

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- | | | | |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> | Coloured covers /
Couverture de couleur | <input type="checkbox"/> | Coloured pages / Pages de couleur |
| <input type="checkbox"/> | Covers damaged /
Couverture endommagée | <input type="checkbox"/> | Pages damaged / Pages endommagées |
| <input type="checkbox"/> | Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> | Pages restored and/or laminated /
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> | Cover title missing /
Le titre de couverture manque | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> | Coloured maps /
Cartes géographiques en couleur | <input type="checkbox"/> | Pages detached / Pages détachées |
| <input type="checkbox"/> | Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> | Showthrough / Transparence |
| <input type="checkbox"/> | Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur | <input checked="" type="checkbox"/> | Quality of print varies /
Qualité inégale de l'impression |
| <input type="checkbox"/> | Bound with other material /
Relié avec d'autres documents | <input type="checkbox"/> | Includes supplementary materials /
Comprend du matériel supplémentaire |
| <input type="checkbox"/> | Only edition available /
Seule édition disponible | <input type="checkbox"/> | Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées. |
| <input type="checkbox"/> | Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure. | | |
| <input checked="" type="checkbox"/> | Additional comments /
Commentaires supplémentaires: | | Continuous pagination. |

THE

MONTREAL MEDICAL JOURNAL.

VOL. XVII.

NOVEMBER, 1888.

No. 5.

Original Communications.

ADDRESS ON SOME OF THE RECENT ADVANCES IN SURGERY.

BY FRANCIS J. SHEPHERD, M.D.,

Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on
Operative Surgery, McGill University.

(Read before the Canadian Medical Association, at Ottawa, September, 1888.)

MR. PRESIDENT AND GENTLEMEN:—When informed by our worthy President that I was appointed to deliver the address on *Surgery* before this Association, I felt that the duty might have devolved on one much more competent to treat this great subject satisfactorily; one who had the faculty of making his address interesting to every one of you. When writing me, Dr. Graham said that the address should be limited to a period of—well, say that of an ordinary sermon, and hinted that the members of the Association did not want to be lectured to. I shall endeavor, to the best of my ability, to carry out these instructions.

It is not so many years ago that Boyer, after the French war, said that “surgery seems to have attained the highest degree of perfection of which it is capable.” The history of surgery, which during the past fifty years has been one of continuous advance, has proved the falsity of Boyer’s opinion. During the last decade this advance has been almost phenomenal, and now scarcely a month passes without the introduction of some new operative procedure or some daring operation on cavities and

organs which have from time immemorial been regarded as sacred. The causes of this advance have been two in number—the discovery of anæsthesia and the introduction of antiseptic surgery, with which the name of Lister will ever be associated. Formerly, surgery was regarded as a mere mechanical art, and practitioners of medicine looked down upon the surgeon as one who practised a trade. How different is the relationship now. Surgery now takes the lead, and the surgeon has wrested from the physician many regions which he thought to be essentially his own. The abdomen, for a long time the hunting ground of the physician, has been almost completely surrendered to the surgeon, and with what brilliant results you all know. Certain diseases of the kidney, liver, ovaries, lungs, brain, etc., which were formerly purely medical, have become chiefly surgical; and owing to modern methods of operative treatment, many lives have been saved which heretofore the physicians let slip through their fingers as being beyond their skill to cure, though they endeavored by a copious and, it is to be hoped, judicious use of the various preparations in the pharmacopœia to alleviate the sufferings of their unfortunate patients. The brain, within the last few years, has yielded not a few results to surgery which medicine has striven for in vain. The victorious advance of surgery has been positive, and the success which follows its onward course stimulates to further exertions. Still medicine and surgery are not opposed to one another, and should go hand in hand. Without the aid of the physician, many cases would escape the beneficent treatment of the surgeon; and one cannot afford to do without the other. In an address given by Prof. Bergmann before the German Scientific Medical Association in 1887, he says: “There is more or less rivalry between medicine and surgery in the cure of disease, but further progress in surgery can only take place through an increased knowledge of internal medicine. Surgeons must now avail themselves more of the accurate means of investigation which we owe to physicians—auscultation and percussion, thermometry, chemical, microscopical, and electrical investigation. As long as internal medicine remains the guardian of scientific methods and scientific principles, so long will it remain

the parent tree of which surgery is only a branch." Again: "It follows from what has been said that surgery owes all its recent development to clinical medicine, and just as antiseptic treatment is the product of careful observation in etiology, so the energetic procedures of internal surgery will have successful results only when firmly established by the methods of clinical medicine; otherwise surgery will sink, in the hands of expert specialists, to a mere display of manual dexterity." Such are the opinions of one of Germany's greatest surgeons. His warning note that surgery may degenerate into a mere display of manual dexterity is timely, for what strikes one most in reading the surgical literature of the day is, that it treats almost entirely of surgery in its operative aspects, and those departments of surgery which are not operative seem to be treated with but scant consideration. There is great danger of the surgeon becoming too limited; already there are men who profess to perform but one or two operations; they certainly do them well, but such limitation must induce a narrowness of mind which is detrimental to surgery in general, and will in the end have a dwarfing effect on the more scientific branches of surgery. It is to be hoped that this is merely a temporary condition which is induced by the novelty of invading territories hitherto but little known to the surgical traveller.

However, even if it must be admitted that surgery to-day is chiefly operative, still it is more conservative than formerly, as witness the great advance made in the surgery of the joints. Where formerly a limb was amputated, now the joint is excised or the diseased matter removed with scissors and a sharp spoon. How rarely is the foot now amputated for disease of the articulations. I have only once amputated a foot for tuberculous disease of the joints, and have always regretted it. Who would now amputate an arm for disease of the elbow, or a hand for wrist-joint disease?

But, gentlemen, I fear I am tiring you with my platitudes and generalizations, so I shall pass on and give in as brief a manner as possible an account of the recent advances in some of the more important departments of surgery. At the Toronto

meeting of the Association in 1882 it was my privilege to read the report on surgery. At that time, among other subjects, I discussed the modern treatment of wounds; since then, not much progress has been made in the treatment of wounds. The same principles laid down then are still in force—cleanliness, rest and asepticity. The dressings applied to wounds have become much simpler, and the antiseptics most relied on are soap, water and a good nail brush. Not only should the hands of the operator be cleansed with soap and water, but the parts operated on and their vicinity should also be similarly treated. Faith in germicides is being lost, and although irrigation has supplanted the spray, the solutions used have become weaker and weaker, until some surgeons use water only, especially in operations on the abdomen and thorax, where antiseptics have been proved to be absolutely injurious and often dangerous.* Sponges have become objects of suspicion; their place is now taken by the irrigator, linen, or pieces of washed gauze. The spray, which formerly was a trusted friend, a valued ally, and with some the sheet-anchor of antiseptic surgery, has been all but abandoned, and is now seen as a mere survival of a past condition. Whilst in Germany last summer, I saw in every surgical klinik the magnificent ruins of the spray-producer, looking like some old castle which marked the customs and conditions of other days. Lister himself was one of the first to give it up, and last summer at King's College Hospital he spent some time in explaining to me how especially useless the spray was in those operations on the thorax and abdomen, where it is still retained in a sort of superstitious way by some enthusiastic men. Whilst on the subject of the treatment of wounds, I might allude to one point where it seems to me practitioners in reporting cases might be more explicit. We read of a successful case of abdominal or other operation where the result was, of course, a brilliant success (how few unsuccessful cases do we read of), and the author states that the operation was performed with full antiseptic precautions. Now, what does this mean? "Full antiseptic precautions," with one

* See Senger's paper read at a recent meeting of the Berliner Medicinischer Gesellschaft.

surgeon, may mean an elaborate ritual, and with another simple cleanliness. It would be a great improvement if, when reporting cases of remarkable recoveries from astonishing operations, the reporter would state exactly the method of treatment employed to which he attributes his great success. The patient gets but little credit for the part he plays in bringing about a favorable result, and nature gets still less.

In the *surgery of the abdomen* much progress has been made. In ovariectomies and extirpations of the uterus, the mortality is being steadily diminished, chiefly by the simplification of the methods of performing the operation. Rapidity of operation and a not too elaborate "*toilette* of the peritoneum," with drainage if there be bleeding, have been most successful in reducing the mortality in these operations. Following the lead of such men as Tait, Bantock, etc., antiseptic solutions are being discarded for plain water.

