concluded, from the persistence of the symptoms, that its escape was prevented by adhesions of the pleura at the point which had been perforated, the operation was repeated next day. The puncture was then made just below the left nipple, and, on withdrawing the stilet into the bladder, a large quantity of air rushed out and distended it. The bladder was then separated. Air continued to rush from the chest for several seconds, "as if from a blowpipe." When this ceased, and when the air began to pass inwards during inspiration, the canula was withdrawn, and the wound healed. The relief to the patient was sudden and great, and he continued to improve till the 17th of June, when the account closed. No farther history of the case appears to have been published. The heart was still felt beating in the right side, and the fluctuation of a fluid was perceptible in the left. —Dr. Davy, in "Philosophical Transactions," p. 1823.

CASE 26.—From Dr. Johnson's "Medico-Chirurgical Review," vol. 10, page 478. Mr. Cornish, a medical practitioner, having suffered an attack of pleuritis, was attended by Dr. Johnson and Mr. Cooke from the 16th to the 21st December, 1823, when Dr. Johnson was satisfied of the existence of pneumo-thorax. On Monday, the 29th of December, Mr. Cornish nearly expired from suffocation. He was lying on his right side breathing most laboriously, countenance sunk, pulse between 130 and 140; he had had no sleep for many nights. The action of all the respiratory muscles was painful to behold; no perceptible difference in the size or shape of the two sides. The right emitted an extremely dull sound, the left sounded hollow throughout. The apex of the heart was beating rather to the right of the right nipple. The respiration was loud and rattling in the right lung, metallic tinkling distinct on the left; expectoration muco-purulent, with specks of blood and many black particles. In the evening Mr. Guthrie made a short incision on the lateral part of the left side between the sixth and seventh ribs, and cautiously opened the pleura, when a rush of air issued forth with a hissing noise, and strong enough to have extinguished several candles. The patient turned on his back, breathed with comparative freedom, and expressed his gratitude for the operation. No fluid issued from the wound when made a dependent opening. A piece of linen was placed on the orifice. On Wednesday, the 31st, the difficulty of breathing returned, the wound having closed, the metallic tinkling had returned, and to that side of the chest was as sonorous as ever. The wound was reopened and enlarged, and the pulse fell to 120, the metallic tinkling

ceased to be heard, the patient took nourishment and an opiate at night, the air being evacuated from the chest by introducing a probe.

Jan. 1, 1829. Has slept several hours; breathing easy; pulse reduced in frequency; appetite good. A canula was placed in the wound, when large quantities of air came through it on each expiration; the heart beat two inches nearer the central line of the thorax than before. In the night he became greatly oppressed, and died next day. On raising the sternum, the heart was found rather to the right of the median line of the chest; the left lung was collapsed to one-fifth of its natural dimensions; the vacant space was filled with air, and about fourteen ounces of turbid serous fluid. The pleura costalis and pulmonalis presented marks of inflammation of a few weeks' standing, viz., some thin false membranes which were easily separated by scraping with the scalpel. There were no marks of more recent pleurisy, even in the vicinity of the wound, there being only a slight ecchymosis between the pleura and subjacent cellular tissue, for the space of a few lines around the incision. A tube was inserted into the trachea, and air blown into the lungs. The left lung expanded to a certain extent, and air was heard to bubble out. The lung was then carefully removed, and an aperture was immediately recognised at the division or cleft between the two lobes. The tube was inserted into the bronchus leading to the left lung, and Dr. Johnson blew in air. It rushed forth at the aperture, and extinguished a taper that was held near it. The aperture itself was then more accurately ascertained. It was circular, and capable of admitting a crowquill. It was evidently fistulous, and of several weeks' standing. It was found to communicate with a very small excavation, formed by the softening down of some tuberculous matter, and into this small excavation a bronchial tube was seen to enter. Thus the communication between the trachea and the cavity of the chest was distinctly traced through a bronchial ramification, a very small tubercular excavation situated on the very surface of the lung, and an aperture through the pleura pulmonalis. The left lung presented some trifling tuberculation, but was not materially diseased. The right lung was much more tuberculated; but the tubercles were principally in a quiescent state. There was no other disease in the chest. The tuberculation of the lung was of old standing, and the softening down of the tuberculous matter must have preceded the formation of the opening and the escape of the air into the cavity of the pleura.

CASE 27. By Dr. F. Bird.—William Layard was sent by Mr. Guthrie into the Westminster Hospital in August, 1842, with pneumonia, from which he recovered, but, suffering a relapse, was readmitted under Dr. Roe in September. On the 20th of October he was evidently labouring under the disease called pneumo-thorax, of which the following were the symptoms:—He lay on his back breathing with difficulty, the left side being evidently fuller and rounder than the right, the intercostal spaces between the ribs being less observable, or more filled up than on the opposite side. The pulsation of the heart could not be felt in its usual place, but was distinguishable to the right of the sternum. The integuments of the chest were so oedematous on the side affected as to constitute a prominent symptom. On percussion the sound of the fore part of the chest was quite sonorous, like an empty cask, whilst that of the opposite or sound side was dull; and, as the percussion was continued down towards the back, the sound also became dull, like that emitted from a full cask. No respiratory murmur could be heard on the anterior part or side affected, but metallic tinkling was distinctly audible within. On the 21st Dr. Bird punctured the left side with a very small trocar, and drew off forty-two ounces of a whey-coloured serous fluid, a considerable quantity of air escaping through the canula with a very audible sound. The man was immediately relieved. The next day, the 22nd, he introduced a large trocar through the same opening, and drew

off seven ounces of a fluid more turbid than the first, and on the 24th the discharge was purulent. The heart returned to its natural position, and some hopes were entertained of recovery, which were not verified, as on the 6th of November he died. On dissection the left lung was seen to be shrunk and lying close to the spine; air on inflation passed out, particularly from two openings on its anterior surface, one the size of half-a-crown. The pleura costalis was coated with fibrine, as well as the pleura pulmonalis. The left lung was full of tubercles, many in a state of suppuration; the right was tubercular, and there was one abscess at the upper, and some purulent matter in the under, part of the cavity of that side.

CASE 28.—Mr. Stapleton, now Lord Beaumont, was wounded by a pistol ball on the 13th of February, 1832, when standing sideways; it entered the right side of the chest a little below the nipple, appeared to pass under the lower end of the sternum, just above or about the xiphoid cartilage, and to have lodged in the cartilage of the last of the true ribs of the left side, near its junction with the bone, in consequence of a round projection at that part resembling a pistol-ball, but which, on being exposed, showed only a knob of cartilage which might have been a natural formation; no further steps were, therefore, taken. The injury had been received about four o'clock, it was now five; he could lie flat on his back, had little or no pain or oppression. Seven o'clock. Breathing became oppressed, and accompanied by pain; vesicular murmur distinct in both lungs; pulse 96. V.S. ad 3xxxij. Nine o'clock. Difficulty of breathing and pain greater; was again bled until the pulse failed, although he did not faint; the relief great. Half-past ten. Oppressive breathing again returned, pulse very low and quick, thirty-six leeches applied, relief obtained. Half-past twelve. Thirty-six more leeches. Half-past two. Thirty leeches were again applied; in all, four pints of blood were taken from the arm, and one hundred and two leeches were applied to the chest, the bleeding being encouraged afterwards; during the first ten hours five grains of calomel and four of the compound extract of colocynth had been given, and now forty minims of Batley's solution of opium were administered. Feb. 14, 8 o'clock. Slept after four o'clock; on waking took an aperient draught, and is much easier; pulse 120, soft, small, and weak. 3 P.M. On the dyspnoea returning twenty-one leeches were applied, and the oppression was relieved; felt sick, with a desire to vomit; *Haustus effervescens*. 5 P.M. Easier, but faint and restless; bowels not open; an enema given, which acted freely. Half-past 12. A returning oppression relieved by eleven leeches; calomel repeated and sol. opii m. xxx. 15, 8 A.M. Night restless, but slept at intervals; slight tickling cough; little or no expectoration; no blood; faintings less, but thinks he would faint if he sat up in bed; pulse 130, soft, small, and weak; little pain; lies tolerably flat; respiratory murmur appears tolerably distinct on both sides. 9 P.M. Oppression returned; twenty-four leeches; repeat calomel and colocynth, to be followed by an enema, after which the bowels became free; the sickness, faintness, cough, &c., continued all day. Vespere. calomel gr. xj. *haustus opii*.

16, 8 A.M. Had forty-eight leeches applied at twice during the night; they have just ceased to bleed; has slept at intervals, and is easier; has no pain in the chest; pulse 103. Vespere. Is improved; an enema statim; afterwards calomel gr. xj, opii gr. i. 17, 8 A.M. Slept fairly during the night, and is better; pulse 108, soft; breathes freely, and has no pain. Vespere. Has had leeches applied twice during the day, making in all 245, and each time with relief; an enema, calomel and opium, as before. Twelve at night. More oppression, and, as the pulse was fuller and quicker, a vein in the arm was opened, but only four ounces of blood could be obtained.

18, 3 A.M. Slept at intervals, although very

restless; pulse 120, fuller; oppression in breathing returning; V.S. ad 3xx., causing him to faint; haustus sennae. Vespere. Has been much relieved by the bleeding; blood cupped and bled; twenty leeches, enema as before, calomel and opium. At the night, at two o'clock, the dyspnoea returning, twenty-two leeches were applied, and thirty minims of sol. opii given.

