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Original Communications.

**A CASE OF LEFT LUMBAR COLOTOMY
IN A PATIENT SUFFERING FROM
CANCER OF THE UTERUS
AND RECTUM.**

BY GEORGE A. PETERS, M.B.,

Surgeon to the Out-Patient Department, Toronto General Hospital; Surgeon to the Toronto Hospital for Sick Children.

Mrs. G., aged 67 years; came under my care on Oct. 27th, 1887, suffering from malignant disease of the uterus and rectum. There was no trace of cancer in her family so far as known, and her family history was also good in other respects. She had borne one still-born and nine living children, some of her labors being very severe. The menopause occurred at the age of 50 years, and was accompanied by a profuse and offensive discharge from the uterus, which lasted more or less continuously for four years, but afterwards ceased entirely. She first noticed trouble in defæcating about seven years before date. This condition gradually became aggravated, and for 2½ years she had never had a free motion. The fæces collected in the rectum just above the anus, and though she suffered from great and prolonged tenesmus, nothing could be passed by natural efforts, and she was accustomed to remove the mass at intervals of 3 or 4 days by the aid of the fingers. During all this time she had never noticed any blood, but there was at times a great deal of mucus covering the fæces. Progressive emacia-

tion had been observed for about twelve months. Sudden jarring of the body, as in riding over rough streets, caused a deal of pelvic pain.

Oct. 20, 1887. This morning before breakfast she took one ounce of castor oil, which set up most violent colicky pains and extreme tenesmus, but no motion whatever. When I called in the evening I found her suffering great pain, with almost constant tenesmus. On examination, per vaginam, a hard tumor, about the size of an orange, was found attached to the posterior wall of the uterus near the fundus. The cervix uteri was deeply lacerated on the left side, but quite soft and free from ulceration. The finger in the rectum came in contact with the swelling in Douglas' pouch, and also with a hard nodular mass which involved the mucous membrane of the rectum in the whole of its circumference. The finger could be passed for a short distance through the centre of this mass in the axis of the bowel, but the opening then narrowed till it would not admit the finger tip. Slight pressure produced a good deal of pain. The whole mass had been jammed down into the pelvis by the violent straining efforts, and was quite immovable. No part of the tumor could be felt above the pubes, owing to the distension of the abdomen and the pain produced by deep pressure.

An enema of soapsuds brought away a little mucus and a few small masses of fæces, but it was found impossible to pass even a No. 10 gum elastic catheter through the stricture, so that the enema was practically ineffective.

Ordered an opiate and poultices to the hypogastrium.

21st. The opiate having controlled the tenesmus, the mass in the pelvis gradually passed upwards, so that in the morning, when I saw her with Dr. L. MacFarlane, the mass in the rectum could scarcely be felt. There was considerable localized peritonitis, however, and some vomiting.

22nd to 30th. The temperature ranged during this time from 99° to 101° ; pulse 90 to 100. The peritonitis continued, but gradually subsided. During this period neither flatus nor fæces passed per anum, but a great deal of flatus was belched from the stomach, and there was also considerable vomiting, which could, however, be controlled by bismuth and cerium. Morphia was given freely to subdue the pain. Enemata were tried several times, but utterly failed. No purgatives were given by the mouth.

31st. The peritonitis is better, but there is gr. at distension of the abdomen with flatus and fæces, and much pain from persistent peristalsis.

Dr. I. H. Cameron saw her in consultation and agreed with the diagnosis of cancer of the body of the uterus, involving the rectum secondarily.

Nov. 2nd. Assisted by Drs. Cameron, J. Caven and McPhedran, I performed Amussat's operation of left lumbar colotomy. An incision about 4 inches long was made in the left lumbar region, half-way between the crest of the ilium and the last rib. The incision was made parallel with the crest, with its middle point $\frac{1}{2}$ inch behind the middle of that landmark, as recommended by Allingham. The abdominal wall was very thin, and the descending colon was found without difficulty. The bowel was seized at the point where it was uncovered by peritoneum, and drawn well up into the wound. Two strong silk ligatures, about $\frac{1}{2}$ inch apart, were then passed through the skin of one side of the wound, then, missing the muscular walls of the abdomen, through the bowel, being made to include about $\frac{3}{4}$ inch in a longitudinal direction, and out through the skin of the opposite side of the wound. An incision about $\frac{3}{4}$ of an inch long was then made in the bowel between these sutures. Through this opening considerable flatus and a small quantity of fæces escaped. The sutures were then drawn

through the openings by the loop presenting on the inner wall of the bowel, and divided, thus forming four sutures connecting the bowel with the skin. Six additional sutures were inserted in the circumference of the opening, the wound thoroughly cleansed with sol. hydrarg. bichlor., 1-2000; and the skin of the primary incision stitched up as closely as possible to the point of attachment of the bowel. The wound was then dressed with iodoform-gauze.

Nov. 3rd. Temperature $99\frac{1}{2}$; pulse 96. A good deal of nausea from the ether. Little or no pain. Large quantities of fæces and flatus passed by the artificial anus. It was found that a pad placed firmly over the opening caused pain from tympanites, so the wound was lightly covered and smeared freely with an ointment of bismuth, zinc ox. and iodoform.

Nov. 7. Large quantities of fæces continued to pass for some four days. The skin wound healed throughout by first intention, and the attachment of the bowel to the skin granulated rapidly without the formation of any pus.

Nov. 12. (Ten days after operation.) Patient was up for $\frac{1}{2}$ hour. The wound is perfectly healed. The mucous membrane pouts a little when the bowels move. The appetite is good and the patient suffers no pain.

The remainder of the history is quite uneventful. The artificial anus gave no trouble, but it was found best to keep the motion soft with pulv. glycyrrhiz. co.

Towards the last the tumor grew rapidly and she suffered from its pressure effects, viz., œdema and neuralgia of the lower extremities.

She died on May 31st, about seven months after the operation.

A SYMPOSIUM IN EDUCATIONAL REFORM.

BY DRs. MULLIN, TEMPLE, WM. BURT, R. W. POWELL, ECCLES, OSLER, F. J. SHEPHERD, AND M'PHEDRAN.

We have copied a method adopted by the *Philadelphia Medical News*, in publishing the views of a number of prominent members of the profession in the form of a "symposium." The symposium which appeared in the *News* had for its text the co-education and the higher education of women. The subject we have

chosen is that of Educational Reform, practically as it pertains to Ontario. We have asked a number of physicians, representing both the medical schools and outside profession, for replies to a series of questions which will be found below. We have to return our thanks for their kindness and promptness in responding.

QUESTIONS.

1. Do you consider that the Ontario Medical Council requires from students an attendance on too many didactic lectures?
2. If the number of didactic lectures be deemed excessive, what effect will such excess have on the work of the students in the laboratories and hospitals?
3. Do you think that Medical Examinations, as at present conducted by the Ontario Medical Council, are sufficiently practical?
4. Do you consider that the examiners in primary branches should be selected from men who have never taught these branches?

ANSWERS.

Dr. John A. Mullin :

I have time to say only a word or two on the questions you put. I have always thought it was unfortunate that students, whether at primary or final, should be examined by any except those engaged in teaching, for I think there are very few general practitioners who are capable of giving the examination that will test the acquirements of the student. This was the opinion of Dr. Rolph, expressed when the incorporation of the profession was mooted many years ago—formed from what he had seen of the examinations at the old Medical Board—and I think there have been many cases since to illustrate the force of his remarks, where medical men engaged in general practice would be obliged to "read up" on various subjects before entering on their duties as examiners. I think that it might be possible to arrange for some system under which the teachers in the several schools might conduct the examinations—or a committee composed of representatives of the several schools might prepare the questions and conduct the examinations. Of course, one difficulty would be to maintain secrecy as to questions and subjects, but it would not seem impossible to provide for this, and also to provide against undue favoritism to their own pupils. I think it ought to be at-

tempted, for the plan of appointing examiners from the general profession will never do justice.

I have several times refused to take part in examinations on the grounds I have mentioned. If, however, the present system is objectionable as regards the Medical Council, is it not equally so as regards the examiners in the University of Toronto? The matter is a very difficult one to deal with, and I feel that it is a subject that ought to be dealt with by those engaged in teaching, and I feel that any views I have are too crude, and not worth anything.

Dr. J. Algernon Temple, Trinity Medical College :

In reply to your circular letter of the 3rd inst., I would say in reply.

1. No.

3. *Re* Medical Council Examinations. I do not think they are sufficiently practical.

4. Primary Branches Examiners. I think the student is done a great injustice by appointing examiners, in these branches, who are not teachers, and who are not constantly engaged in the daily study of them, especially in such branches as Physiology and Chemistry. How many men, in general practice, are qualified to examine in these branches? The present examiner in Physiology is a notable instance of a mistaken appointment.

Toronto, Feb. 20th, 1890.

Dr. Wm. Burt :

1. Yes.

2. The students cannot give sufficient time to requisite work in the laboratories and hospitals.

3. I have had frequent opportunities of observing the Medical and Surgical Anatomy examinations, and I know them to be most practical. I have endeavored to make my own examinations as practical as possible, and the prevailing answer that I got from students, when pressed for a solution of some easy practical question, was that their opportunities for practical work were not sufficient. So far as I have looked into the matter, the endeavor has been to make all the examinations as practical as possible.

4. As a rule, they should not be. Some Surgeons do not allow their Descriptive Anatomy to leave them by constant reviewing

and occasional dissections, and for examining purposes they would require to review their subject, a work which all teachers of Anatomy are required to do as well.

As to Physiology and Histology, although many are well read in these subjects, still so much of them are experimental and laboratory work that very few, other than teachers, could devote the necessary time to them.

Paris, Feb. 6th, 1890.

Dr. R. W. Powell :

1. Yes. It seems to me that the teaching bodies are best qualified to determine the best mode of instilling information, and, in their own interests, they are likely to keep pace with enlightened systems of teaching; and in my opinion, it is not a part of the duty of the Ontario Medical Council to insist absolutely on a fixed number of lectures in the six months' course, viz., 100.

2. If, from the nature of the rules insisted upon by the Ontario Medical Council, the teaching bodies have, in spite of themselves, to adopt a didactic plan of teaching, then six months becomes too short a time to include laboratory and hospital work with 100 didactic lectures.