In cases of *acute intestinal obstruction* it is now becoming a recognized custom for the physician to call a surgeon in consultation, and the result has been that many lives have been saved. In my opinion these cases should be placed in the hands of the surgeon from the first, as in the great majority of cases there is little hope of relief being afforded by medical means alone. Not a few cases of *intussusception* have been cured by early operations, and also many cases of strangulation due to bands, twists, etc. It is now an axiom of surgery not to let any case of acute intestinal obstruction die without at least an exploratory incision. Soon patients will be as anxious for operations in these cases as they are now in cases of strangulated herniæ. Physicians still procrastinate in cases of intestinal obstruction. They often do not advise operation until all hope of recovery has been abandoned, and operation is looked upon as a *dernier ressort*. The treatment by rest, starvation and opium has still charms for most practitioners, who are always hoping that "something will turn up." Cases of operation are reported where no cause could be found for the obstruction, and where an opening was made in the distended bowel with the best results. The artificial anus which resulted being, after some time, spontaneously closed. This

affection, in spite of operation, will always be a very fatal one until some better means of diagnosis are available before collapse sets in. On many occasions the gravity of the case is overlooked until the patient is almost moribund.

In *inflammation of the cæcum and appendix*, surgical interference has been attended in numbers of cases by remarkable success. It is now held by many surgeons that all cases of so-called typhlitis ending in suppuration are due to perforation of the cæcum (rare) or appendix, and that early operation in this most fatal affection is the proper procedure. In some cases the perforated bowel has been closed with sutures or the diseased appendix has been excised. The results have been most satisfactory. It has been attempted to close by operation perforations due to the ulcers in typhoid fever, with but little result; the condition of the patient and the state of the bowel itself render it improbable that much progress will be made in this direction. The operation has been performed by Küssmaul of Strassburg, Bartleet of Birmingham, and Morton of Philadelphia, with fatal result in each case.

In *tubercular peritonitis*, most brilliant results have been effected by operation. The early operations were chiefly cases of mistaken diagnosis for ovarian disease, or were doubtful cases in which an exploratory operation was called for; the good results following these mistakes led to the adoption of incision and drainage as a recognized treatment for this affection. Many remarkable cures are reported, but in the majority of cases this treatment is only palliative.

In *suppurative peritonitis*, the treatment by incision and drainage has also afforded some remarkable results, and in all cases this method should be adopted even if the cause, which is usually perforation of the intestines or appendix, cannot be discovered.

In *perforating gunshot wounds of the abdomen*, good results have been obtained by immediate operation. W. T. Bull and Dennis of New York, and Parkes of Chicago, on this side of the Atlantic, have led the way in showing the profession what excellent results may be obtained by immediate operation. Prof. N.

Senn of Milwaukee, at the International Congress held last year in Washington, read a remarkable paper on "Intestinal Surgery." His experiments were made on dogs, and he showed how gunshot wounds of the intestines could be healed by omental grafting, with or without scarification of the serous surfaces.* Dr. Senn has also quite recently devised a method for the detection of perforating wounds of the intestines, by means of hydrogen gas insufflated per rectum; the escape of the gas from the abdominal wound can be recognized by its inflammability, and this, of course, is proof positive that the intestine has been perforated.

At the meeting of the British Medical Association held in Dublin last year, some admirable papers on the *radical cure of hernia* were read by such surgeons as Macewen of Glasgow, Mitchell Banks of Liverpool, Ball of Dublin, Barker of London, etc. The results of operations by excision of the sac and stitching up the wound were most encouraging. Macewen reported sixty-five cases operated on by his method, without a death, and only one failure. Banks, who was one of the first advocates of this method of operation, reported 106 cases; Ball, 22 cases without a death, and Barker 35. Macewen does not excise the sac, but after reducing the hernia makes use of the sac as a pad, by drawing it up through the internal ring and fixing it there. Banks, Barker, and others advise excision of the sac and fixing the stump at the internal ring, whilst Ball's method consists in torsion of the sac before excising. The open method has been advocated on this continent by McBurney of New York. French surgeons, after ligature and excision of the sac, do not advocate closing the inguinal canal by sutures, as is done by English and German surgeons. My experience in this operation has been small, but some months ago I operated on a very formidable case, the details of which I shall venture to mention. A blacksmith, aged 52, had an enormous, irreducible, scrotal hernia of the left side, from which he had suffered for many years. The tumor had become so large that he could not wear trousers or follow his occupation. He was, besides, a rather corpulent man and a hard drinker. I performed the operation

* Meeting of the American Medical Association, 1888.

for radical cure of the hernia on the 25th of April last. The sac was dissected out and opened, and the contents reduced with the greatest difficulty. The sac contained all the small intestines, the transverse and descending colon, and the sigmoid flexure, together with a large mass of omentum. Nearly two pounds of the latter were excised, and it was only by suspending the patient by his heels (a suggestion of Dr. Bell's) that I was enabled to reduce the protruded bowel. The intestines had not been in the abdomen for some years, and that cavity now seemed too small to contain them; and when, after an hour and a half's exertion, the intestines were all returned, the abdomen was as tense as a drum. The sac was excised and the stump fixed to the internal ring according to Barker's method, and the canal closed by suturing the conjoined tendon to Poupart's ligament. The patient made an excellent and uninterrupted recovery, and is now pursuing his occupation as a blacksmith with comfort. I saw him a week ago, and there was not the slightest tendency to a return of the hernia.

In the victorious advance of surgery the *liver* has not escaped. Langenbuch of Berlin has successfully resected the greater part of the left lobe, and Dr. Dalton of St. Louis, and Prof. Postemp-ski of Italy, have successfully sutured the liver for gunshot wound and stab wound respectively. Hydatid cysts have been frequently and successfully evacuated.

The *surgery of the gall bladder* has been making steady and uninterrupted progress. Lawson Tait has reported no less than thirty cases of operation on the gall bladder, with one death. He differs from Langenbuch of Berlin, who prefers excision of the gall bladder to incision and drainage. Mr. Tait says*: "The more experience I have in dealing with these cases the less necessity, it seems to me, arises for anything more than the simple process of cholecystotomy, and the extremely favorable results obtained from it put it in the first rank of modern operative procedures." Diseases of the gall bladder are among those affections which should be looked upon as surgical, and which the judicious practitioner should treat as such. In some cases

* *Lancet*, April 14th, 1888.

of obstruction from gall-stones, the gall bladder is shrunken and can be with difficulty brought to the surface. It is often difficult to say whether a case of obstruction of the common duct is due to impacted calculus or malignant disease; when the cystic duct alone is obstructed there is no jaundice. In doubtful cases an exploratory incision is now considered justifiable. When the gall-stone has escaped from the common duct it may still prove a source of danger. Obstruction of the intestine due to gall-stone is more common than is supposed; a small stone may cause symptoms of complete obstruction and consequent death. Such cases should be treated by early laparotomy. It is not necessary to incise the bowel to free the stone, for it may be passed on through the ileo-cæcal opening by external manipulation, as has been done by Mr. Clutton of London, or broken up *in situ* with a needle, as recommended by Mr. Tait.

The *stomach* has been frequently successfully opened for the removal of foreign bodies, or the performance of Loreta's operation of dilating a contracted pylorus; operations of excision of malignant growths of the stomach are not growing in favor, the game, as a rule, is not worth the candle. The *pancreas* has been successfully operated on for cystic disease, and the *spleen* has been so frequently successfully excised that the subject is no longer a matter for wonderment.

We come now to the *surgery of the kidney*. Since Simon first extirpated a kidney in 1869, great advances have been made. The surgery of no other abdominal organ has been so rapidly developed and perfected. No doubt many kidneys have been removed unnecessarily, and too often, unfortunately, with a fatal result; but surgeons are now beginning to see their way more clearly in this, until recently, little known branch of surgery. It is now a well established rule that no kidney should be removed without a previous nephrotomy or exploratory incision. Again, no kidney should be removed until the condition of its fellow is ascertained. Several cases are on record where the surgeon has removed the only kidney in the patient's possession. A preliminary nephrotomy enables the surgeon to avoid this fatal mistake. The most brilliant results have been obtained

in the operation of *nephro-lithotomy*. During the past year Mr. Jordan Lloyd* of Leeds, England, has introduced a method of exploration of the kidney which is a great improvement on the old needle puncture. He advises puncture of the lower end of the kidney with a long-bladed tenotome in a direction upwards and inwards till the lowest of the calyces is reached; a small, short-beaked child's bladder sound is then introduced, and the calyces and pelvis explored. In June last I had an opportunity of putting Mr. Lloyd's method into practice, and found it a simple and admirable one. The patient had been subject for several years to attacks of renal colic; latterly the pain had been continuous, and was located in the left lumbar region and down the course of the ureter; great pain was felt on pressing over the left kidney. He had never had any blood or pus in his urine. Knowing the comparative harmlessness of the operation of nephrotomy, and having had experience in several other cases, I determined to cut down on the painful kidney and examine it. When the kidney was reached the exploration was made with the greatest facility and with but little disturbance of the parts. After incising the lower end of the kidney with a bistoury, the short-beaked sound was introduced and the pelvis and calyces of the kidney thoroughly explored, but without result; no stone was found. The hemorrhage from the kidney, which was free, was easily controlled by pressure. The wound was closed and a drainage tube placed at its lower end. Urine ceased to come from the wound after the second day. In ten days the patient was out on the gallery, and in two weeks the wound had soundly healed. The pain which previously had been most intense was much relieved, and has since almost entirely disappeared. When last seen the patient was attending to his work and looked strong and healthy. I might mention that a woman from whom I removed a kidney in September, 1884, for calculous pyelitis, is still alive and in good health, and since the operation has given birth to three healthy children. Another operation which is finding favor in the eyes of surgeons is *nephrorrhaphy* or fixation of a floating kidney. Removal of the kidney was formerly prac-

* Practitioner, September, 1887.

tised for the relief of the pain and inconvenience of a floating kidney; the substitution of nephrorrhaphy for nephrectomy in these cases is a decided advance, for the former operation is a much safer as well as a more scientific one.