19, 8 A.M. Easier, quieter, better; pulse 110, soft; can lie quite flat on his back. The wound discharged so little that it was possible the matter had not a free passage; the external parts were therefore dilated inwards towards the sternum, until the pulsation of an artery could be seen, perhaps the internal mammary, which it was not thought advisable to disturb; respiratory murmur not distinct at night; enema as before, calomel and opium, and twenty leeches.

20. During the night, or at three in the morning, being greatly oppressed, thirty leeches were applied, and at eight o'clock twenty more, which quite relieved but left him in a state of great exhaustion, sick, and faint. A little arrowroot relieved the faintness; discharge from the wound free and accompanied by air; bowels open. — 10 at night. Calomel, and forty minims of the solution of opium.

21, 8 A.M. Says he feels better, and now for the first time has a hope of life; pulse 112, soft; no pain; can turn on his side, but fears to hurt himself; wound discharges freely; has had a small piece of bread for the first time. — 4 P.M. Restless, but better. Haustus sennae c. mag. sulph. — 8 P.M. Oppressed; pulse 120. Twelve leeches, calomel, and sol. opii. m. xxx. N.B.

22. Better; pulse 114, soft. Dr. James Johnson and Dr. Elliottson examined the chest, and ascertained themselves that no serious effusion had taken place, and that the lungs were respiring fairly. Calomel and opium at night.

23. Oppression at night relieved by six leeches; slept afterwards; breath slightly affected by the mercury, which was now omitted. The compound extract of colocynth, gr. x., given at night, with thirty minims of solut. opii.

24. Free from pain; breathes easily and without difficulty; can turn in bed with ease; slept well; the discharge from the wound is free; takes farinaceous food, oranges, tea, &c. He gradually improved until the 15th of March. On the previous Friday, the 9th, he removed from Long's Hotel, in Bond-street, to 128, Madam-street, and on the 13th amused himself by washing all over in a third or small bath room without a fire; caught cold, and acquired a troublesome cough, which was quieted on the 14th, at night, by opium. On the 15th, A.M., it was evident that some mischief had been done; pulse 120; breathing difficult; was bedewed with a cold sweat; respiratory murmur distinct on both sides; on the left not heard below the fourth rib; although the whole side sounded acoustically; it evidently contained air, the metallic tinkling being very remarkable, on which account he was again seen by Drs. J. Johnson and Elliottson in the afternoon, who thought the pneumo-thorax of the left side complete both as to air and to a fluid effused. The wound having closed very much, and the distance to the left cavity of the pleura under the sternum being considerable, it occurred to me that a piece of sponge, tied around the eye of a small gum-elastic catheter in a proper manner, might be introduced, so as to enlarge the track of the ball, and give a passage to the air from the left side of the chest. This was done at five o'clock P.M., and at ten, on its being withdrawn, air rushed out in a very manifest manner, and to his great relief. The metallic sound, which was distinct before the instrument was withdrawn, instantly ceased, but could be reproduced by closing the opening. The small gum catheter was therefore reintroduced with the eye projecting beyond the sponge, and retained; air passing through it; cough very troublesome.

March 16. Quieter, breathes more easily; cough troublesome; expectorates a little mucous; bowels confined. Calomel and colocynth at night; mist. amygdal. c. antia. tart.

17. Better; pulse 100; bowels open; cough easier; expectorates freely a *rouille*, or reddish mucopurulent matter.

18. Easier and better; breathing on the left side not heard below the fourth rib; discharge free; the permanent gum catheter taken out, but passed in daily.

24. Continues to improve; wound gradually closing. After this he slowly but regularly became convalescent, so as to render further reports unnecessary.

The case of Lord Beaumont is given at length, it being a remarkable instance of the strict and constant watching such cases require. He is now, at the end of fifteen years, in perfect health, and feels no inconvenience from the injury. Respiration is perfect on the left side, even at what must have been the part injured, and there is no reason to believe from auscultation that the lung adheres by its pleura to the wall of the chest.

Dr. Houghton, in his able article on Pneumothorax in "The Cyclopaedia of Practical Medicine," declares the opinion to be unfounded which supposes that the presence of compressed air is necessary for the production of metallic tinkling. The great point to overcome is not, however, the opinion, but the fact, that the evacuation of the air destroys the sound, and that the restoration of compressed air reintroduces it. If the fact is not so, the opinion is, of course, good for nothing; but, if the fact is admitted, I am indisposed to consider Dr. Houghton's objections valid. He advances two special instances, amongst other general ones, in support of his objection. The first is, that when drink is taken into a flatulent stomach, a metallic tinkling may be sometimes heard on coughing or speaking, and he concludes that the air is not compressed in a flatulent stomach—a conclusion I am not willing to admit; for, although the air might like to have it all its own way, and to distend the stomach and stretch the wall of the belly as much as it pleased, these two living parts may not like the stretching, and in turn may try to compress the air, which, in fact, I believe they do; hence the metallic tinkling. That a metallic tinkling is heard on auscultation, immediately after the fluid has been drawn off by the operation for empyema, I do not suspect to be the case, but that it may be heard, perhaps, after some time, when the fluid again secreted has encroached upon and compressed the air which replaced the fluid withdrawn, I do not doubt. The objection thus raised actually supports my hypothesis, which I value as nothing beyond the fact that with the evacuation of the air the metallic sound for the time ceases.

That an operation for the removal of the compressed air should only be palliative, when the disease has been caused by a tubercular abscess, cannot be doubted; more could not well be expected from it. (a) That the complaint is permanently removable—when the lung is only accidentally, and not constitutionally, diseased—the case of Lord Beaumont is a brilliant example. There is neither difficulty nor danger in such cases, in introducing a small trocar and canula for the evacuation of the air; and, if nothing should pass out, the little air which may pass in will soon be absorbed. In Lord Beaumont's case the air certainly passed out and, in all probability, passed in through the retained catheter, and it assuredly did no mischief. If I had not succeeded in his case with the sponge-tent, I was prepared with a small trocar and canula, through which I should have passed the elastic catheter—a practice to be pursued in other cases which may be similar, this being certainly at first time, if not at present, the only instance of a case of pneumo-thorax from a gunshot-wound of the lung terminating favourably, in consequence of the surgical evacuation of the compressing air.

(a) See the review in "The Edinburgh Medical Journal" for January, 1848, of the works of Messrs. Addison, Bouverie, Rainey, &c., "On the Anatomy of the Lung, and particularly of the Air-passages."

ORIGINAL CONTRIBUTIONS.

COMPARATIVE VIEW OF THE HEART AND OTHER ORGANS.

By W. H. BROWN, M.D., F.R.S., &c.

PAPER III.—THE BRAIN AND NERVOUS SYSTEM. SUB-KINGDOM RADIATA.

Porifera.—The possession of a nervous system thus low in the scale of animated nature (if, indeed, it belong to it at all) is generally disputed by comparative anatomists. An opinion was formerly entertained—now pretty nearly discarded—that granular nervous matter was diffused or dispersed through the system of these beings, and of those of the superior class, polypifera, a surmise which has, perhaps, been rather too summarily dismissed, inasmuch as it is difficult to conceive that so acute an amount of sensibility to impression as that manifested by some of the members of the latter class could exist without a nervous source; and no other arrangement would admit of the subdivision to which both these classes may be subjected without incurring destruction.

Polypifera.—In one of the higher families of this class, the actinidae, a faint sketch of a nervous system has been described by two sets of observers; one, however, describing it as a circle at the base of the animal supplying its muscles, another as an equally delicate annular cord embedded in a strong muscle surrounding the orifice of the stomach, and supplying the tentacula. It is necessarily a difficult question to solve in animals so constituted, but the latter is probably the more correct view of the two.

Aculeata.—About as satisfactory as in the former case is an attempt to define the nervous development of the aculeiform creatures of this class. In the medusa, however, the enthusiastic Ehrenberg considers that he has detected a circular filament at the margin of the mantle distributing eight branches to the eight spots he is pleased to designate eyes, and likewise another circle round the entrance to the stomach, marked by four ganglia, ending filaments to the tentacula. Professor Grant has also assigned nervous functions to a delicate double circular fibre placed anterior to the stomach in the Beroë, and which he avers is endowed with eight ganglia, from each of which filaments pass to the body and to the tentacula. Other observers, however, have not been enabled to come to conclusions so satisfactory.

Bathodermata.—We now arrive at a more unequivocal development. In the anterior a nervous circle surrounds the mouth, having a ganglion opposite each ray, from which these filaments are given off, one to traverse the ray, the other two to supply the central organs. A similar arrangement pertains in the scyphina, in the absence of rays the filaments form the oral ring passing backwards to the digestive apparatus and forward to the dentals. The siphon exhibits an approximation to the nervous system of the articulate, inasmuch as two ganglia are placed anterior to the oesophagus, whence proceed filaments the entire length of the body, supplying it in their course, and directed down the abdominal surface.

Porifera and *polypifera* are now grouped together under the designation of *scypha* (combined), whilst *echinodermata* stands in that of *nematocours* (filament-nerved). *Aculeata* is one of the connecting links between the two divisions of this sub-kingdom. This arrangement was originally proposed by Professor Owen.

SUB-KINGDOM ARTICULATA.