3. So far as I am aware, the examinations are well conducted and sufficiently rigid to protect the profession.

4. The present mode of selecting examiners is no doubt open to question; it has long been my opinion that examiners in the primary branches ought to be selected for their peculiar aptitude in that branch, or for special qualifications, and for no other reasons.

Because a man teaches a special subject year after year he is, in consequence, the more familiar with it, and it cannot be successfully urged that teaching disqualifies a man to examine.

Ottawa, Feb. 9, 1890.

Dr. F. R. Eccles, London Medical College :

1. I do.

2. You can't have your cake and eat your cake. If a student spends his time taking a second course of didactic lectures, he cuts short his hospital work. I hope all the schools will

fall in with the idea of only compelling students to take one course of didactic lectures.

3. I do not.

4. I do not.

London, Feb. 6, 1890.

Dr. W. Osler, the Johns Hopkins Hospital :

We have not received a direct reply from Dr. Osler, but take the following extract from a letter that appeared last month in the *Montreal Medical Journal*: "I do not think the Boards are elevating the standard of medicine in demanding so many lectures, but it must not be forgotten that the schools have, until recently, been wedded to the old plan. I do not know a Canadian faculty in which five years ago it would have been possible to carry out a scheme of graded education. In how many is it possible to-day? Now that a four years' curriculum is the rule, and the option of a year with the physician is no longer allowed, the Board and Colleges could easily unite on a scheme of instruction on advanced modern lines. The teaching in each year should be separate, courses of lectures should not be repeated, and laboratory and tutorial work should take the place of much of the didactic teaching. To carry out this plan effectively, the fees would have to be increased in order to pay for additional instructors."

Baltimore, Jan. 2, 1890.

Dr. Francis J. Shepherd, McGill Medical College :

Your questions treat of subjects of vital importance to modern medical education, and I have much pleasure in replying to them.

1 and 2. I am certainly of opinion that all the Boards (not only Ontario) require about twice as much attendance on didactic lectures as is necessary for the good of the student. A short time ago the British Medical Council complained that the Scotch Universities over-lectured their medical students; what would they say to our Boards, which require attendance on nearly double the number of lectures demanded by the Scotch Universities? Why, our students have to attend over (2,000) two thousand lectures; this means a daily attendance of five lectures for four years, thus leaving but a small portion of time

for work in Hospitals, Laboratories and Dissecting-Rooms. The mental and physical exhaustion caused by attendance on lectures is, to my personal knowledge, very great. How many ordinary people, think you, could stand five daily sermons, each an hour long? Why, a forty-minute sermon once a week exhausts many people. Lectures were well enough when books were dear and there were no facilities for practical work, but now that text-books on every subject are within the reach of all, and Laboratories, etc., are holding out their arms for students, the great necessity for a double course of lectures on nearly every subject is not so evident. Lectures, when given, should be demonstrative and explanatory, and not read slowly from manuscript, so that the student may easily take down all those words of wisdom for future use at examinations. I have always held that if it is so necessary for students to actually write down all the lectures dictated to them, then shorthand should be one of the compulsory subjects in the matriculation examination.

One course in practice of Medicine and practice of Surgery should be sufficient. It is a question whether Botany is now essential to a complete medical education, and surely one three months' course each is sufficient for medical jurisprudence and midwifery. The more lectures a student attends, the less time he will have for practical work, and the less energy he can put into this work.

3. I am not sufficiently acquainted with the Ontario Medical Examinations to offer an opinion.

4. The examiners for the primary branches should certainly be selected from men engaged in the active work of teaching these branches, and who are in touch with the science of the day. I am also of opinion that medical politics should have nothing to do with the appointment of examiners, but that the best men should be got, irrespective of their politics, school, or province. If teachers find it difficult to keep ahead of the science of the day by working at the subject the whole year, how is it possible that the general practitioner should fit himself for the post of examiner in the few days or weeks immediately preceding the examination?

Montreal, Feb. 6, 1890.

Dr. A. McPhedran, University of Toronto :

1. I do. The didactic lectures, honestly attended and utilized, would require more labor than any student can endure. They do not furnish either an easy, or an efficient, means of acquiring a knowledge of medicine, therefore all good students attend as few purely didactic lectures as possible, and devote all the time thus gained to other means of getting up their work. I speak from a knowledge of many of the best students in both the schools in this city.

2. In proportion as they attend this "treadmill" of didactic lectures, in that proportion must they, of necessity, neglect their hospital and laboratory work; and, as the examinations are fashioned on the basis of didactic teaching, the average student is compelled to attend the lectures, or similar means of getting up his work, in order to pass them, and, consequently, is able to do his practical work in only the most perfunctory manner.

3. Far from it. Take, for example, the examination in clinical medicine. It consists, I believe, in requiring each student to look at a few simple specimens under the microscope and tell what they are, and to answer a few general questions about a patient whom he is asked to examine, and on whom he has, perhaps, had several clinical demonstrations. This, I understand, is the sum total of his practical examination in medicine. He is not required to know anything about gross specimens; he may not know an inflamed lung from a liver, an atheromatous aorta from an ulcerated bowel, yet, when licensed, he is supposed to be able to perform a *post mortem* examination, and swear to the exact state of each organ in the body.

4. To be an efficient examiner in any subject, implies not only an intimate knowledge of the subject, but also of the capabilities of those to be examined. The former can be acquired by study, which must be constant and carried on, in the primary branches of medicine, with full laboratory facilities; the latter can be acquired only by the teacher or fellow-student who is brought into daily contact with students. No one will find fault with these premises; the inference is self-evident. Only a teacher of physiology, for example, can be expected to conduct an examination in that subject so as to ascertain the proficiency of each student in it;

and to test the student's knowledge is the object of an examination.

Toronto, Feb. 24, 1890.

Selections.

THE IMPLANTATION OF DECALCIFIED BONE.

Dr. Senn is so well known as one of the most original observers among American surgeons that anything coming from his pen is looked at with interest. In a paper in the *American Journal of the Medical Sciences*, he discusses the best means of closing large bone cavities, and gives a series of experiments in animals upon the process of repair after implantation of decalcified bone. Something has already been done in attempting to close large cavities in bone after operation. Neubahr adopted the principle of folding in the skin and soft parts, Lesser that of encouraging the formation of aseptic blood-clot, Hamilton that of supplying a nidus for new growth by sponge. Schede proposed a modification of Lesser's plan by the formation of a blood-clot under a moist blood crust, and this method has perhaps met with most favour. In all of these the implanted substance probably acts as a framework in which development of the bone can extend from the walls of the cavity, and Dr. Senn considers it worth while to inquire whether decalcified and aseptic bone would not prove a more natural and useful packing for such purpose. Dogs of various ages were submitted to experiment—first with a view to determine the usefulness of this implantation after trephining the skull, then in cavities formed in the long bones. After injury or operation on the skull, he considers it can be relied on as a measure well calculated to favour the reparative process, and to provide a firm, thick, unyielding cicatrix. After the experimental formation of bone cavities, it was found that the ossification proceeded consistently from the surface to the centre of the cavity, and without the implantation acting as a foreign body. He therefore extends his observations to the human subject, and details ten cases in which he has used the decalcified bone for packing a bone cavity produced by disease, and scooped out and

disinfected before being packed. These cavities were of various sizes up to that of a pigeon's egg, and were filled with plates of decalcified ox-bone, which had been rendered aseptic by sublimate and by iodoform. The time occupied by the process of solidification was about one to two months, but the results were certainly better than are usually obtained. Care was taken to ensure capillary drainage by means of some absorbable threads, and when the bony implants had been forced into the cavities, it was maintained that any infiltration by blood between the fragments acted beneficially as a cement. The author concludes "that the packing answers the purpose of an antiseptic tampon, and furnishes the best medium for the growth and development of the tissue resulting from the regenerative process initiated by the trauma." One of the cases narrated was not uncommon, one of excision of the knee with tuberculous deposits on the head of the tibia, which were scooped out and a cavity the size of a walnut left, which was packed with the bone chips. There was firm bony union in two months, with complete healing of the wound.

In a case of united fracture of the humerus, when the conditions, owing to crush of the parts and considerable nerve injury, were unpromising, an attempt to substitute bone grafts has been made by Dr. White, the Professor of Clinical Surgery at the University of Pennsylvania. Union had not taken place either primarily, or after scraping the ends and wiring, so that the recent experience of Mr. McGill, of Leeds, and of Dr. Sherman, of San Francisco, of the success of animal bone grafts, induced him to make the attempt. After scraping the ends of the bones, they were brought nearly together; but a number of fragments of dog's femur, which had been taken under careful antiseptic precautions, and mixed with pieces as large as peas, were placed between the ends of the broken humerus, the wound closed, and a few strands of catgut laid in for drainage. The arm was fixed on a plaster bandage, which was renewed after some time, but how long it remained before a second plaster splint was put on is not clear. Two months later this was taken off, and no union had occurred, so the limb was amputated. The usual atrophy of the bones was found, and there had been no septic

changes, nor was there any evidence of the implanted fragments having been a source of irritation. But there was a new formation of bone, apparently in the position occupied by some of the implanted fragments, and this new spur was connected with the lower fragment, and grew in the direction of the axis of the limb. It appeared, therefore, to show a formative effort which, under more favourable circumstances, might have given the case a successful termination.

In connection with this summary of Dr. Senn's results, it is well to refer to the antecedent experiments, clinical observations and achievements of Dr. Macewen, of Glasgow. At the British Medical Association meeting held in Glasgow in 1888, that eminent and original surgeon showed at one of his demonstrations, given in the Royal Infirmary, a series of cases in which cavities in large bones had been treated in various ways, by sponge-grafting, blood-clot, and introduction of chips of decalcified chicken bone, and also by permitting cavities to heal by being filled up with granulation tissue. All these methods serve the same end. The foreign bodies introduced require to be removed by absorption before the granulation tissue which penetrates them becomes converted into connective tissue. In the case of the sponge, it is least suitable, as it takes very much longer time to be absorbed, and is apt to produce irritation, delaying the healing of the wound. The blood-clot is the most easily absorbed, and its component parts break down into granular *débris*, which is readily removed by the leucocytes.