In the *surgery of the bladder* progress has also been made, though not to the same extent as in that of other abdominal organs. Tumors of the bladder are now successfully removed, and Guyon of Paris and Thompson of London have done excellent work in this direction. The introduction of the electro-endoscope has much facilitated diagnosis. The old supra-pubic operation is now the fashionable one for the removal of stone from the bladder, and it is being practised largely everywhere. The operation has been much improved by the introduction of Petersen's rectal bags and the practice of moderately distending the bladder before operation with an antiseptic solution. The operation is suitable for cases of large and hard stones, and for the removal of tumors and foreign bodies, but it will no more supplant the old operation of lateral lithotomy than did lithotrity. In some cases of stone in the bladder, Mr. Reginald Harrison* of Liverpool justly remarks, "it is necessary to do something more than merely remove the stone. In cases of cystitis with enlarged prostate where stone has formed, removal of the stone is necessary, but it is also necessary to prevent further formation by getting the bladder into better condition." The bladder, says Mr. Harrison, is like a chronic abscess with a stone in it, and it is quite as necessary to drain the one as the other. These cases are unfit either for supra-pubic lithotomy or lithotrity; but the lateral operation provides an excellent means not only for the removal of the stone but of after-drainage of the bladder. Ruptured bladders have recently been *successfully treated by abdominal section* and suture of the bladder rent. An early diagnosis is, of course, important in these cases.

I fear I have already exceeded my allotted time, and although many other subjects of intense interest to the surgeon might be touched upon, yet I feel constrained, for the remainder of my address, to confine myself to giving a short account of the re-

* Lettsomian Lectures, 1838.

markable advance which has been made during the past two or three years in the treatment of various *diseases and injuries of the brain and spinal cord* by surgical operation. Brilliant results have been obtained in this department of surgery—results which, a few years ago, would have been looked upon as Utopian. The operation of trephining the skull is a very old one, and was frequently and often unnecessarily performed by surgeons in the early part of this century. I have heard that it was quite the fashion for Dublin surgeons to have their pockets full of buttons of bone which had been removed with the trephine from the skulls of pugnacious Irishmen. However, the surgeons at that time only trephined for injury, and their explorations did not extend further than the dura mater ; it was considered injudicious and dangerous to interfere with the brain itself, not, as in earlier times, from superstitious motives, but owing to such interference being followed by fatal inflammation. It is only with the introduction of antiseptic surgery, and a more accurate knowledge of the localization of brain functions that the brain itself has been interfered with. Our knowledge of the functions of the brain has been greatly extended by the researches of such men as Broca, Hughlings Jackson, Fritsch and Hitzig, Goltz, David Ferrier, Yeo and others. The observations of these investigators chiefly go to prove that many areas in the brain are connected with separate and distinct functions. It was found that if these areas on the surface of the convolutions were stimulated electrically, distinct movements were excited in certain groups of muscles on the opposite side of the body. These facts were not discovered all at once, but were the result of prolonged clinical observation and careful experiments on the brains of animals. Many cases of severe injury to the brain have been saved in the past by early trephining. Abscesses of the brain following injury have been frequently opened successfully. Again, many cases of epilepsy due to injury have been cured by trephining over the spot injured ; but it is only quite recently, in fact only since the truth of the theory of Broca's localization has been established on a firm basis, that operations have been undertaken where there was no external indication of injury or

disease. The lesions have not only been successfully diagnosed, but the brain and its membranes have been incised without resulting in fatal inflammation. It has been clearly shown that inflammatory conditions following operations are due to sepsis. If the wound be kept aseptic the case does well. Dr. Macewen of Glasgow, an old pupil and house-surgeon of Lister's, noticed that cases of severe injury to the skull, with extensive loss of cerebral substance, were quite amenable to treatment, and exhibited no tendency to inflammatory action as long as the tissues were kept aseptic; hence, he said, if such injuries can be recovered from, how much more likely is recovery from a carefully planned operation. His first case was in 1876 for abscess, which he diagnosed to be in the vicinity of Broca's convolution; operation having been refused during life, he was permitted to trephine over Broca's convolution after death; the abscess was found as diagnosed and easily evacuated. In 1879 Dr. Macewen successfully evacuated from beneath the dura mater of a boy, who had previously received an injury of the head, some fluid which had collected there and had given rise to convulsive seizure of arm and leg. In the same year a tumor of the brain was diagnosed and successfully removed from the frontal lobe of a woman, who lived for eight years after and then died of Bright's disease of the kidneys. Up to 1884 Macewen had operated on seven brain cases, with one death, a case of abscess of the temporo-sphenoidal lobe. In December, 1884, the first case of tumor of the brain was operated on in London, having been previously diagnosed by Dr. Hughes Bennet, and removed successfully by Mr. Rickman Godlee; the patient lived four weeks relieved of his previous symptoms, and then died from septic complications. The report of this case, at a meeting of the London Medico-Chirurgical Society in May, 1885, gave rise to a most interesting and important discussion, in which Drs. Macewen and Ferrier took part. Dr. Macewen related several cases on which he had successfully operated, and mentioned his method of reimplanting the removed disc of bone. Up to this time MacEwen had operated on seventeen cases for the relief of cerebral pressure and other brain lesions. At the Brighton

meeting of the British Association in 1886, Mr. Victor Horsley excited the admiration of the meeting by his remarkable paper on the *Advances in the surgery of the central nervous system*. In this paper he minutely detailed his method of operating, and showed how, if performed carefully, the brain might be incised and tumors removed without any great risk to the patient. His experience was chiefly derived from operations on monkeys. He also showed three patients on whom he had successfully operated (one for tumor and two others for scarring of the convolutions, causing epileptiform fits). Since this time operations on the brain have become comparatively frequent for epilepsy following injury, for abscess of the brain (especially that form connected with suppurative disease of the ear), and for tumors. On this side of the Atlantic, Drs. Keen and Roberts of Philadelphia, and Drs. Weir and Seguin of New York, have done good work. Dr. Keen has recently successfully reimplanted, in one piece, the bone removed by the trephine.

At the recent meeting of the British Medical Association in Glasgow, Dr. Macewen read an epoch-marking paper in the surgery of the "Brain and Spinal Cord." He related how for years he had been working at this subject, and with what great results. His paper is certainly a wonderful contribution to surgical science. He says: "Of twenty-one cerebral cases (exclusive of fractures of the skull and other immediate effects of injury), in which operations have been performed by me, there have been three deaths and eighteen recoveries. Of those who died all were *in extremis* when operated upon. Two were for abscess of the brain, in one of which pus had already burst into the lateral ventricles; in the other, suppurative thrombosis of the lateral sinus had previously led to pyæmia and septic pneumonia. The third case was one in which, besides a subdural cyst over one of the hemispheres, there was extensive softening at the seat of the cerebral contusion in the opposite hemisphere, accompanied by œdema of the brain. Of the eighteen who recovered, sixteen are still alive, in good health, and most are at work; leaving two, who have since died, one eight years after the operation from Bright's disease, the other forty-seven days after operation from tubercular enteritis."

These results are certainly remarkable, and very encouraging as to the future of the surgery of the brain. I had the pleasure last year, while in Glasgow, of seeing some of Dr. Macewen's cases, and some were most interesting. In one case the diagnosis of the lesion was made from sensory phenomena alone, and successfully operated upon. Notwithstanding the success of such men as Macewen and Victor Horsley, operations on the brain should not be rashly undertaken. Each case should be studied on its own merits, and the surgeons who attempt these operations need not only experience in general surgery, but an accurate knowledge of motor and sensory phenomena in connection with the localization of the functions of the brain.