Arachnida.—The nervous system in this class consists of a two-lobed ganglion above the oesophagus (the supra-oesophageal); from either side of which, at the base, passes a column forming a circle round the oesophagus; and meeting in a ganglion below it (the sub-oesophageal); from this a great nervous trunk having a ganglion at every segment, runs the entire length of the body on its ventral aspect. The supra-oesophageal ganglion supplies the sensory nerves,

those of the antennæ and ocelli; of the latter there are ten in the leech ranged round the upper portion of its sucking disc; a filament has likewise been detected in the leech, arising in this ganglion and passing down the back to the alimentary canal, which affords the first trace of a par vagum and sympathetic: the sub-oesophageal ganglion gives off the branches which supply the oral muscles, and in the leech, those of the formidable dental mechanism; the ventral ganglia give off two pairs of nerves to be distributed to their respective segments (the first supplying the ventral muscles, the second those of the side and back); these are the excitatory; in the aphrodite a third pair are given off before these two, from ten or eleven of those ganglia nearest the head, which supply the respiratory apparatus.

Insecta.—We have the same type in this class as in the former, but in an advanced condition. The brain or supra-oesophageal ganglion is relatively of larger size; the optic nerve supplying the compound eye has become so large as almost to constitute a lobe, from the extremity of which the numerous branches to the ocelli are given off. The antennal nerve on either side is given off above this in conjunction with the par vagum, the two original cords of which immediately arch inwards and unite in a small central ganglion, whence proceeds the filament distributed to the alimentary canal. The ganglia of the ventral chain are generally eight in number: the first or sub-oesophageal ganglion (connected with the brain by lateral cords, as in the former case) supplies the lower parts of the mouth. "In the thorax we distinguish the second ventral ganglion, which, as it distributes branches to the first pair of legs, I have called the brachial ganglion. The third ventral ganglion, supplying amongst other parts the elytra, may be termed the elytral ganglion. The fourth ventral ganglion is distinct in the present species, and, supplying the nerves to the second or true wings, may be termed the alar ganglion. The fifth, sixth, and seventh, or first three ganglia in the abdomen, distribute nerves to as many large and moveable segments of that division of the trunk. The last ganglion is the largest, and its size is conformable with the bulk of the generative apparatus, upon which, on the rectum, and the modified terminal segments of the abdomen, its branches are expended."—(Owen.) Four small ganglia at the commencement of the oesophagus, supplying it and connected together by their filaments, constitute the sympathetic system. A distinct respiratory tract has been figured and described. From the beginning of the separation of the bifurcated inter-ganglionic columns, or conduits, Lyonnæ says, "there descends a nerve, the extremity of which is enlarged a little above the succeeding ganglion, which sends off from the enlargement a transverse nerve to the right and to the left, to which I give the name of spinal rein (*bride spinière*). Of these transverse nerves there are ten pairs; they terminate chiefly in the stigmata and tracheæ, but send off small branches to the skin and to the dorsal vessel. These are the respiratory ganglia and nerves, and have been erroneously considered as the motor column and nerves." Advance of this type in this class consists in the concentration of the ventral ganglia: thus in the mantis the number of ventral ganglia is reduced to four—three thoracic, one abdominal; and in insects of the hemipterous order the whole system consists of but three ganglia, forming the brain, the sub-oesophageal ganglion, and a large rounded thoracic ganglion which supplies the whole of the body below the head.

Arachnida.—The nervous system in this class consists of a bilobed supra-oesophageal ganglion or brain, from which two short thick columns embrace the gullet, terminating in a considerable stellate ganglion beneath the stomach, whence two cords are continued to the abdomen, at the commencement of which they subdivide into four or five lines each, which supply the abdomen and its contents. The cephalic ganglion gives off anteriorly (upwards and forwards) the

two long optic nerves; laterally two nerves to the mandibles, and posteriorly the stomatogastric, "which form on each side a reticulate ganglion, which distributes filaments to the stomach." The sub-oesophageal ganglion, formed by the union of at least four pairs of ganglia, sends off branches to the palpi and legs. The nervous centres in spiders are confined entirely to the cephalo-thorax; but in the long-bodied scorpions, seven small ganglia are developed regularly along the median nervous cords, which supply the different segments, as in insects.

Crustacea.—Still we find the same type pertaining in this class which has characterized all belonging to the sub-kingdom articulate—a type which has obtained for it, in a more modern nomenclature, the more scientific appellation of homogastralia. We find it, too, in this class, passing through all the gradations of which it admits, from the distinctly double ventral cord, with its numerous and separate ganglia, to the perfect concentration of these into a single ganglion, whence nerves radiate to the entire system. Thus in the talitrus (sandhopper), one of the humblest members of the class, we find the supra-oesophageal mass or brain to consist of two separate ganglia, united by a short commissural cord; these give off the usual sensorial nerves to their respective sides. From these pass longitudinally the oesophageal cords, which terminate in two sub-oesophageal ganglia, united as in the former case, which furnish the nerves of the masticatory apparatus. From these a chain of nine ganglia are continued on either side, similarly connected, which supply their respective segments. The squilla mantis presents an advance on this arrangement, inasmuch as the ganglia of each segment have coalesced laterally, whilst the sub-oesophageal and two succeeding ganglia of the thorax have coalesced longitudinally, into a single ganglion, leaving but three additional ganglia in the thorax and six in the abdomen. The stomatogastric, as indeed throughout the class, are given off from the oesophageal cords. In the pagurus, or hermit-crab, the thoracic ganglia have coalesced into three (inclusive of the sub-oesophageal), the central of which is the largest, and, with the third, supplies the feet; from the latter, two small, long cords pass to the anus, where they terminate in a small ganglion which supplies the muscles of the caudal plates. It is in the crab, however, that the greatest concentration is found, for here the thoracic and visceral ganglia are agglomerated into a single oval mass, which supplies the masticatory organs and those of locomotion. The cephalic ganglia (for the mass is really of plural composition, as will be evident), as in all other cases, supply the eyes and the antennæ, a branch from which latter now constitutes the auditory nerve.

Since the able investigations and observations of Mr. G. Newport directed inquiry into the subject, much attention has been devoted to the discovery of the respective tracts of the sensory and the motory functions in the class under consideration. The best elaborated opinion, however, conveying all that is really known on the subject, is expressed in the following paragraph from the surpassing lectures of our ablest philosopher in the science, Professor Owen:—"Three principal divisions of the nervous system of the crustacea may be defined, according to the views which I entertain of their functions. Thus, admitting from analogy that the supra-oesophageal ganglionic centre is that in which true sensation and volition reside, then those nervous filaments which are exclusively connected therewith, and some of which would seem to extend the whole length of the animal along the dorsal aspect of the ganglionic columns, would form with their ganglionic centre the true sensori-volitional system; whilst any other ganglions superadded to the abdominal columns, with the nervous filaments terminating in or originating from them, would constitute the system for the automatic reception and reflection of stimuli. The stomatogastric nerves, connected partly with the brain and partly with the oesophageal columns, will form a third system analogous to the great sympathetic or organic nerves of the vertebrata."

SUB-KINGDOM MOLLUSCA.

Tunicata.—The low degree of vitality enjoyed by the creatures of this class endows them with well-nigh the humblest form of nervous development. Between the inlet and the outlet it is to be found a single ganglion, whence filaments are given off to the circular muscular fibres of these orifices; branches likewise pass down longitudinally, supplying the respiratory tube, and are reflected upon the oesophagus. Ganglia are spoken of as existing among the viscera, and constituting a sympathetic system; but this requires to be confirmed by further investigation than has yet been applied to it. The existence of cephalic ganglia, or brain, is altogether unnecessary in these acephalous and (properly so called) senseless molluscs.

Conchifera.—The principal nervous centres in this sub-vitalized class consist in the most elevated genera of three pairs of ganglia (the second or central often constitute a single bilobed ganglion), the labial, the pedal, and the branchial. The first of these, or labial, best deserves the title of cephalic ganglia, from their position above the oesophagus and the distribution of their nerves; they are connected together by a short transverse cord; supply the labial processes, and send forward trunks to the anterior and backward to the posterior adductor muscles. The pedal ganglia connect together branches from the latter trunk, at the base of the foot, and principally supply that member and the viscera. Whilst the branchial ganglia connect the posterior adductor trunks at that muscle, supply the branchiae, that part of the mantle in its own immediate region, and by two large branches the posterior part of the tentacled margin of the latter, on which its ramifications anastomose with those of similar trunks given off from the labial ganglia. These supply the ocelli, ranged along the inner margin of the mantle in the pecten. The branchial are much the largest of the ganglia.

Gastropoda.—Individuals low down in this class present us with but little advance on the conchiferous type. The cephalic ganglia at the sides of the oesophagus are connected by a commissural cord passing over it; from these ganglia pass two cords, terminating, as in the former case, in pedal and branchial ganglia, but now, however, in close proximity, and situated much higher up in the body of the animal. The cephalic ganglia supply the antennæ and ocelli, and likewise send downwards and forwards two filaments, each of which terminates in a ganglion (joined to its fellow by a delicate nervous loop) below the pharynx (the pharyngeal ganglia), which supplies this latter, the mouth, and the tongue. In the helix the pedal and branchial ganglia are concentrated into a single sub-oesophageal ganglion, connected by a double cord with the supra-oesophageal mass; from this the visceral, branchial, and muscular nerves radiate. In the onchidium the cerebral, pedal, and branchial ganglia have coalesced into a single supra-oesophageal mass, whence a ring is formed by a delicate filament round the oesophagus. The pharyngeal ganglia are united into one. In the slug and snail tribes the nervous centres consist of a supra and infra oesophageal mass, connected laterally by a triple nervous cord. From the former of these two masses are given the nerves of the tentacles and ocelli, and on each side two delicate filaments, which terminate in a small pair of stomatogastric ganglia at the side of the oesophagus; from the sub-oesophageal mass are distributed nerves to the foot, and to the organs of respiration and circulation. In those species in which the cephalic ganglia are not in juxtaposition, the line of connection between them is a thick band of nervous matter, not a mere filament, as in other cases. To the labial or pharyngeal ganglia Professor Owen ascribes the residence of the olfactory sense; to the sub-oesophageal, probably belongs that of the acoustic faculty. We

find then in this, as in other classes, and from class to class along the great scale, that advancement in development is invariably accompanied by concentration of the nervous centres.