Decalcified bone occupies a medium position, much nearer, however, to the blood-clot, and its absorption, though occupying a variable time according to methods of decalcification and vitality of the tissues into which it is introduced, is generally effected in about a month. But Dr. Macewen found, taking it as a general rule, that cavities in bone were filled up with granulation tissue almost as quickly and as surely when they were treated with ordinary aseptic dressings, in the form of stuffing, the granulation tissue filling up the apertures, and ossification ultimately taking place. There is one advantage, however, of these bone and blood tampons: they permit healing under a single dressing.

It is a totally different matter, however, when one wishes to introduce viable grafts. Here the tissue introduced grows, there being no absorption and penetration of it by granulation tissue. In one such case, when the condyles of the femur were represented at the time of excision of the knee laterally and posteriorly by a mere shell of bone, the interior of which had been filled by a tuberculous caseating nodule removed at the time of operation, grafts were taken from the patella and placed round the periphery of the cavity as well as in the centre.

The wound healed under a single dressing, and the cavity was found to be filled by a hard substance which felt osseous to the touch, and there was firm osseous ankylosis between the femur and tibia. When an ordinary bone cavity has to be filled, much may be done by osteoplastic flap formation, which affords thoroughly satisfactory results, and is much better than those obtained by filling cavities with absorbable aseptic material.

In compound comminuted fractures, even when several inches of shaft are crushed into fragments, the soft tissues being in fairly good condition, Dr. Macewen does not amputate. The bone fragments are removed, rendered aseptic, and reimplanted, and when suppuration is prevented firm union takes place. This was illustrated by a case of a railway servant, who had been run over by a railway waggon and had sustained a compound comminuted fracture at the lower third of both thighs.

On the right thigh there were two large flesh wounds, the one on the inner, the other on the outer aspect of the limb. These communicated with one another and exposed numerous fragments of comminuted bone scattered among the muscles, the fracture involving three inches of the shaft of the right femur. Some of these fragments were impregnated with dirty grease. The main vessels of the limb were intact. These osseous fragments were removed, carefully inspected, and the greasy matter pared from them by a sharp chisel. They were then rendered aseptic and reintroduced so as to form a continuity with the upper and lower ends of the fractured shaft. The wound healed under one dressing; the man was dismissed with two sound limbs, though with a little stiffness of the right leg, especially at the knee-joint.

To sum up—(1) The healing of osseous cavities is, as a rule, performed by granulation tissue, though this takes a considerable time when the cavity is large. (2) The introduction of aseptic absorbable material, such as blood-clot and decalcified bone, facilitates the healing, especially of the superficial parts of the wound. (3) Osteoplastic flaps are more useful and surer, especially for large cavities. These may be aided by bone grafts when there is a paucity of bone in the neighborhood from which the osteoplastic flaps may form.

VALUE OF THE ELECTRICAL METHODS EMPLOYED FOR THE RESUSCITATION OF PERSONS WHO HAVE CEASED BREATHING.

In patients under ether, the movement of the diaphragm is an exceedingly interesting study, for, before the condition known as surgical anaesthesia is developed, while there is still some rigidity, and the throat reflex is not completely abolished, the contractions of the diaphragm are frequently so violent that unless the laryngeal opening be absolutely free, the intercostal spaces are depressed, and the abdominal contents thrust violently downward and outward. Just so soon, however, as the chin is pulled forward, and a free access of air is allowed, the abdominal displacement is not so great, though it still remains present, and the chest movement is no longer reversed. As the ether is pushed, the respirations become purely thoracic, the diaphragm no longer taking part in the respiratory cycle, or becoming so relaxed that it allows the chest on expansion to aspirate the abdominal viscera upwards, as is shown by the retraction of the belly walls at a time when they should normally expand with the thorax in inspiration. This observation would seem to point to the fact, that the primary stimulant action of ether upon the respiratory apparatus is particularly felt by those centres which govern the movements of the diaphragm, and that, as this is the case, these centres, later on, are the first to feel the paralyzing effect of still larger amounts of the drug.

This gives us, therefore, yet another danger signal during the administration of the ether, and we hold that the integrity of the diaphragm-

matic function, as represented by the movements of the belly walls, should be as carefully observed as are the thoracic excursions, the character of the pulse, or the condition of the pupil. The rule may, therefore, be laid down that when the diaphragm ceases to act, anaesthesia has been carried to its extreme legitimate limit, and that the use of an anaesthetic after this time must be carried on with the greatest care and watchfulness.

We have made other observations, which confirm the belief, that the diaphragm is the first to yield to respiratory paralysis. In death from any cause, the progress of failure of respiration will, in the vast majority of cases, be denoted by a failure on the part of the diaphragm primarily, with compensatory excursions of the chest; and it is also to be noted that as the chest movements fail, the accessory muscles of the neck come into play. These muscles in time cease to act, the hyoidean group lose their *point d'appui*, the chest remains motionless, the lower jaw is dropped, and the scene is closed by a few gasps.

In our experiments made upon animals with coal gas, it was found that this order of muscular involvement was adhered to, and that as the animal returned from death's door, a reversal in the order of return of functional activity was apparent, the neck muscles acting first, the chest muscles next, and the diaphragm last. Whenever this sequence is disturbed, the changes are probably produced by some reflexes which escape attention, and which exert a stimulating effect, particularly upon the diaphragmatic apparatus. Thus, it has been shown that when the communicating fibres from the higher centres to the respiratory centre are cut, so as to set aside any cerebral influence, inspirations may be excited by peripheral stimulations, such as pinching the skin, douching with cold water, or the application of electricity, and that under these circumstances the diaphragm responds more readily than do the other respiratory muscles.

Not only have we found this to be true, but Marckwald has also made a similar observation. In dogs we have found that after respirations had ceased from profound etherization, and where the ordinary methods of resuscitation were unavailing, a rapid exposure of the anterior crural nerve and stimulation of the same by a

strong interrupted current would cause full diaphragmatic movements, soon supplemented by thoracic excursions, after which the animal would continue breathing without any external aid.

By far the most important practical point to be gained from all this information is in regard to the methods commonly used in the application of electricity to persons who have ceased breathing, particularly during the action of an anæsthetic. The few text-books which give any specific directions concerning the practical application of such methods force the physician to a method at once dangerous and impractical, for the directions usually given are to place the positive pole on the phrenic nerve as it crosses the anterior scalene muscle at the root of the neck, the negative pole being pressed against the lower margin of the ribs, and a rapidly interrupted current being used with the purpose of causing contraction of the diaphragm by the direct action of the electricity upon the nerve. Theoretically and practically dangerous is an ever-present fact under its use. The cardiac inhibitory nerves run so closely to the phrenic fibres, and respond so readily to electrical stimulation, that it is hard to imagine how they can escape stimulation if a current be used of sufficient strength to excite the phrenic nerves near by. By practical experiment we have proved that inhibition of the heart may not only be possibly brought about by this method, but that it is nearly impossible to avoid its production if the phrenics are to be reached at all.

A dog, having had its neck cleanly shaved so as to avoid diffusion of the electrical current, was tied down and anæsthetized, the carotid artery being attached to the manometer in order to determine whether any circulatory change took place. In order to prevent any change in arterial pressure, the result of pain, the animal was kept well under the influence of ether. Two gravity batteries were then connected with a Dubois-Reymond coil, pushed up to 10. The sponge of the negative electrode, well soaked in salt solution, was applied to the lower border of the ribs in the axillary line, and a single point of wire was prepared as the positive electrode, in order that the current might be more readily concentrated upon a given spot. An opening was now made in the middle line of

the belly, and the fingers of the left hand thrust in till the vault of the diaphragm could be distinctly felt and its movement noted. On pressing the positive pole into the phrenic region at the root of the neck, forcible unilateral diaphragmatic contractions were excited, together with violent movements of the fore-leg on that side, and it was found that to affect the diaphragm the electrode must be placed on exactly the right spot and pressed in the right direction. The violent contractions produced in the other muscles made it impossible to tell, except by direct palpation, whether or not the diaphragm was acting.

The action under these circumstances on the heart was most striking, for it was found that the only place where the positive pole could be put to contract the diaphragm also *inhibited the heart*.

If a current, by no means as strong as that frequently used in cases of suspended animation, produces such a profound effect upon the heart of a moderately anæsthetized dog, its effect upon a heart already overburdened by congestion or depression would be most disastrous.

Against the reflex excitation of respiration there cannot be the same objection. The electric brush produces a more powerful effect upon the terminal extremities of the sensory nerves than any known method of stimulation. Far more powerful than the douche and than abdominal applications of ether, as recommended by Hare, it should be used under all circumstances when death threatens from respiratory failure. It should not, however, be applied to the neck, but a sponge electrode being placed at the base of the ribs, the brush should be applied at intervals to the epigastrium, to be removed when inspirations result, and reapplied when breathing movements cease. If artificial respiration is being carried on by Sylvester's or other of the recognised mechanical methods, the wire brush should be applied during the inspiratory movements.

It would seem probable that in those cases where the use of electricity has been resorted to, the return to life has been the result of reflex stimulation rather than a direct effect on the phrenic nerves. On the contrary, the striking effect upon the heart suggests the thought that the improper application of electricity may, in

the past, have been an important factor in determining a fatal issue.—*H. A. Hare and E. Martin in University Med. Mag.*, Nov., 1889.

ON THE ANTISEPTIC AFTER-TREATMENT OF VACCINATION.

BY JOHN BARK, M.R.C.S., ENGLAND.

Honorary Surgeon, Stanley Hospital and Hospital for Diseases of the Throat, Liverpool: Public Vaccinator, West Derby Union.

During some five years' experience in a large public vaccination district, with a mixed population of over 100,000, and a yearly average of over 2,000 primary vaccinations, I have noticed that the most common mischief one has to dread is the occasional occurrence of erysipelas, which, of course, as in the case of any ordinary wound, may, under conditions favorable for its development, end fatally through septic absorption.

It is a noteworthy coincidence that all the cases that have come under my observation have been in children in whom cleanliness was almost entirely neglected, or who were living in houses where the hygienic surroundings were bad. There is no doubt that all attacks of blood-poisoning which follow vaccination are due to one or other of these causes, and that they are not the direct result of the operation, as anti-vaccinationists so confidently and unjustifiably assert.