Dr. Macewen's name is also associated with the surgery of the spinal cord; he has operated on no less than six cases. In all, the posterior arches of the vertebræ were removed; four to relieve paraplegia, caused by pressure from connective tissue neoplasms and displacements of the vertebræ due to caries or traumatism. Out of the six cases operated on four were successful and two died. The first case was operated upon as early as 1882. Mr. Victor Horsley successfully removed a tumor, diagnosed by Dr. Gowers, from the posterior end of the nerve opposite the third dorsal vertebra. The patient suffered from paraplegia. He completely recovered, and was shown to the London Medico-Chirurgical Society, January 24th, 1888. I have frequently trephined the spine in the dead subject, and I can say that the operation itself presents no great difficulties. The cases which call for this operation are, however, rarely met with.

There are many other interesting subjects on which it might be profitable to dwell, such as intubation of the larynx, re-implantation of bone, transplantation of the eyeball and conjunctiva, new theories as to the cause of inflammation, tetanus, etc., surgery of bronchocele, surgery of lungs, joints and many others, but time will not allow me to more than mention them.

INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF THE FIFTY-SIXTH SESSION OF
THE MEDICAL FACULTY OF MCGILL UNIVERSITY,
OCTOBER 1ST, 1888.

BY JAMES STEWART, M.D.,

Professor of Pharmacology and Therapeutics, McGill University.

Our meeting to-day is to formally open the fifty-sixth session of the Medical Faculty of this University. Since the opening of this school sixty-four years ago, great and many have been the changes. From small beginnings, we have arrived at a position which is naturally a source of pride to each and all of us, to not only the goodly array of you undergraduates, but to the thousand graduates who are scattered far and near over the earth.

Sixty-four years is a long period in the history of man. It nearly represents the active professional life of two generations of men. It would be instructive to contrast the state of medicine in 1824 with what it is to-day. Such a record would be an account of an amount of brilliant work which far exceeds in importance all the advances made from the time of the old philosopher of Cos to the beginning of the present century. However interesting such a contrast would be, this is hardly the place to direct your attention to it. Before you graduate you will have had many opportunities of becoming acquainted with what has been the progress of medical science.

In the few minutes which I intend to occupy to-day, I prefer rather to make a few general observations which, although rather threadbare, will, I trust, be of use to many of you during your course through this University.

Introductory lectures are difficult undertakings. It is impossible to say anything that is new. The ground has been run over so often, and by so many able men, that there is really little new in a general way to present. However, even at the risk of being tedious and uttering platitudes, I desire to direct your attention for a short time to some thoughts that have been uppermost in my mind since I was made aware that the choice of addressing you had devolved upon me.

My first duty is a pleasant one. It is to bid you all a cordial welcome in the name of my colleagues and myself. To those of you who are this day commencing the study of medicine I would desire to address a few words especially. You are now entering into a study, the greatness and vast importance of which it is, I am sure, impossible for any of you to adequately comprehend. It takes a long, long time for the average medical student to awaken to the vast responsibility he is shouldering. Some students, unfortunately, never attain to that point. Many practitioners go through life without ever attaining it. Without its attainment you can never reach the higher levels of professional life. I congratulate you on the choice you have made. If true to yourselves, the choice is a wise one. When I look about me among my lay acquaintances and neighbors, it is with a considerable degree of complacency and satisfaction, for there are few, indeed, that I would willingly exchange places with. Although Medicine is a hard mistress, still she gives in return that which neither riches nor titles can buy or obtain. To he who practices his profession with all his heart and soul, there is returned to him a double interest—there is the great humanizing interest and the scientific interest, both of an ennobling character. Although there is naturally in the practice of our profession much to see that shows the weakness and frailty of man, there is, on the other hand, much that is pleasant and much that is ennobling. It is difficult for a laymen to understand the great interest that attaches to the practice of medicine. He cannot understand what pleasure there is in the observation of what we call “interesting cases.” He lacks what we call the scientific spirit. Unfortunately it is not uncommon to find members of our own profession sadly lacking in this respect. Their state is not to be envied. They go through life practising a low art, for, remember, we can make our work either a low art or a high scientific calling. It is all dependent on ourselves. Which of these two roads is to be your pathway through life. Now is the day and now is the hour for you to decide this momentous question. Just as the boy is the father of the man, so is the student the father of the practitioner. The character of your work

during the coming session will, in all probability, be the character of your work in the years that are to come. How very few students see further than their examinations. Examinations at best are only necessary evils. If teachers were only able to inspire their students with such a love for their work that they would perform it for its own sake, examinations would be unnecessary. Unfortunately, however, this is far from being the case. It certainly can never be reached while the present pernicious system of general education is in the ascendant. It is no exaggeration to say that few teachers in our public and higher schools grasp the true aim of education. The character of the material that they send forth is the proof of this. While governments pay by immediate results, so long will this bad system continue, and so long will we have to do with men for the professions who cannot grasp the true ideal.

If, while you are pursuing your course through this University, we are enabled to infuse into you an abiding love for your work for its own sake—if we have been able to make you catch the true scientific spirit, we know all will be well. If we only accomplish the feat of enabling you to merely pass your examinations, then our work has been a failure indeed. No matter how brilliant an examination a man may pass, if he has not acquired the genius, it may well be called of being a student for the rest of his career, all his hard work is of little use indeed. Here it may be said that it is not uncommon to find the really brilliant students fail. I know of numerous instances where a brilliant student career has ended on graduation day, simply because these men were never real students; while on the other hand, I have seen many who passed their examinations with difficulty, but who, having acquired an intense love for their work, start forth with renewed vigor, and in a short time distance in the battle of life the showy companions of their college course.

You will readily understand the great responsibilities that rests on your teachers. Our aim is that you should all leave us deeply imbued with that abiding interest in your work which will make you all students in the highest sense of that term for

the rest of your days. To attain this much to be desired end, it is necessary that we should have your fullest confidence. There is much to encourage us, for when we look at the long list of men that have graduated here we know that many of them are still students. The greatest compliment I ever heard paid to the Medical Faculty of this University was from an observant medical practitioner, a graduate of another school. He said that he had time and again observed that graduates of McGill were enthusiastic lovers of their work. An institution pervaded by such a spirit will do work of the highest character. Such influences are not confined to the lives of its individual teachers, but go on for untold generations. It is this far-reaching influence that makes the responsibilities of your teachers so great. Every lecture, every demonstration, and every clinic leaves an impression which will never fade. We claim from you the fullest confidence that in what we do we are doing it solely for your good and future usefulness. Between teacher and student there should be an active co-operation. The day is now fortunately past when a student, especially a medical student, looks upon his teachers with distrust. We are all students. We are all striving towards the same end—the lessening of human suffering.

There should always exist among us that *esprit du corps* which is so characteristic a feature of university life here. Many are inclined to underrate the influence of this brotherhood, but I feel certain that it is a great factor in the building up and perpetuation of good and honest work. It can be compared to the remarkable brotherhood that exists in many of Her Majesty's regiments, especially the Highland ones. What but their *esprit du corps* have made these regiments excel in many a field Spartan valor. Sooner than bring a blot on the glorious record of the past they would die to a man.

I need hardly tell you that your opportunities here are great. Value them and make use of them. Work so now that in the future there will be no regret on your part of not having made use of them. Time and again have I heard medical men regret the opportunities lost while attending college. They would give

a great deal to be able to go over the same ground again. It is only by making use of your opportunities here that you will be enabled when you are cast adrift to do good work. No matter how small may be your field of work, you have opportunities of doing something for science. It is a great mistake to suppose that the great medical centres are the only fields for the cultivation of medical science.

It is usually the custom of those entrusted to deliver introductory lectures to make use of the occasion to say something about, and urge the importance of, their own special subject. I am in great measure relieved from this pleasant duty, for it is pretty well conceded that pharmacology and therapeutics stand in no need of defence. Their importance cannot be denied. In fact they are the end of all the subjects in the curriculum—all other subjects are simply a preparation for the application of agencies to the treatment of disease. The ultimate object of the subject is to teach the legitimate use of means to an end. "The centre around which the lectures are grouped is the physician's prescription. From the utmost verge of the subject, the thread upon which it hangs leads back to the prescription, not of drugs only, but of everything that can alleviate suffering and cure disease. The ultimate end of medical education is to teach how to write a prescription, and in that little act lies the severest test of a physician's attainments. To be examined upon a prescription is to give access to every department of medical learning. If the student could satisfactorily explain the *how*, *what*, *when* and *why* of prescribing, his education would be complete; but this is not to be obtained during his curriculum merely, it is what the practitioner is still learning at the close of his career. The practical application of all the medical sciences culminates in the prescription; the ultimate object of chemistry, botany, physiology, pathology and the other allied sciences with respect to medicine is to teach the physician how to apply the remedies at his disposal most advantageously to his patients." Pharmacology and therapeutics is, as it were, surrounded by the medical sciences, so that in whatever direction we may advance we shall find ourselves approaching towards one or other of them.