Pteropoda.—The nervous centres in this class are all concentrated about the oesophagus; upon the superior portion of a ring surrounding which are developed two cerebral ganglia, supplying the sensory filaments; whilst to the inferior margin of the collar, laterally, are connected the pedal and branchial ganglia. From these are derived the filaments supplying the entire body.

Cephalopoda.—In this interesting class the principal nervous centres are not only confined to the head, but actually assume the dignity of an encephalon, inasmuch as they are protected more or less perfectly by a cartilaginous cranium (developed only inferiorly in the nautilus, but entirely, *i. e.*, over the whole mass, in the sepia officinalis). The same type holds good in this as in the former classes of the molluscous sub-kingdom, but with this advancement. The supra-oesophageal mass in the nautilus consists of a thick cord, terminated at each extremity by a ganglion, which is attached inferiorly, both anteriorly and posteriorly, to a ganglion which, stretching round the oesophagus and coalescing, form an anterior and a posterior sub-oesophageal ring. The cerebral mass supplies the mouth, and it is said the olfactory apparatus; its ganglia, the eyes. The anterior sub-oesophageal ring furnishes filaments to the tentacula; whilst the posterior sub-oesophageal ring sends off numerous flattened fibres to the shell-muscles, and two respiratory nerves which, forming a ganglion at the base of the gills, at their respective sides, distribute branches to these organs, and to the heart; likewise a plexus of delicate visceral nerves, connected with a small ganglion on the stomach. In the higher genus sepia, the supra-oesophageal mass has the form of a heart-shaped body, slightly indented into two halves by a line running from the base to the apex on its superior surface; to these laterally and inferiorly are attached the optic ganglia. Anteriorly two crura descend from the brain, and, passing round the oesophagus, meet in the anterior sub-oesophageal ganglion, which supplies the feet and tentacles as well as the infundibulum and acoustic apparatus; it likewise gives off two nerves which meet two others from the cephalic ganglion, and form together a ganglion above the pharynx which supplies the mouth. Posteriorly two crura descend similarly to the anterior, and form the posterior sub-oesophageal ganglion (connected laterally with the anterior), which, in place of sending numerous nerves, as in the economy of the nautilus, for the shell-muscles, gives off two large branches which form a ganglion immediately before supplying the mantle. In the long-bodied members of this class these nerves, from their parallel dorsal position, have very much the character of a rudimentary spinal column. The branchial nerves, arising between the origins of the pallial or mantle nerves, supply the branchia and heart, as in the nautilus. It is to be remarked that the nerves which supply the arms have ganglia distributed upon them immediately over their respective acetabula or suckers, so that the arrangement in each of these is not very dissimilar from that of the ventral columns of the homo-gangliata.

"We may regard" (remarks Professor Owen, instituting a comparison between the parts just considered and their analogues in the superior class, vertebrata) "the cordiform superior mass, which is principally in communication and co-exists with the large and complex eyes, as the homologous of the optic lobes. The smallest supra-oesophageal mass, anterior to the optic lobes in the octopus and some other cephalopods, may represent an olfactory lobe, or the rudiment of a true cerebellum. I have already indicated the parts (the lateral connecting bands of the infra and supra oesophageal masses) which seem to represent the crura of the cerebrum; they unite with that large sub-oesophageal nervous mass, which, since it gives origin to the brachial

nerves, or the analogue of the fifth pair, to the acoustic and respiratory nerves, and to those two large moto-sensory columns which so obviously represent, by their structure, position, and distribution, the spinal chord of the vertebrata, must be regarded as the representative of the medulla oblongata: it is obviously the part of the nervous centre which is most intimately connected with the vitality of the animal, and which is, therefore, here, as in the higher animals, the deepest seated and best protected part of the nervous system."

From the unsymmetrical arrangement of the nervous system in the class under consideration, it has been proposed to substitute the term hetero-gangliata for that of mollusca.

SUB-KINGDOM VERTEBRATA.

Pisces.—We now arrive at a rudimentary form of that exalted type of a nervous system which attains perfection in ourselves. A brain protected by a skull and a dorsal nervous column, encased in a spine constituting the centres of the nervous influence—that is, as it is expressed, of animal life; whilst a distinct system presides over that of organic life—the sympathetic. The brain is very far from occupying the entire skull, as in ourselves; indeed it occupies but a comparatively small portion of it; the interspace between its lining, the pia mater, and that of the skull, the dura mater, being occupied by an ample development of cellular tissue filled with fluid. No arachnoid tunic exists. The cerebral mass consists of three pairs of lobes or ganglia succeeding each other, terminated by a single lobe, the cerebellum, and based upon the origin of the medulla spinalis—the medulla oblongata. The anterior and smallest pair of ganglia are the olfactory; the second and larger are those of the cerebral hemispheres, or organs of intelligence; whilst the third and largest are those whence the optic nerves originate—the optic ganglia. The cerebellum, or last link of the encephalic chain, is a cone-shaped body, with the apex directed backwards; it is not lobulated as in the superior classes, of which it is indeed little more than the representative of the processus vermiformis. The cerebral hemispheres present a perfectly unconvoluted surface, and, except in the sharks and rays, have no excavations or ventricles in their interior. From the inferior surface of the cephalic mass, the medulla oblongata, we have nerves given off almost identical with those of our own cranial system:—Thus, the third or motores oculorum, the fourth or pathetic, and the sixth or abducentes, are distributed principally to the muscles of the eye; the fifth or trifacial gives off an ophthalmic branch, distributed to the parts about the nose, a superior maxillary branch to the parts about the upper jaw, and an inferior maxillary branch to the parts about the lower jaw; the seventh supplies the auditory apparatus; whilst the eighth or respiratory gives off the glosso-pharyngeal to the branchial arch, fauces, and tongue, the par vagum, to the posterior branchia, pharynx, oesophagus, and stomach, and a spinal recurrent to the shoulder and swimming bladder. The distinct origins of the first and second cerebral nerves (the olfactory and the optic) have already been pointed out. The ninth or hypoglossal is wanting. The spinal cord consists of two parallel columns in juxtaposition, except at their origin, where they decussate, as it were, to form the oesophageal ring of the inferior classes, necessarily not needed in the inverted or dorsal position of the column now assumed. The triangular aperture occasioned by their separation, and which the cerebellum is not sufficiently large, in most instances, to cover entirely, constitutes the fourth ventricle. From this ventricle a canal runs through the spinal column, to some extent separating the two halves of which it is composed. The nerves on either side, given off for the supply of the body, originate by two roots, an anterior and a posterior; and on the latter, very close to its origin, is developed a minute ganglion: thus we acquire the distinct motor and sensory tracts of the highest classes. In the lower vermiform members of the class, as,

for instance, the eel, the spinal column is of uniform diameter throughout its length; but, as we advance and acquire organs of locomotion, it acquires an increase of calibre, almost ganglionic, opposite the origin of these members. The sympathetic or ganglionic system, though minutely developed, assumes its position on either side of the vertebral column, supplies the viscera, forms plexuses about the larger vessels, and communicates with the cerebro-spinal system, as in the higher classes.

Reptiles.—The encephalon of this class makes but little advance on that of the former. The arrangement of its ganglia is precisely similar. The cerebral hemispheres have acquired, however, a relative increase of volume, which causes them slightly to fall back upon the optic ganglia; they are likewise connected together by an anterior and posterior commissure, between which is the third ventricle; their surface is still unconvoluted, but the interior of each is in all cases hollowed out into a large ventricular cavity, wherein are found the corpus striatum and the choroid plexus. The cerebellum is relatively smaller than in the former class; it is still unlobular. The cerebral nerves necessarily are, as nearly as possible, identical with those already described; it is to be remarked, however, that the optic nerves, very near to their origin, are bound together by a short commissure, from which they immediately decussate as in ourselves. The ninth, or hypoglossal, supplying the muscles of the tongue, is now distinctly emitted. The spinal nerves differ in no wise from those of fishes, or indeed from those of the classes above them; the same scheme being observable throughout; which remarks equally apply to the sympathetic system, with the reservation of increase of size of the ganglia as we ascend.

Aves.—The only advance to be noticed in the encephalon of birds is that of the increased development of the cerebral hemispheres, which now considerably overlap the optic ganglia and push them apart; they likewise entirely conceal the olfactory ganglia, the size of which has become considerably reduced. The cerebellum also has attained greatly increased dimensions—to the perfect closing in of the fourth ventricle. In no other respect is especial observation called for.