In my practice as surgeon to the general hospital, having been for many years profoundly convinced of the value of antiseptic treatment in surgical affections, I have long felt that the same principle might be employed with advantage to prevent the incidence of erysipelas or blood-poisoning after vaccination. Acting on this idea, I have for over a year employed an antiseptic pad for the protection of the vaccinated arms of infants, applying it after the opening of the vesicle on the eighth day, before which date (in my experience) septic absorption does not take place.

The pad is composed either of boracic or eucalyptus absorbent cotton wool, or of Hartmann's perchloride wood wool wadding (the latter being the most absorbent, and therefore answering best), and covered at the back and edges by antiseptic gauze; two straps of soft half-inch tape fasten the pad to the arm; while

a similar tape which passes from its upper border to the opposite axilla, prevents the pad from slipping down. The mother must be warned not to disturb this arrangement for at least six days. I have tried this protective dressing in about 100 cases, some of them specially selected on account of their large inflammatory areola, and have found that on removal of the pad on the sixth or seventh day after its application the inflammatory infiltration has entirely disappeared, and in most cases a firm, hard scab has already replaced the vesicles, so that the arm can safely be left uncovered.

The following are the advantages claimed for this form of protector:

1. It protects the arm from external violence.
2. It absorbs all discharge.
3. Most important of all, it reduces the risk of septic absorption.
4. It cannot be used a second time, like ordinary shields, which it is too often the dangerous practice to use again and again.
5. Lastly, and not its least advantage, is its extreme cheapness.

As the result of the practical experience gained in this matter, my conviction is that this antiseptic absorbent covering effectually minimises the risks of erysipelas and blood-poisoning, those *bêtes noires* of all vaccinators, and is well worthy of a thorough trial.

IODIDE OF POTASSIUM IN HEART DISEASE.—G. See and Lopicque declare that iodide of potassium is especially useful in valvular lesions or in severe myocarditis with weak blood pressure; it quickly increases the heart's force and the blood pressure. Later on, dilating all the arterioles, it aids the passage of the blood through them, and thus enables the heart to recover its contractile power. The iodide should therefore be very valuable in overworked or dilated hearts. The coronary arteries are dilated, and thus not only is the circulation aided, but the nutrition of the heart is increased also.—*Rev. S. C. Méd.*, January 15, 1890.

EMBOLISM OF SUPERIOR MESENTERIC ARTERY.—A man of 20, with pain in abdomen, but no rise of pulse or temperature, was treated for colic, which, it was thought, could be traced to a meal of corncake and blackberries. The

pain increased; examination later on in the day showed no tumor or tympanites, but the pain referred to the umbilicus was intense. Manipulation of the abdomen did not increase the pain, nor elicit tenderness. The man in his agony rolled about on the floor. Morphine gave some slight relief. A cathartic was given the second day. Towards evening the pain again increased, the abdomen became very tender, so that the weight of the clothes could not be borne. Nausea and vomiting set in, the body was covered with a clammy sweat, the features were pinched, the eyes sunken, and the prostration great. Death ensued on the morning of the third day. *Post mortem* examination showed peritonitis. Peritoneum and omentum had largely disappeared from suppurative inflammation; no occlusion of bowels. Liver, kidneys and spleen normal. Small intestines intensely hyperæmic, in some places almost gangrenous. Mesenteric glands of small intestine enlarged, and in the mesentery a small dark tumor, which proved to be an embolus in the superior mesenteric artery. No examination of heart.—*J. H. Stubbs, Med. and Surg. Reporter, Feb. 8th, 1890.*

IS THE GASTRIC JUICE A GERMICIDE?—Drs. Straus and Wurtz have conducted a series of experiments in order to ascertain the action of the gastric juice on the bacilli of tubercle, charbon, typhoid, and cholera morbus. The juice from man, dogs and sheep was selected for the experiments. It was found that digestion for a few hours at a temperature of 100° F. destroyed all the germs. The bacillus anthracis was killed in half an hour, the bacillus of typhoid and cholera in under three hours, whilst the bacillus of tubercle bore digestion for six hours, under which time it was still capable of provoking general tubercular infection. Even when digested for from eight to twelve hours the bacillus was still capable of producing a local tubercular abscess, not followed by general infection. Over twelve hours' digestion destroyed it completely. The germicide influences of gastric juice appears to be due to its acid contents, as it was found that hydrochloric acid alone, dissolved in water in the same proportion as it is in gastric juice, proved as active a destroyer of the bacilli. The pepsin appears to have no influence on the

germs. MM. Straus and Wurtz, who publish their researches in *Archives de Médecine Expérimentale*, wisely reminded their readers that the germs, when protected by animal and vegetable tissues and introduced into the stomach in ordinary nutrition, are not exposed to so direct and prolonged action of the acid constituents of gastric juice as in these experiments.

TREATMENT OF ASTHMA.—Of the thousand and one things which have been tried for this disease, nothing in my experience is equal to the nitrite of sodium. I am not fond of mixing drugs, and I therefore generally give it alone. In some cases, however, with the object of promoting sleep, I combine it with hyoscyamus, and in others, again, I have found the tincture of lobelia of some additional benefit. When the nitrite of sodium first came into use I gave some large doses (ten to fifteen grains) in a case of uncomplicated asthma, which had occurred in repeated attacks for some years. The first dose made the patient so sick and faint that I could hardly induce her to repeat it; but although the second dose had a similar effect, the patient was freed from her asthmatic attacks completely, and had not had a recurrence when I last saw her, two or three years afterwards. Since then I have given it in from three to five-grain doses, frequently repeated, and always with the greatest benefit. With regard to hyoscyamus in this affection, as well as in other diseases, I find that the ordinary doses are of little benefit. Two drachms of the tincture or of the succus for a single dose should be prescribed, and not less than one drachm when frequently repeated. Besides having an influence over many spasmodic affections, it has a most tranquillising influence on the mind. Given alone in asthma it will not relieve the spasm, but in combination with the nitrite of sodium, the improved condition of the patient is sometimes simply marvellous.—*T. Frederick Pearse, M.D., F.R.C.S., in The Lancet.*

DR. LAUDER BRUNTON AS AN INVESTIGATOR.—The return of Dr. Lauder Brunton from India is announced in the *British Medical Journal*, which quotes from the *Pioneer of India* an engaging account of Dr. Brunton during its knowledge of him as a Chloroform Commissioner at

Hyderabad. An accident, which occurred to him in the course of some of his experiments, brought to light the fact that before he went out to India he visited Pasteur at Paris and had himself inoculated, as a precautionary measure against the possibilities incident to a large experimentation upon dogs and other animals. The very danger which he foresaw as possible occurred to him; he was badly bitten by an enraged pariah dog which escaped from the control of his assistants. When every one else present at the experiment manifested alarm, Dr. Brunton quietly reassured them by disclosing the fact of his Pasteurian treatment, saying, "It does not matter; I thought something of this kind might happen." Thus, says the journal, "there is heroism also in a chloroform commission." With all his inflexibility of nerve as a man of science and operator, Dr. Brunton was gracious and accessible even to the inquiries of a stranger, and anxious to explain everything connected with the work of the commission. "No one who has come into contact with him," says the *Pioneer*, "can help being fascinated by the charm of his manner and the extent of his knowledge." Dr. Brunton has since written to the *British Medical Journal* a letter in which he modestly declares that, instead of praise for heroism, he rather deserves censure for "medical awkwardness," and explains that he did not betake himself to Pasteur for inoculation, but was inoculated accidentally twelve years ago.—*N. Y. Medical Journal*.

TREATMENT OF HEPATIC JAUNDICE BY HYPODERMIC INJECTION OF PILOCARPINE.—By Witkowski (*Nowing lekarskie*, 1889). The author considers pilocarpine as almost a specific in hepatic jaundice. Two years ago he treated a patient affected with nephritis, complicated with biliary calculus, increase in size and lowering of the liver, jaundice, and ascites of the abdomen and lower limbs. This patient was 44 years of age. Seven years before, during pregnancy, she began to feel pains in the right side. These pains increased after her confinement, and jaundice was associated with them: Carlsbad Priessnitz compresses, and an abdominal bandage with a pad relieved her a little: but the jaundice, as well as the hepatic colic, returned regularly with her menstrual

periods. This condition continued, and grew worse for four years. When the author saw the patient, she awakened in him grave fears. After two injections of pilocarpine (half a Pravaz syringeful of a two per cent. solution), the patient experienced considerable relief; the hepatic colic disappeared completely (morphine was useless in the case), and the liver became less painful on pressure. Under the influence of daily injections (about one-sixth of a grain once or twice a day), for three weeks, the jaundice, as well as the hepatic pains, the engorgement and increase in size of liver completely disappeared. That is three years ago, and the patient has had no return since. The author then treated over thirty similar cases, and has always been satisfied with the results. The treatment was ineffectual in cases of jaundice due to hepatic tumors. If in doubtful cases pilocarpine employed for from ten to sixteen days did not cause the jaundice to disappear, the author concluded that he had to deal with malignant disease, and he was never deceived. He recommends the use of pilocarpine in all cases of jaundice, provided always the condition of the heart is not a contra-indication.—*Bul. Gen. de Thérapeutique*.

G. A.

MEDICAL PRACTITIONERS' MEALS.—Moderation and regularity probably form the concluding words of most of the elaborate directions so often expected by patients and given by their medical attendants. This is the theme which is repeated again and again, with slight variations; the quantity or the variety of alcohol may be indicated, the use of pickles and heating ingredients deprecated, and the kind of vegetable, cooked or fresh, may give a short respite to the monotony; but the theme is bound to assert itself afresh, and to come in with tremendous force at the close of the oration, so that the patient leaves, humming the refrain, "moderation and regularity," as though the words had never been heard before, and possessed a talismanic power which it had been left for the wisdom of the end of the nineteenth century to disclose. But, joking apart, it may be worth inquiring how far the medical profession furnishes living examples of the truth of the doctrine. Upon general lines all are agreed, even though some may seek to

widen the scope and intention of the words by adding significantly, "In fact, temperance in all things." When the question is pressed more closely, however, it will be found that the rush of work, the exacting demands of patients, and keen competition, do not allow many in general practice to follow out the second half of the lesson. It is more particularly the younger men who suffer from want of regularity, those who fear the consequences of delay when an urgent message has been received. From a health point of view it is sufficiently lamentable to find that they often have not time for their meals, but surely they are acting upon a mistaken notion of their duties to their patients. A tired brain, exhausted from want of food, is not best fitted to cope with the serious problems so often set before it. Surgeons understand the monetary value of moderation and regularity, so that their punctuality in all matters, becomes proverbial; but the family medical attendant sometimes seems to consider himself privileged to be a little late, on account of his numerous engagements. Is it too much to hint that, for his own sake as well as for his patients', one engagement, his dinner hour, should be kept with greater regularity? Many practitioners are at work for longer hours than railway signalmen, for whom so much proper sympathy is felt in the event of a catastrophe. If the public could realise that it is unreasonable to expect good advice from a tired and hungry medical man, fewer exacting messages would be sent, to the advantage of all concerned.—*Lancet*.