It is not uncommon to meet even with very distinguished members of our profession who deride in very general terms the use of drugs in general. This incredulity was born in the days when empiricism swayed the medical profession. In the past nearly every form of therapeutic absurdity imaginable has been tested, and often with alleged benefit. Even to this day many people can be found who have a firm faith in homœopathy, the faith cure, and other similar delusions. It is not surprising, then, that there are therapeutic nihilists in the profession. The Vienna school, with Skoda at their head, have wielded an immense influence in perpetuating these errors, not only on the continent of Europe, but throughout the whole world. Skoda was a distinguished physician, who lent all his great talents to the refinements of physical diagnosis, almost completely ignoring both general and special therapeutics. Strange that his chair should now be occupied by a man equally distinguished, and at the same time one of the ablest and soundest of modern pharmacologists. His great influence has already been felt in the very stronghold of therapeutic nihilism. I refer to Nothnagel.

There is a subject of great importance to us here in Canada that I desire to say a few words on. It is the relation existing between the Medical Boards of the different Provinces and the teaching Universities and Schools of Medicine. Every candid observer must admit that there were strong reasons for the institution of the Ontario Medical Board. Whether the motives that actuated the originators of this board were high or not, I am not in a position to judge, but there is no doubt whatever that its establishment has been the means of elevating professional education and the tone of the profession in that Province. This despite the fact of the unholy alliance they entered into with the homœopathics and eclectics. What I wish to direct special attention to is this: that in more than one direction all our Provincial Boards are drugs on the wheels of medical progress. Owing to their narrow policy, progress in the teaching at the University and schools is greatly retarded. All our Canadian Boards require two courses of six months each of the following subjects: Anatomy, Practical Anatomy, Physiology,

Theoretical Chemistry, Materia Medica and Therapeutics, Principles and Practice of Medicine, Principles and Practice of Surgery, Midwifery, Clinical Medicine, and Clinical Surgery ; two courses of not less than three months each upon Medical Jurisprudence, and so on. Now if we compare those requirements with those, say, of the University of Edinburgh, we will find a very marked difference. I take the University of Edinburgh because it is universally allowed to be among the first of the teaching bodies in Great Britain. The following are its requirements : One course of one hundred lectures on the following subjects : Anatomy, Practical Anatomy, Chemistry, Materia Medica, Physiology, Practice of Medicine, Surgery, Midwifery and Gynæcology, General Pathology ; two courses on Clinical Surgery and Clinical Medicine ; and one course on Practical Chemistry, Practical Materia Medica, Practical Physiology, and Practical Pathology. Now you will at once notice the marked difference there is between the requirements of these different bodies. While Edinburgh requires only one course of purely didactic lectures, our Provincial Boards require two. Now, I would not like to go so far as to say that the Edinburgh curriculum is a perfect one and that of the Canadian Boards all imperfection. There can be no doubt whatever that in the main Edinburgh is right and our Boards are wrong. There are several subjects where one course is all sufficient to present the matter to the student. In this list I would name Descriptive Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Surgery and Midwifery. I hope you have noticed that I have included my own subject in the list of those I would like to see cut down. The only subject in the list of so-called didactic subjects which I think demands two courses is that of the Principles and Practice of Medicine. The subject is now such a complicated and vast one that it is quite impossible to present even its salient features in one course of six months. To put it practically, a word that is especially dear in this utilitarian age, it is your future "bread and butter" subject.

If we pass on to other subjects, I am sure you will all admit that one course on descriptive anatomy is sufficient for the full

presentation of that subject. This, with two courses of practical anatomy, would surely even satisfy the most exacting. As to physiology, one general course is quite enough. This, with a course on practical physiology as now conducted by Prof. Mills, would cover the ground very well.

You will all readily admit that one course of theoretical chemistry would be sufficient for the already over-burdened student. As to materia medica and therapeutics, the course should be divided up into pharmacology, clinical therapeutics, and practical materia medica. I would be quite satisfied with a three months course on general pharmacology, a three months course on practical materia medica and experimental pharmacology, and a weekly lecture in the hospital on general therapeutics. To a certain extent I am glad to say that I am able to adopt this arrangement and still keep up to the requirements of our Boards. I feel confident that before many years this or some similar plan will become general.

One course of didactic lectures on surgery, in addition to two courses of clinical surgery, is sufficient even for this important subject. If anything is to be added, let it be on clinical surgery and not on the general lectures.

The importance of midwifery surely demands that it should be treated as liberally as either medicine or surgery. There should be clinical midwifery; by that I do not only mean the usual attendance on six cases of labor, but the regular clinic at the bedside of the lying-in woman, after the manner instituted by Dr. Cameron in the Montreal Maternity. One or two courses of clinical midwifery, with one course of didactic lectures, would certainly be superior to the requirements at present demanded by the Boards, which consists simply of two courses of didactic lectures and the simple attendance on six cases of labor. There is no such requirement as clinical midwifery in the sense that this is now understood.

For what reason two courses of three months each in different years on medical jurisprudence should be required passes my understanding.

Now, a number of our Boards err in the opposite direction in

regard to the all-important subject of general pathology. It would appear from their requirements that it is not necessary to be acquainted with this subject at all, except in so far as it may be treated of in the other subjects of the course.

I have not done yet finding fault with our Boards. Among the subjects a student is required to attend his first year are Anatomy, Chemistry, Physiology and Materia Medica. As far as anatomy and chemistry is concerned, this arrangement is all right, but as for physiology and materia medica it is all wrong. To take materia medica first, a student is required to attend lectures on a subject which deals with the actions of agents on organs and tissues, the anatomy and physiology of which he is entirely ignorant of. Fortunately, here we have been able to get rid of this difficulty by making materia medica a second and third year subject. But how long will it be before a similar change will become general in this country ?

Take physiology again—a subject of intense interest and fascination—the very groundwork of scientific medicine. Now it for the most part consists in the application of chemistry and physics to the study of life, and yet the student is required to take up this subject before he has had a training in either physics or chemistry. If the subject was first entered during the second year, how much easier would it be for both teacher and student. Coming as it does in the first year, it seriously interferes with both the teaching of chemistry and anatomy.

Now, how are all these faults in our Boards to be remedied ? How are these wrongs to be righted ? The teaching bodies are powerless in the matter. In fact, any representation for a change in the curriculum of studies from such a quarter is looked upon with suspicion. For the most part, the Boards are composed of men who are not teachers, and who, consequently, are not in a position to judge of the needs of students. Many of them argue in this way: the more lectures the longer the courses, the fewer men there will be to graduate. I am sure that if here in McGill we had our own way in these matters it would not be long before these abuses would be swept away, as far as we are concerned. We are hoping for better things, and much depends

on our graduates. If, after leaving us, they would move collectively in this matter, I am sure the desired changes would soon come about. Come sooner or later they must.

It is far from creditable to the medical men of this country that such a state of affairs should be in existence. When we consider how much there is to know in medical science, and, after all, how little any one man can know, be his talents and industry of the highest order, it is surely our bounden duty to see that at any rate no obstacles are placed in the way of the student. It has recently been computed that upwards of 25,000 original medical articles are published yearly; this is about the rate of seventy articles a day, being more matter than ten ordinary men can even read, let alone digest. This will give you an idea of the enormous activity in the medical world, and yet you are supposed to know almost everything when you graduate. At the great congress which met in Washington two weeks ago, no less than fourteen special medical associations were represented. So specialized was the work in many of these sections, that the work of one section was frequently unknown ground to the members of another section. An attempt was made to have general meetings, where all might be interested. This proved a great success as far as the general interest that it excited, but I question very much whether, after all, there was an intelligent following by many, of the subjects discussed. It is hard to conceive how the laryngologists, or the gynæcologists, or the orthopædist, or the genito-urinary surgeons could intelligently follow the discussions on cerebral localizations. To many of them the discussion must have been about as intelligent as it would be to a well educated laymen.

I will not pursue this subject any further, as I do not wish to enter into the large subject of specialism. I have only referred to it in order to give you a glimpse of the great profession that you have now entered, and to direct the attention of the profession at large to the fact that the students of this country are seriously handicapped by the regulations of the Provincial Medical Boards. It is a great mistake to hamper the teaching bodies. If medical education is to progress, it is essential that they should

not be subject to the will of every budding medical politician. In this University we especially, I think, feel the obstructing influences of the Medical Boards. We are not only the oldest medical school in Canada, but the most progressive. At present, as in the past, our curriculum has been ahead of all others. It is, in fact, frequently copied by our neighbors—a sign which we are pleased to see, for you all know that “imitation is the sincerest flattery.” Depend upon it, we are not going to rest. Our motto is “Ever onwards! Ever upwards!”