Mammalia.—Having now arrived at the summit of the scale, let us see how the various parts of the complicated mechanism already considered have been left by progressive development; and we may commence the review with the premises that, however tortured by scientific mysticism, the encephalon, even of the most exalted member of this class—the human being—consists of but the same simple primary elements as that of creatures of inferior status. The olfactory ganglia have dwindled into mere bulbous cords, and, instead of coming off, the most anterior of the mass appear to arise from the base of the succeeding pair of ganglia or cerebral hemispheres, the extraordinary development of which has so considerably overlapped them. The cerebral hemispheres not only overlap the olfactory ganglia anteriorly, but they likewise overlap the optic ganglia posteriorly, and high up in the class the cerebellum also. These hemispheres have become more intimately connected by an additional band of union passing between them, from before, behind, termed the corpus callosum, and by several minor bands associating the internal parts. As we ascend in the class, and intelligence becomes more characteristic, the cerebral hemispheres become virtually larger by folding in upon themselves, and so we have gyri, or convolutions, and sulci, or grooves. The optic ganglia, like the olfactory, are thrust inferiorly, their relative size considerably diminished, and their shape undergone transformation; for, instead of two plain spherical bodies, they are now, each one, marked by four prominences—the two anterior named nates, the two posterior testes. From their quadrid appearance these ganglia are now designated the corpora quadrigemina. The nates give origin to the optic nerves. The cerebellum has now acquired considerably in-

creased dimensions; not as we may say on its original type, for that consisted of nothing more than the processus vermiformis, and this has in reality diminished; but in the acquisition of two considerable lobes or hemispheres; a band of connection between which is established inferiorly in a broad prominent commissure, termed the pons varolii. At the posterior margin of the pons the medulla oblongata, or encephalic commencement of the medulla spinalis, takes its rise. This latter has now assumed the shape of a flattened cylinder, marked by a longitudinal depression or indentation, both anteriorly and posteriorly (exhibitive of the original distinctness of the columns), and two similar, though more superficial, equidistant lines on each side of the two described; thus marking the cord, as it were, into six columns. Its interior is described as being "composed of two hollow cylinders of white matter, placed side by side, and connected by a narrow white commissure; each cylinder being filled with grey substance, which is connected by a commissure of the same matter. The form of the grey substance, as observed in the section, is that of two half moons, placed back to back, and joined by a transverse band. The horns of the moons correspond to the sulci of origin of the anterior and posterior root of the nerves. The anterior horns do not quite reach the surface; but the posterior appear upon the surface and form a narrow grey line." (Wilson.) The nerves given off from this column for the supply of the body (generally about thirty pairs) have a double origin—an anterior or motor, and a posterior or sensitive, on which latter a ganglion is developed: these shortly unite into the single

nerve. The sympathetic system consists of a series of well-defined ganglia, arranged on each side of the spinal column, supplying the viscera; forming plexuses about the large vessels, and communicating freely with, and apparently receiving fibres from, the nerves of both the other systems. We have, then, now arrived at the highest concentration of the nervous centres. The ganglia of special sense (olfactory and optic) sufficiently denote their functions. To the cerebral hemispheres belong the attributes of thought and control. The medulla oblongata is especially the origin of the respiratory function. The cerebellum seems to be in some way connected with the locomotive powers. Whilst the medulla spinalis is the source of that reflex power, so manifest and important lower down in the scale of creation, but which is, as has been well remarked, necessarily secondary to the superior intelligence of will.

The term myelencephala, expressive of the characteristics of brain and spinal marrow, has been proposed by Professor Owen as a substitute for the less expressive term, vertebrata.

In conformity with the plan adopted in my preceding papers, I shall now attempt to give a tabular view of the order of progression of the more important parts we have been considering. Such scales must necessarily be imperfect in the highest degree (and especially so in the present instance); but, whilst they are calculated to bring in serviceable review before the careful reader the more prominent particulars already dilated upon, I cannot conceive that the almost epigrammatic brevity with which they are necessarily drawn up can be at all calculated to mislead him.

KINGDOM ANIMALIA.

Entire Nervous System.

Classes.	
Sub-kingdom. Radiata.	Porifera Diffused molecules.
	Polypifera Delicate circle and rays.
Hemito-neuria.	Aculephæ Similar; with supposed ganglia.
	Echinodermata Similar; with a definite ganglia at each ray.

Analogue of Cerebrum.

Sub-kingdom. Articulate.	Annelida Bilobed reflex sensory ganglion (supra-oesophageal).
	Insecta Similar; optic nerves originate from lobes.
	Arachnida Similar.
	Crustacea Similar; lobes agglomerated.
Sub-kingdom. Molusca.	Tunicata Double ganglion connected by transverse cord, but semi-sensory.
	Conchifera Double ganglion on upper portion of oesophageal ring.
	Gasteropoda Encephalated cordate supra-oesophageal ganglion, and anterior sub-oesophageal ganglion.
	Pteropoda Cephalopoda.

Cerebrum.

Sub-kingdom. Vertebrata.	Pisces Encephalated three pairs of ganglia (olfactory, cerebral hemispheres, optic) cerebellum; medulla oblongata (nerves eight pairs).
	Reptilia Similar; cerebral hemispheres enlarged; lateral ventricles formed (nerves nine pairs).
	Aves Similar; cerebral hemispheres enlarged; also cerebellum.
	Mammalia Cerebral hemispheres convoluted at maximum of development; olfactory and optic ganglia reduced to appendages on base of former.

Analogue of Medulla Spinalis.

Chain of reflex motory ganglia—about twenty-one.
Similar—about eight.
Single large sub-gastric ganglion and abdominal cords.
Single large oval ganglion.
Ganglion between inlet and outlet.
Pedial and branchial ganglia.
Single sub-oesophageal ganglionic mass.
Ganglia on inferior portion of oesophageal ring.
Posterior sub-oesophageal ganglia dorsal trunk.

Medulla Spinalis.

Approximated double dorsal column in opine; nerves symmetrical, arising by double origin.
Similar; columns more united.
Similar.
Similar; column marked into six lines.

THE PHYSIOGNOMY OF DISEASES OR SEMEIOTICS IN THEIR ASSIMILATIVE CHARACTERS.

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

In *hydrops pericardii* the countenance is more anxious and distressed than in mere valvular disease; the orthopnea is greater; the akenasiæ are more active in the respiratory movements; there are more fullness and greater dullness over the præcordial region, than in the chronic forms of cardiac disease; whilst the sounds of this organ are distant and less marked to the ear; by the use of the heautophonon we may, moreover, pretty well judge of the extent of the effused fluid, and of the boundaries of the distended pericardium.

Whilst in hydrothorax or dropsy of the pleura, at which not unfrequently attends the former effusion, the orthopnea is not only severe, but the dullness on percussion is so marked, and the auscultator's vocal sounds are so manifestly altered over the seat of the fluid, that a mere novice in the school of auscultation can easily attain to a knowledge of the diagnosis of this form of thoracic disease. Neither is the recognition of unmixed or mere emphysema a difficulty. The barrelled chest, the clearness of percussion, the absence of a pure respiratory murmur, the hernia of the lung shortly to be described, and, above all, the strong physiological characters of this disease, are so many illustrations of the morbid changes of the lung, that, I feel assured, if medical practitioners would only attend to these few simple principles in diagnosis, emphysema would be much more easily recognised than it generally is. But when we pass to this change in the pulmonary texture, there is superadded either dropsy of the lungs or of the pleura, or of both, and the case is somewhat more obscure; then the countenance is haggard, distressed, and dusky; the respiratory efforts are more laboured, and the auscultatory signs are more perplexing to the physician. The dullness on percussion, from the presence of fluid in the thorax, masks the physical signs of emphysema; and I know of no decided test which will enable us to ascertain that this complication of diseases exists except by the use of the voice of the patient, and by that of the auscultator. The former test is a negative evidence, and the latter is a positive one. When the ear is placed over such a chest behind, and the patient is encouraged to talk, the sound of his voice, and the thrill or vibration of that sound, are neither of them heard nor felt by the operator's ear or hand. But, on the other hand, if the heautophonon is placed over the same spot, the practitioner's voice becomes muffled and deadened, just as it does when he talks with his mouth surrounded by a wet blanket or a feather pillow. I am aware that these physical signs are also met with in empyema of the chest, but this presents no difficulty whatsoever, inasmuch as the rise, progress, and symptoms of the last-mentioned disease in no wise correspond to those of emphysema; coupled with fluid in the lungs and pleura, so that an observing mind will be at no loss to form a diagnosis between the two.

Emphysema pulmonum, or that condition of lung which is produced by the escape of air from the cells of the lung into the cellular membrane which connects these cells together, is usually one of the main features of disease in asthmatic patients. These individuals always exhibit the very opposite state of respiration to that of a person suffering from pneumonia or pleuritis.

The thorax in this disease is acting in every part; the whole set of respiratory muscles are in full play; the shoulders are prominently thrown forwards, the clavicles, as it were, buried behind them, and the diaphragm and abdominal muscles take an active part in the efforts of respiration; added to which, if the eye glances over the chest before and behind, whilst the trunk is erect, there will be a manifest and universal bulging of the ribs, so that the front of the thorax is rounded like a barrel, and this convexity is so

APOTHECARIES' HALL.—Gentlemen admitted members on Thursday, March 9:—John Samuel Pearse, Gateshead; Edward William Pews;

Prosper Felix Louis Napoleon De Lanué, Devonport; Charles William Bloxham, Hales Owen; and Edwin Thomas Watkins, Royal Navy.

great on viewing the posterior parts of the chest, the *scapular margin*, *beard or sulcus*, laid over the ribs, will leave a considerable space in the region of the spine, and show that this bony canal is considerably lower than the convex surface of the thorax.

It should not be said upon this branch of the subject, as dislocation in the parietes of the chest must be quite as palpable, at one cursory glance as any other deviation of symmetry in the form of the thorax from disease within its walls.