CHEMISTRY AND ITS RELATION TO MEDICINE.—Among the remarkable developments of medical science in recent years is the important position assigned to chemical discoveries and theories, and their relation to practical medicine. For many years the aphorism of Bœrhaave, "Chymia egregia ancilla medicinæ, non alia pejor domina," defined the position chemistry ought to hold in its relationship towards scientific medicine:—an aphorism which in more recent times has received point and force from the ridicule cast upon chemical theories by the teaching of Graves and Trousseau. Now, however, chemistry promises to play once more a dominant part in the medical theories and speculations of the day, and, under more competent guidance than

was possible when the aphorism was originally launched against the iatro-chemists of the seventeenth century, will, it is hoped, avoid the errors of the past, and solve many important problems urgently requiring elucidation. As evidence of this reaction in favor of chemical speculation, we need only point to the chemical investigations being carried on at the present time in physiology, pathology, pharmacology, and in clinical medicine, and to the large sums expended in almost every school on increased laboratory accommodation, to say nothing of the new laboratories constructed on the embankment at great expense by the Conjoint Board of the Royal Colleges of Physicians and Surgeons, and which will shortly be opened for original research. With this resumption of activity in the domain of medical science, the teaching of elementary chemistry assumes an importance not hitherto accorded it. For a sound and efficient training in the principles of both physics and chemistry will be an essential equipment of the student of the future, if he is to understand the facts that chemical research has to put before him throughout his professional career. These remarks have seemed necessary, since there is, we believe, a disposition to relegate the teaching of elementary chemistry to a more inferior position than it even now holds in the medical curriculum. Such a step would be disastrous, and would be utterly retrograde. For if, during the many years that chemistry was but little regarded as an auxiliary to medicine, it formed one of the essential features of our examinations, now that a more extended knowledge of the subject is required for the new departure chemistry has taken as applied to medicine, it would be absurd to reduce the elementary teaching to what a sixth-form boy could pick up during his last half-year at school.—*Lancet*.

THE TREATMENT BY SUSPENSION.—The literature on the treatment of locomotor ataxy and other degenerative diseases of the spinal cord by suspension is already voluminous, and the views held as to the mechanism and the therapeutical value of the treatment are extremely contradictory. The most valuable of the recent contributions to the subject is one by Dr. Cagney on the Mechanism of Suspension, which he read before the Royal Medical and

Chirurgical Society on the 14th of January, and which was discussed last Tuesday evening. It was hinted by Charcot, and assumed by his disciples, that the good effects observed were due to the forcible stretching of the spinal cord and nerve roots. By means of carefully devised experiments and accurate measurements, both on the living body and on the cadaver, Dr. Cagney is able to show that the effect of suspension is to straighten the curves of the spinal column, in this way producing a total shortening of the spinal canal. This is well marked in the cadaver, and is probably greater in the living subject, owing to involuntary muscular contraction. In his inaugural address at the University of Aberdeen, Professor R. W. Reid stated that his measurements had led him to the same conclusion. The effect is most marked in the dorsal curve, where distinct relaxation of the cord can be seen to take place. In the cervical region there is slight stretching of the dura mater, which is probably not sufficient to influence the spinal cord. Whatever good, therefore, has resulted from the treatment cannot be regarded as due to stretching of the cord. Dr. Cagney offers the suggestion that the apparent good effects are due to the breaking-down of adhesions between the fibres, and to the removing of impediments to the circulation, both of which explanations are entirely hypothetical and not altogether probable. Since the effect on the cervical region of the cord is practically nil, and suspension from the head is dangerous and inconvenient, he submits that the best results might be expected from suspension from the armpits only, or from suitable gymnastic movements. The main points in the discussion related to the dangers and discomforts of the treatment. Several of the speakers mentioned cases where vomiting and syncope had been set up. This occurs even with healthy persons. One of the speakers who had been suspended by Dr. Cagney for one minute, although in perfect health at the time, experienced great pain, and fainted on being let down, and continued in a fainting condition for an hour. In the carefully recorded series of cases reported by Drs. Taylor and Russell in the *Lancet* of Oct. 19th 1885, epigastric pain, nausea, and syncope were produced by the treatment in several individuals, and they were also apparently the

cause of death in a case recorded by Dr. Borsari of Modena. It was observed by Dr. Cagney that the splanchnics could be seen to stretch in the process; and he suggests, with great probability, that it is to this stretching that we must ascribe these accidents. If this be so, however, suspension from the axillæ alone will be as likely to cause them as the combined cervico-axillary method usually employed.—*Lancet*.

Therapeutic Notes.

STROPHANTHUS IN ASTHMA.—Dr. Drzewiecki has successfully employed strophanthus during the attacks of asthma, m.x. to the dose. He has arrested the attacks for a long time, by giving it at intervals for some time, three times a day. The physiological explanation proposed is that strophanthine lessens the excitability of the vagus.—*The Satellite, Jan., 1890*.

DR. OHMAN-DUMESNIL says that by painting powder stains with the following solution they will turn red:

R.—Amonii biniodidi.

Aquæ distillatæ, aa ʒj. m.

By painting the red marks with dilute hydrochloric acid they will disappear.—*Med. Chips*.

MANY young children are irritable and cry because they have intestinal flatus. Instead of opiates, which are the basis of most soothing syrups, Prof. Bartholow gives the following as a valuable remedy:—

R.—Misturæ asafœtidæ, fʒj.

Sodii bromid., gr. iij-v.—M.

This is a dose for a child from one to four months old.—*College and Clinical Record*.

EXPECTORANT MIXTURE OF BELLEVUE HOSPITAL.—

R.—Ammoniac carb., gr. xxxij.

Extract senegæ fluid,

Extract scillæ fluid, aa fʒj.

Tinct. opii camph., fʒvj.

Aquæ, fʒiv.

Syrup tolu, q. s. ad fʒiv.—M.

Sig.—Dose, a teaspoonful.—*College and Clinical Record*.

INCOMPATIBILITY OF ANTIPYRIN AND CHLORAL.—Mr. Blainville, a pharmacist of Paris, was called upon to put up a prescription containing sixty grains of antipyrin and seventy-five grains of chloral in half an ounce of water. An oily precipitate was immediately thrown down which resembled neither chloral nor antipyrin in taste, but recalled somewhat that of coriander-seed. A mixture of antipyrin and quinine is also incompatible, both substances being at once precipitated from the solution.—*Medical Record*.

ANTIPYRIN AND SPTS. ÆTHERIS NITROSI.—Knorr says that when an acidulated aqueous solution of antipyrin is brought into contact with potassium nitrite, a feebly soluble crystalline substance of blue green color is formed—iso-nitroso-antipyrin. H. C. Wood has shown this compound to be devoid of any action on dogs or rabbits. These negative results cast a new light on the well-known incompatibility of antipyrin with the nitrites (e.g., spts. ætheris nitrosi), which may be useful to practitioners. The antipyrin seems capable of diminishing, or even wholly neutralizing the possible detrimental action of a nitrite, and on the other hand it is itself debarred from all action by the presence of sufficient nitrite.—*The Satellite*, Jan., 1890.

APHRODISIAC EFFECTS FROM COCAINE.—C. W. Richardson, M.D., Philadelphia, reports a case of a married lady, modest and reserved, from whom he proposed to remove a growth under cocaine anaesthesia. A few minims of a ten-per-cent. solution were injected. This was followed by erotic excitement, with both facial and verbal expressions, that left no doubt in the mind of the medical attendant and of the lady's companion, as to the impulses which actuated them. It required some time to bring her to even a moderate degree of quietness. An attempt to perform the operation the following day, using the cocaine very sparingly, led to a similar, though not so extreme, condition. No other unpleasant symptoms occurred on either occasion. Surgeons are warned of the development of these symptoms, not only by this case, but by the published observations of Sandré of Vienna, Cunningham of England, and others. Particular attention is called to the medico-legal

aspect of the subject. A female friend of the patient should be present whenever it is proposed to operate upon a woman under cocaine anaesthesia.—*Journal American Medical Association*.

UNNA'S TREATMENT OF TINEA TONSURANS.—The hair around the affected area is cut off, not shaved. Then a band of zinc oxide and glue is painted across the forehead, above the ears, and around the back of the neck. Following this, there is spread upon the diseased scalp an ointment of:

Chrysarobin	5 parts.
Salicylic acid	2 “
Ichthyol	5 “
Simple cerate	100 “

A broad strip of gutta percha paper is passed around the head, so that the lower edge adheres to the oxide of zinc glue. This impermeable paper is then painted with glue, covered with a mull bandage, and over the whole is placed a flannel cap. Every twenty-four hours the cap and bandage are removed, the gutta percha paper cut, the scalp cleaned, smeared with fresh ointment, and covered as before. If the ointment finds its way through the dressings, it must be carefully wiped off, and the soiled portions thoroughly painted with oxide of zinc glue. When thus protected, the child may mingle with healthy children without danger of infecting them. In four days the outer dressings are removed, and the ointment replaced by a five per cent. ichthyol salve, which will relieve the superficial irritation caused by the chrysarobin. At the end of the first week, all the dressings may be removed and the scalp washed with oil and soap. The diseased parts are seen to be of a lighter color than the surrounding skin. The entire treatment is to be repeated three or four times.—*Monatshefte für Prak. Dermatologie*, Dec., 1889.