I will now conclude what I have to say by reminding you that the years of your probation here will quickly pass away, and that soon you will be called upon to go forth to join the ranks of those who are battling with disease. Great is the field of labor, and every true and honest workman is welcome therein. The contest is a great and very unequal one, but every day it is lessening. Every day the light of science is brighter. May it be your part to aid, however humble, in making it still brighter, but to do this you must—*work!* Then “work while it is called to-day, for the night cometh when no man can work.”

INDICATIONS FOR, AND COMPARATIVE MERITS OF, EMMET'S AND SCHRÖEDER'S OPERATION ON THE CERVIX UTERI.*

BY T. JOHNSON-ALLOWAY, M.D.,

Instructor in Gynæcology, McGill University; Assistant Surgeon to the Montreal General Hospital; Gynæcologist to the Montreal Dispensary.

(Read before the Canadian Medical Association, at Ottawa, September, 1888.)

Mr. President and Gentlemen,—To Marion Sims uterine surgery owes its birth, and to the genius of such men as Emmet on this continent and Schröder in Europe it is indebted for its advancement to a high position in surgery. And it does not therefore seem strange that the names and energies of these two latter gentlemen should be associated with a certain definite morbid condition of the cervix uteri in their respective methods devised for its relief.

There is not a procedure better known, or one on which there has been more written, than Emmet's trachelorrhaphy. Indeed

* Clay models of operations were exhibited.

it has, in the past, occupied so much attention in our local societies and medical journals, that at present the majority of us are feeling somewhat inclined to give it a little gentle rest. It is on this continent, however, that it has substantially flourished, but even here, Noeggeroth, after adopting it as part of a lifetime's work, tells us in his declining years of pensionhood that it is not at all necessary. But, gentlemen, we must not mind this strange and unnatural reversion of opinion under such circumstances; the present generation of uterine surgeons has experienced of late another example of such reversion of opinion under similar circumstances.

In England and France, the non-appreciation of Sims' speculum has conduced to perpetuate a feeling of conservatism which we look upon as being so inimical to the advancement of scientific uterine surgery, and which has accounted, in a measure, for the lukewarm acceptance of the benefits of trachelorrhaphy in these countries.

In Germany, however, Simons' perineal retractor has opened up to these original investigators a vast field of information in regard to operations upon the uterus.

And what Sims' instrument did in America towards making possible operations upon the uterus through the vagina, Simons' instrument led the way to similar work in Germany. To the respective merits of these two instruments, as perineal retractors, do we owe the recent advances made in uterine surgery towards the alleviation of much suffering otherwise inseparable from the function of reproduction.

I have introduced in a passing way the application of these two perineal retractors, because I think the advantages which Simons' instrument has over Sims' in operations upon the cervix should be considered. One of the principal advantages consists in the all important fact, that with Simons' instrument we can render more easily the vagina purely aseptic before the operation has been begun, and carry it out under a continuous stream of sterilized water. When I first began to perform trachelorrhaphy it was not thought necessary to do anything further than clear away obstructing mucus, and even

at present in some large centres, sterilizing of the passages is delegated to the hospital nurse, prior to the patient being placed on the operating table. Dr. Brooks H. Wells, of New York, has shown by a carefully-prepared statistical table that in the practices of fifteen of the most eminent specialists in America, no less than 43 cases of pelvic inflammation and 6 deaths had occurred following the performance of so simple an operation as trachelorrhaphy, and surely so appalling a record should cause us to pause and enquire for a cause. Inflammation following operations upon the cervix are by some attributed to traction upon the pelvic floor, but this I look upon as a myth, and can accept but one real cause—*infection from without*. I do not believe there is ever sufficient traumatism produced in connection with operations upon the cervix to set up inflammatory action either in the wound itself or in the parametral tissue adjacent to it.

In considering the indications for an operation upon a lacerated and otherwise diseased cervix I will not take up time with the matter, the full digest of which we are all here acquainted; but I would like, sir, to lay before yourself and the gentlemen present the consideration of a few ideas which have originated during careful thought, in my endeavour to improve wherever experience prompted the necessity for such improvement. It is in this way only that we can obtain comparative evidence of sufficient value to enable us to draw logical conclusions. In regard to trachelorrhaphy for lacerated cervix, I found after I had done many cases that so long as I had to deal with a simple ununited cervical wound, free from areolar hyperplasia, displacement, chronic parametritis and perimetritis, chronic endometritis with cervical catarrhal patches, and other pathological conditions accompanying such a lesion, a simple trachelorrhaphy after Emmet's method produced the most promising results. And many of such simple cases were found to have been ladies who were told by their physician that they had a slight tear in the neck of the womb, and that if they took rest in bed, hot water douches and other palliative methods of treatment they would get better of their

pains, and that eventually they could bear an operation done at some more convenient time. No better advice could possibly have been given, and no better course of treatment could have been carried out. In fact, all the good had been done by the patient's family physician, and the special surgeon found a patient, as a supplicant to him, to do a certain operation upon her cervix. Then, again, we meet with cases which are of recent origin, that is from six to twenty months after delivery, and where the principal symptoms are reflex neuralgiæ, extreme debility and hemorrhagic endometritis. In these cases it is only necessary to readjust the torn edges of the cervix and enforce the necessary rest to favor more complete involution. These latter patients sometimes became neurasthenic, take on strange hallucinations, think they have heart disease, cancer, ovarian, or some obscure disease with which they say we are not familiar, and therefore, from which they can get no relief. Trachelorrhaphy sometimes acts like a charm upon the mental condition of such patients, but occasionally altogether fails, or even places them in a worse state. To repair the cervix here, however, is quite right, but the recovery of such a patient depended more upon a form of treatment outside of our present theme.

These few broad illustrations, gentlemen, of the more frequently met with cases wherein Emmet's method of simply restoring the cervix to its original form, will partially serve our purpose in my endeavours to show the leading indications for that procedure.

We will now, gentlemen, pass on to consider another morbid condition of the cervix very often associated with laceration, wherein Emmet's operation does not succeed in giving relief. In this class of cases we have extensive catarrhal disease of the mucosa, with ectropion and general hyperplasia of the injured tissues. Schroeder claims that the catarrh does not depend upon the laceration; but the reverse—that the laceration is due to the catarrhal disease. I am inclined to think that Schroeder is, to a certain extent, undoubtedly right. Catarrhal disease must tend to destroy the integrity of the elastic properties of

the cervix, and also to prevent union of the torn tissues during the puerperium. Again, how frequently do we meet with cases of most extensive catarrhal disease in women who have never been pregnant, and we sometimes see the catarrhal patch occupying the whole of the portio-vaginalis, extending as far back as the vaginal junction. So that, given, a case of bilateral laceration, extensive ectropion, chronic catarrhal inflammation of the endometrium, formation of retention cysts, and connective tissue hypertrophy, I say that Emmet's trachelorrhaphy is incorrect and unsuitable, and will not give relief. The reason why the operation is unsuitable to such a case is very obvious, and can be explained in this way. We have an extensive catarrhal hypertrophy of the mucosa of the whole cervical canal, the cylindrical epithelium often being replaced by pavement, and there is extensive formation of retention cysts. Now this condition affects the central portion of the canal wall principally, and the mere paring of the torn edges and bringing them together with sutures will in no way cure the catarrhal disease of the central strip left on each cervical segment. And I have found that the tension is so great on the sutures that the lower ones invariably tear out and allow a certain degree of ectropion again to take place.