But an observation ought here to be made of a fact which will help to a decision on the nature of the disease before the ear is placed on the chest of such a patient. It is this: that if there is emphysema to any extent, and it has reached the upper lobes—for emphysema usually begins in the lower lobe, and spreads upwards—each act of coughing produces "hernia of the lung," so to speak, in that triangular space which is formed by the clavicles, sternoclavicle, and omohyoid muscles. At this point, and at this point only of the thorax, we know that the pleura is wholly unprotected by muscle; and, as the lungs are jerked up by each distressing effort of coughing, the emphysematous lung and pleura are forced up into this triangular space, and may be seen as one distinct tumour.

This appearance alone has often enabled me to form a diagnosis of a pair of emphysematous lungs before I had even applied my ear to the chest.

As I have already stated, when treating of the morbid respirations in asthma and emphysema, I have said that the voice becomes altered, is hoarse, shrill, and loud; and it may here be observed, also, that such patients are usually very inquisitive in the description of their complaint; there is a propensity in them to talk in long, unbroken sentences. The forced air in the emphysematous lungs, if one may so term this point-up or extravasated fluid, enables them to do this. Respiration is not the chief distress which gives rise to dyspnoea, for such is a prolonged, and not a very laboured, effort; but it is the short and distressed effort to inspire which is the main feature in the dyspnoea of this class of patients: they have, in fact, more air in their lungs than they want, so that, if the two actions of respiration are watched, it will be seen that the expirations compared with inspirations are fixed to two, (a)

In oedema, or dropsy of the lung, the thorax presents to the eye but little difference from the foregoing changes as noticed in the outset, except that there is no hernia of the lung visible, nor so much convexity of the whole thorax as in

(a) The very opposite condition of voice, respiration, and manner of answering the questions put by the medical man, may be noticed in pneumonia, pleuro-pneumonia, and pleuritis, as contrasted with emphysema. The patient, in these diseases, fears to talk; the voice is subdued, as not much air is allowed to be thrown upon the larynx; in short, he has none to spare, we may say; and, as he attempts to answer your questions, there is an abrupt monosyllable or two uttered, and he stops before he has scarcely framed or uttered a small sentence. Nurses, the most experienced, cannot direct themselves of the notion that such patients are either peevish, obstinate, and are resolved not to answer; or else that they are deaf, and cannot hear medical queries; or, lastly, that they are muddled (a phrase denoting with them insipient delirium), and cannot understand the questions. But, truly, neither of these suppositions is correct; and when nurses have begun to scold such patients for not answering the doctor's questions, especially in auscultating the lungs, when you desire to listen for vocal sounds, as ceophony or bronchophony, I have usually insisted upon their being silent; have desired the patient to cough, and the lungs have then replied to a greater extent than before, and they have then been enabled to expend more breath, and so answer questions in a more prolonged manner.

emphysema. The eye gathers but little additional information from this change of structure beyond the former disease.

By dropsy of the lung is meant that fatal malady so often complicated with emphysema, in which, after protracted struggles of the respiratory organs, the whole capillary system of the lungs suddenly pour out fluid into the pulmonary cells, but more especially into the tissue connecting these cells together. It is not the engorgement or serous infiltration of the first stage of pneumonia, but a thinner aqueous exudation into the cellular substance of the lung itself; for serous effusion from pneumonia proceeds from the inflammatory vessels which are spread over the vascular air-cells themselves, whilst this exudation is almost wholly from the exo-cellular vessels, and by its rapid accumulation it throws the lungs, and renders them useless, and death ensues from asphyxia.

Dropsy of the pleura, or hydrothorax, is simply an effusion of serous fluid from the pleuritic capillaries into the cavity of this membrane. You will find the patient usually sitting upright in bed, or preferring to do so, if he can conveniently, either propped up by pillows, a bed-chair, or otherwise choosing to sit up all night by the fire in an easy chair. As this disease is the sequel of some antecedent, though relative and serious morbid change in the respiratory organs, as the heart or lungs, so the eye of the practitioner gathers more information from observing the posture of the patient, than from any particular changes in the symmetry of the external parietes of the chest. This state of breathing, called orthopnoea is always present in dropsy of the pleura, and, in addition to it, the lower parts of the chest are passive in respiration.

The attention of the reader should now be drawn to the main facts which are to be gathered from an ocular examination of the thorax and abdomen in three or four, at least, of the most formidable diseases of the respiratory organs. 1. Pneumonia, or pleuro-pneumonia. 2. Pleuritis. 3. Phthisis. 4. Emphysema, with or without dropsy of the lung.

In the first instance the surfaces of the air-cells are acutely inflamed; the air entering them is a source of irritation, and aggravates the patient's sufferings, therefore he is unwilling to admit it, at least no more than he is absolutely obliged to do.

In the second instance he is unwilling to do so, not because the air-cells are irritated thereby, but because the full expansion of the lung over the inflamed pleura distends this inflamed membrane, and thus increases his distress.

In the third case the patient is unable to expand his chest, and to allow a natural amount of air to pass in, because the solidification of the lungs on the one hand, and the firm adhesion of these organs to the walls of the chest on the other, render it impossible for him to inspire the same amount of air as a healthy individual does.

Whilst, in the fourth instance, the respired air is wasted by its escape from the ruptured air-cells, is spent over the interstitial cellular membrane connecting the air-cells together; so that, although the patient is both willing and able to respire more than an ordinary column of air, yet, by his struggling efforts to do so, it is manifest that little air is actually employed in oxygenizing the blood, and that his sufferings are increased by the lungs being kept permanently distended.

(To be continued.)

WESTMINSTER HOSPITAL.

Reported by HENRY BUTLER, Esq., M.R.C.S.

CARIES OF THE TARSUS—CHOPART'S AMPUTATION OF THE FOOT.

George Harrison, aged eighteen, a tall, unhealthy-looking youth, was admitted into Mark Ward, under the care of Mr. Phillips, on the 24th of November, suffering from caries of the metatarsal and some of the tarsal bones.

He states that he had been losing health for some time before his admission, feeling very languid and unable to make any exertion. Nine weeks previous to his admission he had severe pain in the ankle, accompanied by swelling and redness; the pain was severe and stabbing, increased by motion, so as to prevent his walking.

Linseed-meal poultices were applied to the part during six weeks, in which time two or three small abscesses had made their way to the surface.

At present the anterior portion of the foot is much enlarged and reddened; there are numerous small fistulous openings over the upper surface of the foot, and on the inner side, leading down to the denuded bone; but on careful examination it did not appear to extend to the tibio-tarsal articulation; the soft parts in the neighbourhood are congested and infiltrated. His general health was attended to, and the soft parts restored to a more healthy condition.

A consultation was held, and upon examination it was evident that the caries extended to several of the metatarsal bones, and probably to the tarso-metatarsal articulation. It was, therefore, decided that a partial amputation of the foot should be practised.

The operation of Chopart was performed by Mr. Phillips, while the patient was apparently in the gentlest sleep induced by chloroform. The parts were kept together by sutures, and straps were brought down from the calf of the leg, around the stump, and up the anterior part of the leg. The case went on without any unfavourable symptom; the ligatures came away on the twelfth day; the posterior flap was strapped firmly forwards, to prevent the extensors of the foot from pointing the stump downwards. Union took place regularly and continuously, and the boy improved rapidly in health. On the 24th of January, about six weeks after the operation, the stump had cicatrized firmly. There was not any tendency to drag down the anterior portion of the stump, and there was a good, firm, elastic cushion at the end of the stump.

UNIVERSITY COLLEGE HOSPITAL.

STRANGULATED FEMORAL HERNIA.—OPERATION. RECOVERY.

Rebecca L., aged sixty-seven years, admitted July 13, 1846, about six P.M., labouring under strangulated hernia; is a largely framed woman, of fair complexion, married, but had no children.

History.—Two years since, a hernial protrusion presented itself in the right groin; a truss was bought, but she would not wear it, as the bowel was not constantly down. About nine months back, another hernia was observed in the left groin; still, however, she could not be persuaded to take to her truss, and merely attended to the daily evacuation of the bowels. Six weeks ago, after a long walk, the bowel on the left side suddenly descended, and she was attacked with sickness, constipation, and violent pain in the part, which symptoms were relieved by rest and aperient medicine, the rupture going back spontaneously. A similar attack occurred three weeks afterwards, and a third about ten days since, with the same symptoms and mode of relief. Last Tuesday she walked from Islington, and was much fatigued; on the Thursday evening following, fell sick, and complained of great pain in the groins; some aperient medicine was taken, and as quickly rejected; the next morning these symptoms were aggravated, and in addition there were cramps in the legs, and pain in the chest and abdomen; matters continued thus until Saturday, when a surgeon was called in, who stated that he found the patient suffering from vomiting and much abdominal tenderness. He was told that the bowels had acted the day before, but his attention was not directed to any hernial protrusion; prescribed some effervescent aperient, and four pills of colocynth, calomel, and opium, one to be taken every four hours until the bowels acted; hot fomentations to the abdo-

men; two of the pills were retained, the third rejected. Visited her again in the afternoon, and, upon making more strict inquiry, discovered a femoral hernia in each groin, that on the right side being reducible, on the left only partially so; enemata of castor-oil and senna mixture were exhibited, and the bowels acted an hour afterwards. Fomentations to be continued; the taxis was employed, but without success.

July 12. Vomiting continued; bowels not acted; tenderness in hernia increased; general febrile disturbance. V.s. brachio ad 3xij.; this produced partial syncope, after which the bowels acted, and again in the evening; when she felt easier. Taxis again unsuccessful.