LA GRIPPE ON THE PACIFIC COAST.—La Grippe appears to have spread over the whole continent. One correspondent in Victoria, Dr. Wade, says it visited the Pacific coast, and did not spare the Indians. There was a rather high mortality; the deaths being mainly due to pneumonia.

THE
Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS
OF THE MEDICAL SCIENCES.

Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.

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TORONTO, MARCH 1, 1890.

ONTARIO MEDICAL COUNCIL.

We understand there are likely to be four election contests for the Medical Council. In Malahide and Tecumseth, two candidates are in the field—Dr. J. MacArthur, of London (who represented the division for a portion of the last term in the place of Dr. Edwards, resigned), and Dr. Sloan, of Blyth. In Burlington and Home, Dr. John A. Mullin, of Hamilton, has been urged by his friends to become a candidate in opposition to Dr. Russell. In Midland and York, the candidates are Drs. Machell and Johnson, of Toronto. In Bathurst and Rideau, Dr. Rogers, of Ottawa, is a candidate in opposition to Dr. Cranston, of Arnprior, the present President of the Council.

UNIVERSITY OF TORONTO MEDICAL
SOCIETY LECTURES.

The Medical Society of the University of Toronto has made arrangements to have a short course of lectures, in some scientific subject connected with medicine, delivered every year, such course to be called the "University of Toronto Medical Society Lectures." Similar courses are given in many of the larger cities of the old and new world, and have been found to be productive of much good. We have to congratulate the worthy and indefatigable President, Dr. Ferguson, who first conceived this idea, and the student members of the Society who have worked so zealously in the matter, on the inauguration of such a scheme, and the success that is likely to attend it.

The first series of lectures will be delivered during this month, probably commencing March

12th, by Dr. E. C. Seguin, of New York, the well-known specialist in nervous diseases. The Society is fortunate in obtaining the services of so distinguished a man for its first course. We think it would be well if former students would put in an appearance, and get some definite idea of the admirable work that is being done by this Society. In addition, it will be highly gratifying to the student members if a large number of the graduates were enrolled as life members.

MODERN MEDICAL EDUCATION.

Our readers will, doubtless, be highly interested by a perusal of the various communications published in this issue, on the subject of modern medical education. We have, in the past, frequently commented on the various matters alluded to in these letters, and have endeavored to voice the opinions of the majority of our profession, who are anxious to see this Province keep abreast of the times in respect to all things medical. There are many who differ from us on some points, and their position and standing are such as to command our respect for the opinions they express.

One of the strongest opponents of the double didactic system, Dr. MacDonnell, of McGill, appears to think, as we judge from his opening address of the present session, that the Ontario Medical Council is solely responsible for the present methods of teaching. As a matter of fact, the schools have had such matters pretty much in their own hands, and the "Provincial Board," while honestly trying to raise the standard in many ways, has naturally showed a willingness to allow the schools to carry out the details of teaching according to their own plans. As there is now, however, a difference of opinion between the different medical faculties on these matters, the Council will probably feel called upon to give the whole subject very careful consideration.

It will scarcely be deemed necessary for us to reiterate our views in detail on the present system of teaching. We are more than ever convinced that too many didactic lectures are required, and we are especially opposed to repetitions of purely didactic courses. We agree with Dr. Osler in thinking that "the teaching in each year should be separate, and laboratory

and tutorial work should take the place of the didactic teaching."

We have a high opinion of the methods of conducting the examinations by the Ontario Medical Council. They are highly practical in their character, and are growing more so from year to year. We do not mean to say that they have reached perfection, and we have no idea that the members of the Council have any such opinion. So far as we know, the vast majority of practitioners throughout the Province will agree that there are defects in their methods of choosing their examiners. At the same time, we think that the majority of examiners appointed in recent years have been fully competent for the work assigned to them, and have performed their laborious duties in a way that has given very general satisfaction. Various expressions of opinion on the different points to which we have alluded will be found in the "symposium" which follows.

NOTES.

THE WOMAN'S MEDICAL COLLEGE.—We are pleased to notice the success of the Woman's Medical College of Toronto. A new building for its purposes is in process of erection, and will soon be completed.

A NEW PATHOLOGICAL LABORATORY FOR THE UNIVERSITY OF TORONTO.—An informal meeting of certain members of the teaching staff of the Medical Faculty of the University of Toronto was held on Monday evening, February 17th, when it was decided to organize for the purpose of assisting the pathological section of the science department in the University of Toronto. The following resolution was proposed and carried: Resolved—That whereas in view of the late disastrous conflagration it has become necessary to restore the University buildings, and as an enlargement of the basis of the scientific department is desirable, it is deemed proper to raise a special fund to make provision for the pathological laboratory and instruction in pathology, such fund to be expended by the Senate in such a way as may seem best calculated to further the interests of that subject.

DR. PRICE BROWN, of Toronto, has removed from No. 41 to No. 10 Carlton St.

Meeting of Medical Societies.

THE PATHOLOGICAL SOCIETY OF TORONTO.

January 25th, 1890.

The President, Dr. Reeve, in the chair.

Dr. A. B. Macallum and Dr. John Caven presented their second report on

CARCINOMATOUS GROWTHS.

Malassez and Albarran in the spring of last year gave to the Biological Society of Paris a detailed account of the same structures which were described by Dr. Macallum at the monthly meeting of the Pathological Society last October. Dr. Macallum, when he made that report, was unaware of this, and of the fact that any other observations in the same line had been made on epitheliomata from the human subject.

The observations conducted since last October have yielded a full confirmation of the point then advanced, viz., that all the three classes of structures, intracellular as well as intercellular, are modifications of one another, or are different stages in the life-history of the same organism. These stages in the order of development of the organism are: (1) the spore; (2) the plasmodium; (3) sporulation. The plasmodium may be homogeneous, sometimes vacuolated and granular, and sometimes nucleated with a nucleolar body. Some non-nucleated forms have been seen to possess small irregular chromatin masses, which may be essential parts of its structure, or accidental elements (as swallowed food material). It has been seen fixed in the act of entering epithelial cells, and it has also been very frequently found with pseudopodial projections stretching for some distance between the epithelial cells. Their peculiar safranophilous or eosinophilous protoplasm serves to distinguish them in preparations stained with hæmatoxylin and either safranin or eosin. The plasmodium, when ready for sporulation has attained a definite size, forms a doubly contoured membrane about itself, and apparently only in this phase of its history acquires a nucleus. This stage may be passed within or without the epithelial cell, although by far most commonly, within. The manner of the segmentation of plasmodium has not been

observed definitely. The number of spores formed is greater than that observed by Albarran, who found only six to eight in two cases of epithelioma of the jaw. In sporulation the protoplasm loses its safranophilous and eosinophilous characters. The spores at first are spherical, measuring about 0.0045 mm., and provided with a central protoplasmic mass (chromatin?) stained more or less with hæmatoxylin, and a peripheral unstained zone. These spores change their form, become bilobed or trilobed, and in the latter form are oftenest found between the epithelial cells, where they simulate the nuclei of leucocytes. These spores apparently enter other cells, where they pass a certain part of their life cycle, during which they increase in size, and acquire again their capacity for certain dyes (eosin and safranin.) After attaining a certain size they become free, and this appears to be the condition in which active migration commonly occurs.

The plasmodia were present in the nuclei of the epithelial cells, in one case abundantly, where they presented the characters of the so-called plasmosomata, but they were distinctly seen fixed in the act of passing into or from the nucleus.

The presence of a plasmodium in an epithelial cell deranges the metabolism of the latter, increases its size, and as a consequence of this increase in size, the adjacent epithelial cells are pressed upon and become laminated around the attacked cell, in the form usually known as the "nest."

These bodies, especially the plasmodia, were found in the affected lymphatic glands from a case of epithelioma. The structure and micro-chemical reactions (*i.e.*, staining power) of these are the same as described for those of the primary growth. The other stages, *i.e.*, the spore and that resulting in sporulation (encysted stage), were not definitely determined in the sections of the lymphatic gland, probably owing to the fact that the preparations were not made with a view to the study of these organisms.

(A full and complete account of these structures, with illustrating figures, will be published shortly.)

Discussion.—Dr. Cameron said that the idea of a specific cancer cell had long ago been given

up. Cancer cells, in the sense of infected cells, had been detected in their travels along the course of the lymphatics. Jonathan Hutchinson has lately given the weight of his authority against cancerous disease being caused by these organisms. The plasmodium uses up all the elements of the cell for its nourishment. It may be that only in the epithelial cells does it find its proper food.

If the theory prove correct, it will prove valuable by simplifying our knowledge of and aiding in the treatment of the affection.

Dr. J. E. Graham asked what effect this discovery would have on the classification, usually given, of these growths.

Dr. Primrose could not find any evidence of cell division in a slide illustrative of cancer of the liver.

Dr. Macallum said that the absence of evidence of cell division in cancer of the liver tended to show that the growth is added to by infection of the healthy cells, and not by propagation of the infected cells.

Whilst acknowledging the eminence of the authority of Jonathan Hutchinson in all that concerned practical surgery, he did not see why his opinion should in this matter be allowed special weight.

In reply to Dr. Graham, he said he thought that connective tissue escapes, as do all cells which cannot be converted into phagocytes. He did not know whether cartilage cells were attacked.

AN INTRACELLULAR PARASITE IN THE INTESTINE OF *NECTURUS LATERALIS*.

Dr. A. B. Macallum :

While looking over some preparations of the intestinal epithelium of *Necturus lateralis* to determine if a form allied to Steinhaus's *Caryophagus Salamandra* were present, I came across a number of intracellular bodies which were either stained deeply, or not at all, with the staining reagent (alum cochineal) and which I at first considered to be similar to the plasmosomata and nucleo-plasmosomata of Lukjanow (*Arch. fur Anat. and Phys.* 1888) occurring in the intestine of the European Salamander. I had not continued my observations long before I came to the conclusion that many of these forms were parasitic, for the following reasons :

1. They are inter- as well as intra-cellular.
2. They are frequently fixed in the act of migration, when they are found possessed of long processes which extend between the cells.
3. They have been seen fixed in the act of migrating from the nucleus of an epithelial cell after having absorbed all its chromatin.
4. When one cell is found specially affected by them, careful search shows the immediately adjacent epithelial cells to have these bodies in greater or less number. This infection of the adjacent epithelial cells may extend to a distance equal to the thickness of half a dozen epithelial cells.