There are other interesting points in the pathology of cervical lacerations recently brought forward by Bandl. He found that in 130 post-mortems on women who had borne children, 76 showed well-marked inflammatory residues in the parametral surroundings of the cervix, and that these cases also bore evidence of cervical lacerations. It can also easily be understood that the constant endeavor on the part of nature to heal the injured part during the puerperium would tend to keep up a venous congestion, leading to increased growth of connective tissue; and in this way we get inflammatory remnants in the parametral tissue surrounding the cervix following laceration. These inflammatory remnants are also found affecting the peritoneum, causing displacements of the uterus of a most intractable kind to treat. In the case of a heavy bulky uterus descending low down in the pelvis, and, when uncomplicated by inflam-

matory remnants, becomes retroverted by virtue of the long hypertrophied cervix being driven against the posterior wall of the vagina, and is reflected forward and downward, causing the fundus and body to be thrown backwards. In such cases I have found the truth of this mechanism of retro-displacements in the fact that after the removal of the cervix, the uterus did not become retroverted, and therefore did not require a pessary. I do not mean, however, that those aggravated cases of prolapse with a retroflexed uterus jammed low down in the well of the pelvis should be confounded with the cases in point—they require other additional methods of treatment. On considering all these facts, and the unsatisfactory results following Emmet's operation in certain such cases, it occurred to me that some procedure more radical in character must be done so that we may reduce the size of the uterus and cut off some of its abnormal blood-supply. Towards this end, exsection of the whole of the diseased mucosa and sub-mucous tissue suggested itself to me in the form of what is known as Schröder's operation. This operation consists in splitting up the cervix on each side to, or past, the vaginal junction, as circumstances may indicate. Then a transverse incision is made across the base of the flap, just below the internal os; this incision should go through the mucous membrane well into the fibrous wall of the cervix. With a long, sharp-pointed, straight bistoury the centre of the segment is transfixed from its point to the transverse incision at its base. The wedge-shaped piece thus lined out is removed and the flap remaining turned in over the stump by silkworm gut sutures. The same is done with the other segment of the cervix, and one suture is passed through the angles on each side. The wound is now dressed with absorbent cotton saturated with 1 to 40 carbolic acid in glycerine, and dusted with hydronaphthol. This dressing is allowed to remain *in situ* for six to eight days, when it will be found quite aseptic. The sutures are removed on the tenth day.

I may here, in passing, say that I always curette the walls of the uterus with the sharp instrument and use the steel dilators on the internal os, if necessary, to secure good drainage. I rarely use vaginal injections, as, if at the outset we make the

vagina aseptic, and carry on the operation under sterilized hot water, we need have no fear of after decomposition of the fluids. I have now performed Schröder's operation upon the cervix in 15 hospital and 22 private cases, and have not known a single rise of temperature or other untoward symptom follow the operation. The after results have been so gratifying, over and above what I had before received from Emmet's method, that I will continue to discriminate and perform it in all suitable cases.

CERTAIN EYE SYMPTOMS OF INTRACRANIAL ORIGIN.

By J. W. STIRLING, M.B. (EDIN.), MONTREAL.

(Read before the Canadian Medical Association, at Ottawa, September, 1888.)

The subject of my paper, "Certain Eye Symptoms of Intracranial Origin," has to do with that well-known and perhaps rather threadbare subject, "The Abnormal Limitations of the Field of Vision,"—*i.e.*, scotomata, hemianopsia, etc.,—and also the limitations of the field of color perception. These limitations, in the light of some recent investigations by Willbrand and others, are, indeed, of clinical importance to the general practitioner as well as specialist in enabling him to localize certain cerebral lesions.

I will endeavor, within the limits of a short paper, to give a *resumé* of these investigations, illustrating them by a few cases which have come under my notice. I trust it may not be out of place if I at first run over the course and ultimate destination of the optic nerve fibres. Proceeding backwards from the eye, the optic nerves decussate partially at the chiasma, after which, taking the name of optic tracts, they continue backwards, bending round the pedunculus cerebri. Fibres from the right tract supply the right side of both retinae, and those from the left tract the left side. The macula lutea of each eye is connected, it is at present assumed, with both cerebral hemispheres. But, to return to the optic tracts themselves, they arise :

(1) By fibres from the grey substance of the optic thalamus and the anterior corpora quadrigemina, the corpora geniculata forming ganglia intercalated in the course of certain of the fibres.

(2) Fibres come from the *tegmentum* of the *crus*.

(3) Also of marked import are certain fibres which pass directly through the *medulla oblongata* without the intervention of grey matter, forming the so-called spinal root of the optic tract, and explaining the pupillary reaction on the stimulation of the retina by light.

(4) A broad band of fibres passes from the tract to the psycho-optic centre at the apex of the occipital lobe, called the optic radiation of Gratiolet.

Other connections of the optic tracts with the cerebral hemispheres exist, far too numerous to mention in detail here; indeed Gratiolet affirms that the optic tracts are connected directly with every part of the cerebral hemispheres from the frontal to the occipital lobes. Some fibres are ganglionic, arising from the basal ganglia, and others cortical in origin—both uniting to form the optic tracts.

Lastly, I may mention as of importance that certain fibres cross in the *corpus callosum* from the motor areas of the opposite cerebral hemisphere, enter the outer capsule, and join the tract directly.

Commencing in front at the optic nerve, I will now, passing backwards, give examples of lesions in various parts of the visual tract. Lesions of the optic nerve associated with monocular blindness and dilatation of the pupil are common, but I may be permitted to cite as an example of a certain class of these cases by no means very common one which I lately had under treatment:—

J. P., aged 45, seen March 12th, complaining of loss of sight in his left eye. About New Year he slipped on the ice and fell, striking his forehead just over the supra-orbital ridge. Was at that time treated for fracture of the skull. Three weeks later the vision of the left eye began to get impaired, and has since steadily got worse until now it is abolished. Examination revealed a deep depression over the left orbit, at the junction of the inner and middle thirds, extending from the edge of the orbit one inch upwards; deep palpation can also discover a depression in the roof of the orbit, extending backwards in the direction of

the optic foramen. Ophthalmoscopic examination showed haziness of the margins of the disc, two or three vessels hidden, and atrophic pallor beginning.

These cases of fracture of the orbital roof extend into the optic foramen, set up a retrobulbar neuritis, followed by atrophy of the optic nerve, or at other times act by pressure caused by exudation or hemorrhage.

Coming now to the chiasma as the seat of lesions causing a limitation of the field of vision, I saw a case, during my house-surgeon days at the Royal Infirmary in Edinburgh, of the rare condition of paralysis of the inner halves of both retinae—*i.e.*, blindness of the temporal sides of the field.

W., aged 23, was seen by Dr. Berry. Although the patient was almost moribund, still the defect of both fields of vision to the temporal side was clearly observable. The patient died a few days later, when the post-mortem revealed a tumor the size of a small hen's egg occupying the region of the pituitary body and involving nearly the whole chiasma.

I have at present another case of evident lesion at the chiasma.

W. J., aged 42, came to me in February complaining of complete loss of vision in the left eye entirely, and partial loss in the right eye. Sight began to fail in the left eye two years ago, and for the past six months has been completely abolished. The right eye began to fail eighteen months ago, but for the past eight months there has been no change. No history of syphilis, but a marked alcoholic one. Left eye, no perception of light. Right eye, complete blindness to outer side of field—*i.e.*, paralysis of nasal side of retina. Inner portion of field amblyopic. Counts fingers at twelve feet. Pupil, right eye active; left eye motionless, except on stimulation of right eye.

Here the lesion undoubtedly affects the anterior part of the chiasma, since the nasal portions of both retinae are paralyzed, and likely, also, the adjacent portion of the left optic tract is affected. Ophthalmoscope showed both discs pale and atrophic.

Cases of homonymous hemianopsia or blindness of the same areas of both retinae are invariably caused by lesions posterior to the chiasma. Those occurring in front of the anterior cor-

pora quadrigemina—*i.e.*, in the optic tract—being distinguished from those occurring behind them in the occipital lobes by the loss of the pupillary reflex.

The reaction of the pupil on stimulation of the retina by light being abolished in the former case, but retained in the latter, together with absence of dilatation, although there is no psychical perception of light.

This is easily understood by considering the anatomical conditions, for it is in the region of the anterior corpora quadrigemina that the tract gives off its spinal root, through which the reflex travels to the third nerve, which innervates the sphincter pupillæ. The centres are in the medulla, and are coupled, so that both pupils react, although only one retina be stimulated.

The experiments of Curschmann, Haab and others have conclusively proved the existence of a unilateral innervation centre for corresponding portions of both retinae.

The lesions in post-mortem sections have been found to occupy portions of the cerebral occipital lobes, *viz.*, the first, second and third, and the cuneus.

Munk excised the occipital lobes of a dog, causing paralysis of the same sides of both retinae—*i.e.*, blindness to the opposite side in the field of vision. On excising the occipital lobes of both hemispheres, although the animal was totally blind, yet the pupils reacted readily to light.

Schaefer has found that on excising all of the occipital lobes except a layer of the lower surface in the monkey, the eye was entirely blind except the upper part of the field of vision—*i.e.*, the lower portion of the retina alone remained active.

Important aid in localizing the lesion causing the eye symptoms may be obtained by the collateral phenomena—*e.g.*, seat of pain, depressions in skull, abnormal phenomena in areas supplied by other nerves.

Willbrand has very ably drawn a number of inferences from the aggregate of symptoms he has observed in occipital lesions. They are :—

1st, That in homonymous areas of the field of vision in hemianopsia, the light sense cannot be reduced without the perception of form and color being similarly reduced.

2nd, That perception of form and color can be reduced without the light perception suffering.