13. Stercoraceous vomiting; cannot bear any pressure on hernia; much abdominal tenderness; at her own request was brought to the hospital.

State on Admission.—In the left groin is a small oval-shaped tumour, situated below, and resting partly upon, Poupart's ligament, its long diameter placed transversely; the neck can only be distinguished sinking into the saphenous opening after much careful manipulation. There is a good deal of tenderness in it when touched, as well as over the whole abdomen. The warm bath and taxis having again failed, Mr. Quain immediately proceeded with the operation, the steps of which I shall describe in the operator's own words:—"A crucial incision having been made through the integument and as much of the cellular membrane and fat beneath as could be pinched up with a fold of the skin, fat was still seen, and on dividing it enlarged glands were cut. After dividing a good thickness of these, I came upon a substance like omentum; this was fat over the sac, which is occasionally to be met with, and then a tumour projected forwards. It was pyramidal, or conical, and covered as usual by a thin membranous coat (fascia) devoid of fat. On dividing a thin layer of membrane, an ineffectual effort was made to return the hernia. The sac was laid open with great care; it was in actual contact with the intestine; there was none of that moisture over the intestine on separating it from the sac which is usual, even when actual liquid is not present. I have never seen the two in so complete contact. The woman became faint when the sac was opened; this is common. The bowel was much discoloured, more than brown; part of it was even much more so than the rest; it appeared as if thinned. I returned it into the abdomen, after cutting the stricture at the inner side of the hernia. The sac was thickened at the outer side; extravasated blood in a patch under part of it; the inner side was inflamed; this on account of manipulation in taxis."

After the operation the edges of the wound were brought together with a point or two of interrupted suture, and a compress dipped in cold water applied. Ordered—

R. Hyd. chlorid., gr. iij.; pulv. opii, gr. j., ft. pil. statim sumend.

R. Hyd. chlorid., gr. iij.; pulv. opii, gr. ½; ft. pil. 4tis horis sumend.

Twelve o'clock, P.M. Pulse 120, hard; bowels acted once; motion of a natural colour, but had indurated lumps in it.

14, four A.M. Slept a little; not much tenderness on pressing abdomen; bowels acted again.—Nine A.M. Pulse softer, 106; tongue dry, furred; complains of much thirst; abdomen not tender on slight pressure.—Twelve o'clock. Bowels acted again; liquid motion; pulse 104; skin soft and moist; respiration about fifteen in a minute; uneasiness, not pain, on pressing the abdomen.—Nine P.M. Sutures removed; little attempt at union of the wound; edges brought together with isinglass plaister; no pain in abdomen; bowels acted five times since; twelve liquid motions, with small pieces of fecal matter.

16. Passed a restless night; delirious; bowels very much relaxed; two enemata of starch, with 3ss. of tinct. opii in each, were administered, and retained a little while.—Ten A.M. Lies dosing on the back, with legs stretched out; pulse 100, full and soft; skin moist; no pain on pressing

the abdomen, unless the pressure be firmly made; respirations easy, fifteen per minute; tongue covered with thick fur, which is dark in the centre, and pale at the edges; great thirst; bowels still very much relaxed; wound looking quiet. Ordered—

R. Magn. ust., 3j.; sq. purm., 3jss.; tinct. opii, m. xxx. Capt. cooh. iij. statim et rep. 4tis horis. To take beef-tea when thirsty.

Evening. Restless; has taken three doses of the mixture; bowels not so much relaxed.

16. Slept till half-past one this morning; since then has been wandering; bowels acted twice during the night.—Ten A.M. Pulse soft; tongue furred, as yesterday; great thirst; delirium, which consists of wandering in her mind and talking incoherently; but she is very sensible when spoken to, and knows everybody around her; can bear pressure on the abdomen; bowels more quiet; the wound has united at only a few points, and presents a dark slough at its base. Ordered to take a tablespoonful of brandy in water frequently.—Three P.M. Seems altogether more composed.

17. Better; passed the night well; bowels acted four times in the day, with loose motions; delirium only slight.

18. Better to-day; bowels acted only once; no delirium; continues taking strong beef-tea and brandy; thirst not so urgent.

19. Feels comfortable; slept well during the night; tongue cleaner; wound looking healthy; bowels not acted since yesterday; had an enema of gruel in the afternoon, which acted twice; in the evening an anodyne was given.

20. Passed a restless night; in other respects the same; cont. anodyne.

21. Passed a better night; complains of pain in the wound; bowels open; pulse 90, soft.

22. Passed a good night without the anodyne; tongue moist, cleaning; pulse 90; no pain on pressing abdomen; bowels acted once in the night; don't complain of much thirst; wound looking healthy; slough separating.

23. Feels better; passed a good night; no wandering; pulse 85, full; tongue getting clean; bowels regular; wound slough separated; looks healthy; suppuration free.

24. Going on well; eats a chop with relish.

26. Tongue quite clean; bowels regular; appetite good; wound healing.

29. Sits up during the day; wound dressed with red wash, and healing fast.

31. Doing well; wound healing favourably.

Aug. 12. In all respects well; wound nearly cicatrized; leaves the hospital to-day.

PROGRESS OF MEDICAL SCIENCE.

ACADEMY OF SCIENCES.

Meeting of March 6; M. PUILLET in the Chair.

ANATOMY OF THE SPHERO-PALATINE GANGLION (G. OF MECKEL), BY M. GROS, ASSISTANT-DEMONSTRATOR OF THE FACULTY OF MEDICINE.

M. Gros asserts that the description of this ganglion, by Meckel, is replete with errors: in the first place, Meckel considers this intumescence of the fifth pair as analogous to the Gasserian ganglion, and, at the same time, as the prototype of the sympathetic ganglions—a contradictory assertion, which has thrown much confusion upon the subject. M. Gros shows that Meckel's ganglion, adhering in one point only to the nasopalatine filaments of the fifth pair, remains, however, always distinct from the latter, even to the naked eye. The origin of the mistake committed by Meckel resides in the fact that a portion of the organ, hitherto unknown, escaped his attention: this portion M. Gros denominates the orbital or orbito-cavernous portion, arising at the summit of the orbit, inside the superior maxillary nerve; this part emits from its circumference an immense number of filaments, destined to the orbit and to the cavernous sinus. Sixty may be counted in the horse, thirty in the ox, fifteen in man, ten in the monkey, eight in

the dog, and four or five in the hare. It is to this portion that the ganglion owes its characters of independence. The other part, the ganglion of Meckel, properly speaking, emits grey filaments, which immediately join the white ramifications of the fifth pair, or isolately proceed to the nares and velum palati. Such are the descriptions in the description given by Meckel of this organ. But that anatomist, led astray by his imperfect knowledge of the ganglion, founded upon it a general theory of the sympathetic system. That theory consists in looking upon the sympathetic nerves as deriving their origin from the cerebro-spinal centres; an opinion which Petit, Bichat, and Müller have endeavoured to disprove.

ACADEMY OF MEDICINE.

Meeting of March 7; M. ROYER COLLARD in the Chair.

The meeting was taken up with a paper, read by Prof. Bouillaud, "On the Localization of the Faculty of Language in the Anterior Lobes of the Brain." He endeavoured to show, by the observation of eighty cases, that all important morbid alterations of the anterior cerebral lobules produced constantly a lesion of speech, which might even consist in a total abolition of that faculty, and that the alterations circumscribed to other parts of the cerebrum have not a similar effect. He concluded that, whenever the faculty of language was more or less deeply modified by a disease of the brain, that disease might be localized in the anterior lobes of the viscus, and that in such cases the application of the trephine for the removal of foreign bodies should be made in the frontal region in preference to any other.

A short and uninteresting debate ensued, and the meeting adjourned at five P.M.

LA CHARITE.

COMPLICATIONS OF GUNSHOT WOUNDS.—A CLINICAL LECTURE BY PROFESSOR VELLEZ.

(Concluded from page 398.)

The most frequent complications of gunshot wounds are—1, gangrene; 2, fractures; 3, hemorrhage; 4, strangulation; 5, infection.

We have already said something of fractures, and we will now draw a rapid sketch of the peculiarities of gangrene in the history of gunshot wounds.

Gangrene caused by these injuries may be primary or secondary; the former always exists, being inherent to the nature of the wound: it is characterized by the excessive contusion of the soft parts, and may vary in its degree according to the depth at which the tissues are affected. Secondary gangrene is not a necessary consequence of the lesion; it may depend upon the nature of the injured parts, or upon the progress of subsequent inflammation. The secondary gangrene due to the nature of the injured organs may be produced by lesion of the bones, of the nerves, of vessels, or by crushing of the tissues. Thus, when a ball passes through a limb, and divides its principal artery, gangrene is almost an inevitable consequence, particularly if both the main artery and vein are injured. The laceration of the nerves is another cause of gangrene when the greater number of the nerves of a limb—of the arm, for instance—are divided. The diagnosis of gangrene is always easy, but it is not so to foresee its appearance; in some cases, indeed, that prevision is absolutely impossible. The prognosis of gangrene in a gunshot wound is more serious than that of a common injury. Spontaneous gangrene is, however, of a still more serious import, inasmuch as it is caused by internal maladies upon which the surgeon has little or no action.