It is not to be denied that some of the intra-cellular elements described by Lutjanow are due to cell degeneration. I am inclined to believe that many of them are parasitic elements.

The main peculiarity of this intestinal parasite in *Necturus* is its chromatophagous character. My own observations on the origin of hæmoglobin in *Necturus* allow room for no other conclusion than that the chromatin of the hæmatoblasts is the mother-substance (hæmatogen) of the hæmoglobin. I have also determined, I think definitely, that there is a transmission from the mother to the ovum (in Amphibia) or to the foetus (in the cat) of this chromatin in but a slightly changed condition. What is more natural then, than to infer that chromatin is an essential constituent of the food of a growing or adult individual, and that when it is withheld, or its resorption by the intestine prevented, the system is thrown into that condition which results in anæmia? Ordinary or simple anæmia is usually regarded clinically as a disease or condition in which only the corpuscles and their hæmoglobin contents are affected, whereas in my opinion the latter condition is secondary, the primary cause of the anæmia being the non-absorption of the chromatin of the food (milk, flesh, etc.) for some reason or other (intestinal fermentation, putrefaction, etc.),—hence the lessened production of that compound derivable from chromatin, (hæmoglobin) as well as the diminished performance of the functions of the various organs of the system.

On the other hand, it may be that progressive-pernicious anæmia depends on a greater derangement of the chromatin-absorbing power of

the intestine, and the characters of the chromatophagous parasite in the intestine of *Necturus* point to the possibility of the occurrence of a similar parasite in the intestinal tract or in the blood in cases of pernicious anæmia, which absorbs the chromatin, which should go towards recruiting the nuclear elements of the body. The action of arsenic in so-called cases of pernicious anæmia might therefore be attributed to a specific effect on such parasites, if they exist, just as the action of quinine in cases of malaria is attributed to a specific effect on the *Laverania malarie*. If such parasites do not occur in cases of pernicious anæmia, then we must attribute the action of arsenic in such cases to its facilitating the absorption of chromatin from the food in some way or another.

The parasitic nature of the condition known as pernicious anæmia is rendered probable from the fact that in certain localities it is more frequent than in others. For instance, in the canton of Zurich, Biermer observed 15 cases in 5 years (1867-72), all of course ending fatally: an exceptional record, I believe.

In chlorosis we have probably two factors: the diminished absorption of chromatin from the same causes as in ordinary anæmia; and the more or less abundant constant withdrawal from the organs of the patient, during the abnormal condition, of the chromatin to store up in the ovarian cells and in the developing uterine mucosa.

Dr. Graham said that clinical experience had often caused him to think that some cases of pernicious anæmia must be of parasitic origin. The cases which had especially impressed him were those coming on suddenly, a few days after a confinement in which there had been no loss of blood. He used the term in a general way, for of course some would not consider anæmia after confinement really a pernicious anæmia. Can there be any connection between the large number of white blood-cells and parasitism? He had often thought leukæmia, pseudo-leukæmia and pernicious anæmia were closely related.

PECULIAR CASE OF DISEASE OF THE BRAIN.

A. McPhedran:

A. T. æt. 56; enjoyed good health till March, 1888, when appetite became fitful, with occasional attacks of sudden vomiting. He gradu-

ally lost flesh. Towards the end of May he noticed some difficulty in walking, objects "wavered," as they would on shipboard in a stormy sea. In June there was slight paralysis of right side of face, unable to open right eye alone. Partial anæsthesia of lower part of cheek, lower lip and chin on right side. Tongue feels as if scalded, is partially anæsthetic, as is also inner part of left cheek. Taste sweetish and disagreeable, lately becoming more bitter. Frequent pains in occiput, shooting up over vertex, jolting causes pain across shoulders. Bowels constipated: need strong purgatives; formerly easily moved.

Dr. R. A. Reeve found the eyes normal, except slight diplopia, due to paralysis of the superior oblique muscle.

Paralysis of left face developed early in July, being complete by the 10th. Some vertigo on sitting or standing. Diplopia more marked, now unable to read. Walking more difficult. Watch heard at six inches on left, and twenty on right side. Hearing on left side sharpest until last few days, he says. Tragus of left ear, and neighboring parts feel swollen and numb. Sense of taste absent in anterior part of tongue; slow perception at back. Vomiting more frequent; but without nausea, sudden and projectile. Constipation persists. About July 25th, urine suddenly became very copious, over a gallon in twenty-four hours, very pale, sp. gr. 1005. A few days later profuse vomiting set in, lasting a couple of days, during which the urine was reduced to almost normal amount. After the stomach quieted the polyuria returned; in this manner it alternated several times with vomiting, sometimes fully 300 ounces of urine were passed in twenty-four hours. There was great thirst and often a voracious appetite.

In August, the diplopia became more marked, so that he constantly saw objects double, except when they were above the level of the eye.

In September, the hearing in the left ear seemed to be completely lost.

In October, the paralysis of the right side of the face, which had been scarcely perceptible after the left side became paralysed, now increased and became nearly complete. The soft palate and pharynx became paralysed also, so that no food could be taken, and very little

drink, for a month before death. During this time the amount of urine passed diminished, until very little in excess of normal. Vomiting occurred occasionally, emaciation became very marked.

Death from asthenia, Oct. 29th, at 5 a.m. *Rigor mortis* complete at 7 a.m.

The discussion was postponed until the next meeting.

TORONTO MEDICAL SOCIETY.

Dr. T. A. Mackenzie narrated a case of
PUERPERAL ECLAMPSIA.

Primipara, aged 26, was, during pregnancy, in a remarkably good state of health, suffering neither from nausea nor constipation, and able to attend to all her household duties. On Christmas Day she had a severe headache, but this was the only one of which any history could be obtained. She noticed that at night there was some slight puffing about the ankles, and that her shoes seemed to pinch her. This swelling, although increasing gradually, was never so great as to cause her to mention it. On New Year's Day, between six and seven in the evening, while she and her husband were examining something, she suddenly found that she could not see. Immediately afterwards she complained of a sensation of numbness of the left side of the face. This spread to the fingers of the right hand, then to the right arm and leg. These primary symptoms were not heeded, when suddenly she was seized with convulsions. I noticed afterwards, when she was in the state of coma, that the movement was almost entirely in the left leg and arm. As it was impossible for me to attend her, she was seen by Dr. Lynd. In all there were 14 convulsions. Chloral given in full doses was useless. The convulsions were partially controlled by the inhalation of chloroform. As soon as the os uteri was found to be sufficiently dilated, the forceps were applied and the child delivered. The next morning there was one slight convulsion; no others occurred. There was no return of consciousness. After the first attack quite a large quantity of urine was passed. The urine drawn off by catheter gave when heated, nearly $\frac{1}{3}$, by bulk, of albumen. The microscope showed an abundance of granular casts. Every effort was made to act on the

bowels by the use of p. jalapæ co. glycerine enemata, elaterium, croton oil; but these all failed. Finally on January 3rd an enema of turpentine had the desired effect. Pilocarpin gr. $\frac{1}{6}$, repeated in an hour and a half, caused perspiration, but it was not free nor of long duration.

The lungs filled up and death occurred about 48 hours after the first attack.

Dr. Holford Walker said that he had seen four cases of puerperal eclampsia. The first case he had seen was in a woman who had a normal confinement. An hour after he got home from attending her, a message came saying that she was in convulsions. On his way back to see her he remembered that he had read somewhere that heroic doses of morphia was the best treatment. He accordingly gave her 3 grains hypodermically. The result was that shortly after a great quantity of urine, a chamber vessel full and a half, was passed. There were no more convulsions—and the woman recovered perfectly. In his other three cases he had given two grain doses; the convulsions ceased in half an hour; there was an abundant flow of urine and perfect recovery. Personally, he would not hesitate for one moment to use morphia, and in such doses.

Dr. J. F. W. Ross had seen quite a number of cases. In one case the convulsions came on 24 hours after labor. Sixty grains of chloral were given, and no more convulsions. In another everything had been done, even bleeding, and yet death occurred. In a third, in which the attack was ushered in by loss of sight, and vomiting, the patient was kept under ether for eighteen to twenty hours, and recovered. In still another, death occurred in spite of morphine given in very large doses, although not such heroic doses as those given by Dr. Walker. He would be afraid to use such a dose.

Dr. Acheson related a case of convulsions coming on an hour after delivery—three convulsions in all—treated by half grain doses of morphine. He was inclined to believe that both the morphine treatment, and treatment directed towards eliminating the uræmic poison from the system, were indicated.

Dr. Greig had been called to a case in which there had already been two convulsions. He found the patient quiet and sensible. Putting

the finger into the vagina to make an examination induced another very severe convulsion. Morphine gr. $\frac{1}{2}$ hypodermically, bromide and chloral gr. xx of each, and the usual purgatives, prevented further convulsions, and a month later the woman had a normal labor.

Dr. Machell did not believe in any hard and fast rule of treatment. A purgative, removing the irritation of a loaded bowel might give relief; so might bromide and chloral; or morphine; and yet often any or all of these fail and death must occur. A woman had been found by her neighbors in an unconscious state. A physician was sent for, who gave her chloroform, applied the forceps and delivered her. No other convulsion occurred and yet the patient died, never gaining consciousness.

THE HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated meeting 4th Feb., 1890.

The President, J. W. Rosebrugh, M.D., in the chair.

Dr. Wm. McCargow read the notes of
DISLOCATION OF THE FOOT BACKWARD.

The subject of this accident, a large stout woman, aged 60, I first saw at Oneida, County of Haldimand, August, 1858, along with Dr. Jacob Baxter, of Cayuga.

She stated that three months ago she received a fall, displacing the ankle joint; that she was treated for it by a medical man in her neighborhood, who failed to reduce the luxation, and left her in her present state. She also stated having consulted other medical advice without benefit.