The treatment of gangrene in the wounds which now occupy our attention consists in the removal of the mortified part. A great and important question here arises. Should the amputation be performed as soon as gangrene appears, or only after nature or art has arrested its progress? The surgeons who are of opinion that the limitation of gangrene should first take place, before any operation be instituted, say, in such

port of their opinion, that, if amputation is resorted to before the specified time, the stump may also mortify, because the vessels are frequently obliterated above the wound at a height which cannot always be ascertained with precision, and also because the concussion, stupor, and general infection make it doubtful where the gangrene will stop. In order to solve the question properly in each case, it is necessary to consider the cause of mortification. If it has been occasioned by arterial disease, it is best to await spontaneous limitation; but if the gangrene be traumatic, if there be no reason to suppose the vessels diseased above the wound, it would be improper to lose any time. In general, therefore, it is better to amputate before limitation of gangrene, particularly if the mortification occupies the larger part of a limb; when, on the contrary, it has invaded only the fingers or toes, the surgeon may wait until nature has arrested its further progress.

From the 22nd of February to March 2, 1848, 88 wounded persons were admitted into the hospitals of Paris—viz., 461 men, 15 women, 92 soldiers; 48 men, 1 woman, and 12 soldiers have died.

TREATMENT OF STRICTURES, BY M. AMUSSAT.

Although generally easy in simple cases, the treatment of strictures of the urethra is, on the contrary, attended with extreme difficulty, in cases where the obstacles to be overcome are numerous, or placed in different directions. The most experienced practitioners have frequently to struggle with the sometimes insurmountable difficulties, either to obviate a retention of urine brought on by a stricture, or to introduce even the finest bougie into the urethra, when the urine can still be passed, although in a small stream; and further, admitting that a thin bougie has been introduced with success, it is not always an easy matter to substitute a larger one in its place. M. Amussat, whose long experience of disease of the urinary organs gives much value to his suggestions, proposes a new mode of gradual dilatation, which he has employed successfully in several cases. The introduction of a common bougie being found impossible, M. Amussat endeavours to place in the urethra a very small elastic bougie, half a millimetre in diameter. The instrument being fixed permanently in the urethra, the urine escapes along its surface, and twenty-four hours after its application a second bougie of similar diameter is introduced into the passage; others are successively added, so as to form a fasciculus of five or six, which do not by any means impede the excretion of urine; after some little time this can be removed, and be replaced by a middle-sized instrument, equal in diameter to the removed fasciculus of smaller bougies.

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

Absorption of Chyle.—Dr. E. H. Weber says the lacteals, or chyle-vessels, which are situated within the walls of the intestines in man, send off to the intestinal villi branches which ramify within these structures, and form a network the meshes of which are as small as those of the capillary network, while the diameter of the smaller tubes of the lacteal network is also as small as that of the capillaries. A similar lacteal network was observed in the same spaces between the intestinal villi in a case in which the lacteals were fully distended with chyle. But there could not be perceived any of these vessels on the walls of Lieberkuhn follicles, the lacteals existing in the spaces between the villi, as well as in the villi themselves; it is not to the villi alone, but also to the interspaces, that the function of chyle absorption belongs. And, from their absence from the walls of the Lieberkuhn follicles, these follicles possess no share in the process of absorption. Inasmuch as the mucous membrane, with its rich supply of blood-vessels and lacteals, is covered by a non-vascular layer of substance, the epithelium; and since this layer of epithelium, according to some phy-

siologists, is cast off whenever digestion is carried on, and certainly often admits of being easily separated from the vascular part of the mucous membrane after death, it has been supposed that, during the absorption of chyle, this separation of epithelium always takes place, and that the lacteals are thus brought into immediate relation with the materials contained in the intestines. But this view is erroneous, for there has been found the lacteals filled with chyle in cases in which the intestinal mucous membrane was still covered by epithelium, and in which, therefore, the chyle must have passed through the epithelium in order to reach the lacteals. Moreover, during the absorption of chyle, the cylindrical cells of the intestinal epithelium undergo changes in form and colour: in rabbits they become swollen, and contain globules of chyle; and in man the intestinal epithelium, besides cylindrical or prismatic cells, possesses in its deeper layers other round cells, many of which are filled with an opaque white material, others with a clear transparent fluid; from which it would appear that there are different cells, possessing the property of absorbing different kinds of fluids. Besides the epithelial cells on the surface of the villi, other round absorbing cells are found within the substance of these structures; and these also appear to be of two different kinds, some being filled with white opaque contents, others with a transparent oily-looking fluid.

Serous Effusion in the Theca of the Medulla Spinalis.—Dr. H. T. Child relates the case of a young man, aged twenty-six, who had been exposed to a severe rain, and on the afternoon of the next day was attacked with paralysis of the lower extremities, so suddenly that he fell over while engaged at business. When seen at nine a.m., the paralysis had extended so as to partially interfere with the motions of the upper extremities; sensation appeared natural; his pulse was about eighty; there was no apparent tenderness on pressure along the spine; he had passed his urine freely within an hour; his speech was somewhat affected. A cathartic of extract of colocynth combined with powdered cantharides was ordered. At three p.m. it was found that he had lost the power of deglutition; his pulse was now eighty-eight, and rather oppressed. Free cupping was directed along the spine, and a blister to the nape of the neck; in the evening the pulse was 100; he had swallowed nothing, but was profusely salivated, and had been all day, the cause of which it was impossible to trace. The bladder was emptied by means of a catheter, and an enema of infusion of senna and tincture of aloes to be administered. In the morning of the next day his pulse was ninety-six; he had had his bowels evacuated by the enema, and had passed his urine; his mind was somewhat affected; sensation natural; constant restlessness and desire to be moved. Sixteen ounces of blood to be taken, by cups to the spine, and a repetition of the enema. At one o'clock p.m., his pulse was 120; skin hot and dry. A tube being passed into his stomach, a gill of milk and water was injected; he said he felt refreshed; from this time he sank rapidly; his breathing became hurried and stertorous, and at seven p.m., he died, about fifty hours after the first appearance of disease. A post-mortem examination was made thirty-six hours after death. The spinal column in the lumbar region was found filled with transparent serum; the theca was somewhat softened, and there was atrophy of the medulla spinalis. The condition of the brain and other viscera was not ascertained.

On the Treatment of Young Permanent Teeth, that require Plugging.—Dr. F. B. Flagg says, in the course of a series of microscopic observations upon the human teeth, in which he had been engaged for more than two years past, he was early led to observe the striking difference of density in the bony portions of teeth of different ages; particularly in their more external parts, as the bone approaches either toward the enamel or cortex. In two preparations, consisting of

transverse sections at the neck, one, an adult tooth, the other of the age of eight years, he had observed this peculiar development most decidedly illustrated. A section of the older tooth being prepared sufficiently to allow the light to pass between its pores, when subjected to a powerful lens, presented a uniformly fibrous or striated appearance, from the edge bordering upon the chamber of the nervous pulp, quite to its outer surface, with the slight exception of the cortex at this part of the tooth; that being beautifully defined by its clustering stars. A similar section of the young permanent molar, although it appeared equally opaque as the other at its inner portion, yet it gradually became less so, for about two-thirds of the way towards its outer circumference, when all its fibrous appearance was lost, and the external third became perfectly translucent. Much difficulty has been experienced in the practice even of our best operators in regard to saving these early permanent teeth. It is not unfrequently necessary to fill the same cavity twice or three times, at periods varying from one to three years, before we can confidently pronounce it to be an operation lasting and permanently useful. The probable reason for this is the change which is constantly progressing within the tooth, necessary to its growth and full development; the capillary tubes in the immediate vicinity of the cavity so filled, evidently acting to its detriment. It is reasonable to suppose that this condition may be superinduced by vital action being in contact with a foreign substance. Be this as it may, the following practice, having been pursued with uniform success, is recommended to others desirous of benefiting the condition of young sufferers in this respect. After removing every particle of decay, as much time must be devoted to burnishing the bony surface as is necessary to close the mouths of the tubuli opening into the cavity. This should be done with a smooth instrument, capable of reaching every portion of exposed bone, and with sufficient strength to cause the bone to present under the instrument somewhat the feeling of enamel; then wipe dry, and fill full, solid, and finish.

A Case of Ovarian Tumour.—Dr. A. Channing states the case of a woman, married, and had children, who was troubled with a tumour, filling most of the lower part of the abdomen; it was unequal in its outline, as if composed of many tumours. It was felt in the vagina, and so far filling it as to press the neck of the womb firmly against the symphysis, giving much trouble in passing urine. The uterine periodical function continued. Much suffering attended this disease. At times acute inflammatory attacks. The health had sunk, emaciation had occurred, the situation of the patient seemed hopeless. In its treatment, constant efforts were made to sustain the patient, while means were used to keep inflammatory processes in check, and to prevent increase of the tumour. Leeches, vesication, iodine ointment, hydriodate internally, sol. muriate of lime, &c., were among the means employed. At length a new symptom showed itself, which was the precursor of recovery. An involuntary and copious liquid discharge took place from the rectum. Some of it was collected in a vessel and examined. It was a perfectly transparent, dense, gelatinous liquid, very adhesive, and having a distinct albuminous odour. There was not the least trace of fecal smell in it at any time. The discharge went on; the tumour grew less; the pains ceased. She regained appetite, strength, flesh, and is now well. Is not this case of some interest in this regard, that it shows how a disease of the ovary, consisting of a fluid deposit, and threatening life, may disappear, and recovery happen, where opportunity is offered for a constant discharge of the fluid as it forms. The sac or sacs thus have an opportunity to contract. New processes occur in them from exposure to the air, and at length the sac disappears. What is done by a rude surgery, the pulling away or cutting away the sac, or removal of the tumour by excision, is done by a gentler and wiser hand, and recovery