Upon examination the foot was found to be displaced backwards, with shortening of the foot and lengthening of the heel, with a depression above the latter. The toes are pointed downwards and the extremity of the tibia forms a projection in front of the ankle. I gave her to understand that it might not be too late to remedy the displacement so that she could walk. At this time, the way she went about the house was only by resting the injured limb on a chair, and with the aid of the other and carrying the chair, moved about in that way. Having willingly agreed to an operation, a plaster cast of the limb was taken. On the 7th September, assisted by Dr. Baxter and Mr.

Farrell (subsequently a graduate of Royal College of Kingston), the patient having been duly placed under chloroform, an attempt was first made at reduction by aid of a "Jarvis Adjuster." Not succeeding by what was considered by us as a fair trial, I divided the tendo Achilles, when reduction with the hands was easily effected. The fibula, broken in the usual place in like cases, was ununited.

The chief after-treatment of the case consisted in keeping the end of the tibia in place with due support of the heel and foot, which was done by a well-fitting anterior tin splint with foot piece, such as Dr. Keer of Galt was in the habit of using in simple fractures of the leg near the ankle-joint. She recovered with a stiff joint. Passive motion was advised after the removal of the splint, but insufficiently used by her husband, and the distance from my house in Caledonia being some 16 miles, it was out of my power to attend to it. I saw the patient, Mrs. Wyllie, some years subsequently at the house of her son in London, Canada West, when she was well and had good use of the foot.

This dislocation is very uncommon, which is my only excuse for bringing this case before the Society. The tibia rests in these cases from half an inch to three-quarters of an inch in front of its proper place.

INGERSOLL OLMSTED,
Secretary.

Correspondence.

THE PROSPECTIVE PATHOLOGICAL DEPARTMENT OF THE UNIVERSITY OF TORONTO.

Editor of CANADIAN PRACTITIONER.

DEAR SIR,—There could not be a more fitting time than the present to appeal to the great medical constituency of Ontario in behalf of the necessities of our beloved Provincial University. It is needless to refer to the dire calamity which so recently laid the grand old building in ruins. We must remember, however, that the University still lives, not only in the hearts of her graduates; not only in the teachings of Science and Art, which she has scattered broadcast throughout our land; but likewise in the affections of all men who love the grand old

principles and truths upon which she was founded, and by which she has been guided through every step of her career.

The matter of her restoration is one in which all must feel the deepest interest. Our Provincial Parliament, the City Corporation of Toronto, the Senate of the University, with various other corporated bodies, as well as private individuals, will do all they can to help in this direction; but there will yet remain much to be done; and herein lies the opportunity for the medical men of our Province to prove their devotion to that science, to the pursuit of which they have dedicated their lives.

With all the advancement of recent years, pathological research is yet in its infancy. Still the investigations are sufficiently mature to prove that the position which pathology should occupy, in the study of disease, cannot be overestimated; and with the desire of furthering this laudable and utilitarian end, the medical graduates of the University in this city have inaugurated a movement which, they trust and believe, will receive both wide and generous support.

The cost of a well-equipped pathological laboratory will be considerable; and for this, so far in the estimates for restoration, there has been no provision. What the sons of the University would like, and what they will endeavour to accomplish, will be to make this the special work of the graduates in medicine, as a fitting tribute to our national seat of learning, and an honor to our noble profession.

This is an object so thoroughly Provincial, so thoroughly identified with the best interests of our country, that all graduates, of whatever school, might willingly lend it their aid. Trusting that what all University men so earnestly desire may be accomplished,

I am yours, etc.,

PRICE BROWN, M.B.

No. 10 Carlton St., Toronto.

PRESERVE YOUR INSTRUMENTS.—You can preserve your instruments from rusting by immersing them in a solution of carbonate of potash for a few minutes. They will not rust for years, even when exposed to a damp atmosphere.—*Southern Clinic.*

Books and Pamphlets Received.

Annual Report of the Canadian Institute, Session 1888-89, being a part of appendix to the Report of the Minister of Education, Ont.

Transactions of the Medical Association of the State of Missouri, at its 32nd Annual Session, held at Springfield, Mo., May 21st, 1889.

Book Notices.

A Handbook of Dermatology for the use of Students. By A. H. Ohmann-Dumesnil, M.A., M.D., Professor of Dermatology, St Louis College of Physicians and Surgeons, etc.

"This book was not written to fill a long felt want, but rather as a guide to students in their reading." The author has sifted out the wheat from the chaff, and presents, in a concise form, the best and most applicable methods of dealing with the diseases of the skin.

Handbook of Materia Medica, Pharmacy, and Therapeutics, including the Physiological Action of Drugs, and the Special Therapeutics of Disease. Samuel O. Potter, Professor of the Theory and Practice of Medicine in the Cooper Medical College of San Francisco, etc. Second Edition, P. Blakiston, Son & Co., Philadelphia.

The author, already known for his "Quiz Compend" and "Index of Comparative Therapeutics," has compiled a book, which should be of use to the busy practitioner, containing, as it does, a vast amount of accurate and valuable information, arranged in such a form that "he who runs may read."

The American Armamentarium Chirurgicum. New York: George Tiemann & Co., 107 Park Row.

This is a very full and complete illustrated catalogue of surgical instruments. The drawings of the various instruments and appliances in all departments of surgery are exceedingly good. The book, however, is much more than a simple illustrated catalogue. It contains descriptions of the methods to be employed in using the instruments in the various surgical procedures. There is, however, no pretence of originality, as the descriptions referred to are taken from the writings of standard authors. As good judgment has been exercised in choos-

ing the best quotations this portion of the work is all that could be desired. Altogether it is the best book of the kind we have seen.

The Physician himself and Things that concern his Reputation and Success. By D. W. Cathell, M.D., Baltimore, Md. Ninth edition, revised and enlarged. Philadelphia and London: F. A. Davis.

This book contains a large amount of good sound advice which will continue to be of service, more particularly to the young practitioner; the fact that a ninth edition has been called for shows that it has already had a large circulation, and has become widely known. The author has covered a great deal of ground, and almost every conceivable difficulty which may be encountered by the physician, either in his dealings with his patients or in his relation to his professional brethren, is freely discussed, and reliable advice is given as to the proper course to pursue. There are some minor points in which we cannot fully agree with the writer, but there is nothing which we would call objectionable in the book, and as there is a large amount of excellent material presented, we have no hesitation in heartily recommending it to the profession.

The History and Pathology of Vaccination. In two volumes. By Edgar M. Crookshank, M.B., King's College, London. London: H. K. Lewis, Publisher.

In the volumes before us, we have a work of a kind but too seldom seen in the physician's library, at least on this side of the Atlantic. A leading literary light amongst us has said that the medical profession in America should not be reckoned as a learned profession. While this is not altogether true, the very marked lack of information in regard to the history of medicine amongst practitioners lends a certain force to the statement. It is very doubtful if ten men out of a hundred picked at random from the profession in Ontario, could give a correct *résumé* of the information regarding the discovery and introduction of vaccination contained in these volumes. With regard to this work, whilst it is impossible in the space at our disposal to *review* it at all, we can recommend it heartily to the profession as well worthy of perusal, on account of both its historical interest, and its value as a scientific exposition.

Personal.

DR. S. T. RUTHERFORD (Tor., '89) has gone into partnership with Dr. Parke, of Listowel.

DR. JAMES L. TURNBULL (Tor., '89) has recently returned from Europe, and has formed a partnership with Dr. Reeve, of Clinton.

DR. FRANK FERGUSON, pathologist to the New York Hospital, has been elected Professor of Pathology in the New York Post-Graduate Medical School and Hospital.

DR. ALFRED C. SMITH, of Newcastle, N.B., has been appointed a Governmental Commissioner in Leprosy, and will be expected to give his whole time to the work of making investigations in connection with that disease.

DR. WILLIAM WARREN POTTER, of Buffalo, was elected President of the New York State Medical Society. Dr. Potter belongs to a family of doctors, including his grandfather, father, uncles, and his son, who were or are members of the profession. He took a prominent part as a surgeon in the civil war. He has been for some time one of the editors of the *Buffalo Medical and Surgical Journal*. He was one of the founders of the American Association of Obstetricians and Gynæcologists, of which he is the secretary.

ENTERPRISING CANADIANS.—Drs. Clark & Ewing, lately students of this city, appear to be flourishing in Buffalo, as may be judged from the following, which appears in the *Buffalo Sunday Times*:

A SEVERE CASE OF NASAL CATARRH CURED
BY THE FRANKLIN ST. SPECIALISTS.

"I feel so happy and thankful that my daughter Gertie has been so thoroughly and so quickly cured by Drs. Clark & Ewing, of 213 Franklin street," said Mr. Noble, of 426 Seventh street, "that I could not possibly tell all about the case in a testimonial, but if anyone will call at my home, I will gladly explain her condition before and after treatment."

Our specialties are diseases of the heart, lungs, liver, stomach, kidney, nose, throat and skin.

Dr. Clark, B.A., M.C.P.S.O., formerly demonstrator of the chemical laboratory in the medical department of Niagara University.

Dr. Ewing, C.M., M.R.C.S., England, formerly lecturer in pathology and skin diseases in the medical department of Niagara University.

Consultation free. Charges moderate. Office hours, 9 a.m. to 8 p.m. Our only office and residence is 213 Franklin street, Buffalo.

Births, Marriages and Deaths.

BIRTHS.

DUNCAN.—At Chatham, on Wednesday, 19th February, the wife of J. H. Duncan, M.B., of a son.

DEATHS.

DALTON.—On Friday, February 14th, at 6.30 p.m., W. H. Dalton, M.D., aged 75 years, 11 months. Late of Bartlett Place, Davenport road, Toronto.

Miscellaneous.

BILLING'S NATIONAL MEDICAL DICTIONARY.—A review of Billing's Medical Dictionary will appear in our next issue. We have no hesitation in recommending it very highly.

A rather sensational article has been going the rounds of the medical press concerning the danger of contracting consumption in sleeping-cars where the berths have previously been occupied by those afflicted with the disease, and making several absurdly impracticable suggestions in regard to the prevention of the infection. It might be going too far to say that there is no danger at all from such a source, but it is a very small one. There is little proof that the bacillus tuberculosis retains its vitality outside of the body long enough to infect another person under such circumstances. While consumption is probably a *communicable* disease, we can by no means consider it a contagious one in the same sense that the term is applied to small-pox, scarlet fever, or similar diseases.—*Popular Science News*.