3rd, That perception of form cannot be affected without color sense also failing.

4th, That color perception only may be affected; the light and form perception escaping.

Upon these data he formulates the following:

1st, The fibres of Gratiolet run to the very periphery of the cortex cerebri of the occipital lobes and cuneus, which form the psycho-optic centre.

2nd, The cortex is divisable into three layers, superimposed, in the outermost of which resides the color sense, in the middle the perception of form, in the innermost the light sense.

Now as the fibres of Gratiolet run to the extreme periphery, the course of any one fibre must be through all these three layers. Now it is evident that a lesion of a fibre occurring in the innermost layer will prevent its functionizing in the middle and outer layers; again, that a lesion in the middle area will prevent its acting in the outermost layer, although the innermost escapes, and, finally, that a lesion may occur in the outermost layer without at all altering the function in the two inner layers.

A very interesting and rare case occurred in my practise last spring:

K., aged 30; incipient symptoms of general paralysis of the insane; vision $\frac{2}{6}$; pupils active; fundus normal. Field free for general vision, but *total color blindness* existed to the left side of both fields of vision—*i.e.*, the right occipital lobes were affected. There was also slight facial paralysis of the left side only noticeable on smiling. Patient complained of occipital headaches.

Another case:

T. S., aged 30; poor vision in both eyes. Nine months ago, while skating, he fell and struck the back of his head. A few days later severe meningitis supervened. Patient was unconscious for several weeks; on regaining consciousness was totally blind. Sight has since been gradually returning. Patient has

still occasional severe occipital headaches. Examination of fundus reveals pallor of both discs with diminished calibre of vessels. Vision : L.E., $\frac{5}{6}$, pupils active ; Jaeger 16.

R.E., fingers ten feet.

Both fields of vision limited all round, the R.E. extremely, and wanting entirely to the left and downwards. The L.E. field not limited to so great an extent as that of the R.E., but is also more limited downwards and to the left. The limitation of the fields, the reaction of the pupils, and the seat of pain point to the occipital lobes as the seat of the lesion.

I have not heard for some time from this patient, but it is likely the vision and field will continue to improve as long as the meningitic exudation keeps on absorbing.

In conclusion, I think these few notes may be of use to the general practitioner in assisting him to localise the site of some cerebral lesions, by studying the fields of vision, which can be done approximately without any special instrument, and also by noting the condition of the pupils. To recapitulate :

1st, Are the same areas of both fields affected ? Then, if so, the lesion must be behind the chiasma, in the tract or occiput ; if same areas are not affected, then the lesion may be in the chiasma, in the nerve, or in the eye itself.

2nd, Is the pupil dilated and inactive ? Then the lesion is anterior to the anterior corpora quadrigemina in the tract if the defect of the field of vision is homonymous. If the pupil is active, at the same time with a homonymous defect of the field of vision, then the lesion is behind the corpora quadrigemina.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

GYNÆCOLOGICAL CASES UNDER CARE OF DR. ALLOWAY.

(Continued from page 284.)

CASE III.—*Chronic Cystitis treated by injections of strong solution of Nitrate of Silver.* (Reported by MR. GARROW.)

L. S., aged 33, unmarried, admitted to hospital complaining of painful and frequent micturition; has been troubled for four years, but during the last two years has been much worse. Would urinate every half hour during the night. Family history good. No diathesis. Has always been regular, excepting some seven months in 1881, during which her menses entirely ceased. Had measles eight years ago, since which she says she has never been perfectly well.

Examination.—Urine contains a large quantity of pus and some blood. Uterus and annexa normal. Paracystical tissue extremely sensitive to touch.

May 7th.—Patient unwell; flow scanty. *11th*—Feeling well. *18th*—Began washing out bladder with a solution of salicylic acid (1 to 1000) twice daily, and each alternate day with a solution of nitrate of silver, two grains to the ounce. Bladder curetted through urethra under ether.

June 17th.—Washed bladder with 20-grain solution of nitrate of silver in the morning, and with plain water at 1 and 7 P.M. (Hegar's funnel apparatus used.) *25th*—Washed out bladder with 30-grain solution of nitrate of silver. *26th*—Patient much better; comparatively free from pain.

July 5th.—Thirty-grain solution of nitrate of silver for the last few days with much improvement.

Since this date improvement has been steady and marked. Pus cells have entirely disappeared from urine, which has assumed normal appearance, and is retained for six hours. Left hospital on 10th August practically well, but will continue the treatment at home.

This girl learned to use the funnel herself. She was supplied

with solution of the nitrate, and promised to keep up the treatment for some time after arriving home.

CASE IV.—*Carcinoma Uteri; Death from Uræmic Coma through involvement of Ureters.* (Reported by MR. GARROW.)

M. C., aged 38, married; has three children, youngest seven years of age. Had a miscarriage in August, 1885, and dates her present trouble from this time. This patient was admitted into the hospital in November, 1885, case report reading as follows:—

Nov. 6, '85.—Sent to hospital as a case of typhoid, and complains of fever and weakness. From what can be gathered from patient, she took sick six weeks ago with a cough and some expectoration; became chilly and feverish three weeks ago, and took to bed a week later; has had no headache or giddiness; suffered from thirst and anorexia; bowels constipated; miscarriage in August, and since that has been losing flesh and strength.

Examination.—Heavy dull countenance and rather deaf; skin hot and dry; much emaciated; temperature 103° in the evening; pulse rapid, rather small volume, fair strength; tongue dry, red, glazed and cracked. On abdomen a few rose-spots; no marked tenderness but gurgling in right iliac fossa; no distension. Lungs: a few sibilant râles. Heart normal. Urine normal.

Nov. 9th.—What were taken for rose-spots have developed into tubercles, elevated, not surrounded by areola, about the size of half an orange pip. Family history: father, mother and three sisters died of phthisis.

Nov. 12th.—Papules have developed into pustules, five or six on front of abdomen; temperature has been irregular; pulse and respiration rapid. Lungs: harsh respiration in front of left and broncho-vesicular in right apex behind; vesicular quality is ill marked all over; no dullness. Skin dark color, covered with sudamina, very short. Almost no cough. No abdominal pain nor tenderness, and no vomiting.

Nov. 18th.—Abdomen flaccid. Little or no cough since ad-

mission. Respiration broncho-vesicular in character, right apex to sixth rib behind ; no râles or other physical signs.

Nov. 30th.—Temperature has been normal for last few days. Tongue cleaning ; great emaciation ; pulse 84. Sputa examined for bacilli tuberculosis and none found. (Examination by Dr. Johnston.) Lungs : no adventitious signs.

Dec. 6th.—Convalescing satisfactorily ; temperature normal ; gaining strength.

Jan. 16, '86.—Patient discharged to-day ; normal temperature ; much stronger though still considerably emaciated.

Patient readmitted to hospital on 14th February 1888, this time complaining of pelvic trouble. Menstruation irregular and frequently excessive ; severe dysmenorrhœal pain ; profuse leucorrhœa and pain in back and loins ; also has frequent floodings. Vaginal examination shows cervix in an advanced stage of cancerous infiltration, involving rectum and bladder ; uterus fixed by pelvic adhesions ; also find a vesico-vaginal fistula.

Patient put under palliative treatment ; has recurring floodings, also intermittent attacks of diarrhœa ; very little pain throughout and no vomiting. Keeps fairly comfortable ; is greatly emaciated ; has no need of opiates ; kept gradually getting weaker, and died of uræmic coma at 10.45 A.M., August 26th, '88. During last week, œdema of feet and ankles noticed. Appetite fairly good throughout.

Post-mortem examination showed the following : Whole cervix a mass of cancerous tissue, with infiltration of posterior wall of bladder and anterior wall of rectum. Patency of vesico-vaginal fistula destroyed in removing the cancerous mass. There was also infiltration of left pelvic floor at brim. Both ureters were enlarged, especially the left, which was about three-eighths of an inch in diameter. Vesical end of ureter was occluded by the cancerous mass. On severing, a considerable quantity of thin pus was allowed to drain away. On slitting up ureter to left kidney and opening kidney, found it completely undermined and showing well the pathological appearance of surgical kidney. Right ureter was also dilated somewhat, but not to same extent, nor was it occluded. On section, right kidney showed several

small caseous-looking spots in its substance, but no disintegration; also found a small calculus in pelvis of kidney (right). Several small abscesses appear in pelvic cavity. Lungs: right showed nothing of any interest; left, considerable tubercular infiltration. Also found a small-sized cavity, the softened material from walls of which, on examination microscopically, showed presence of tubercle bacilli. (Examined by Dr. Springle.) Liver and spleen show nothing beyond hyperæmic condition. No cancerous nor tubercular deposits found in either organs. Other organs show nothing special, excepting heart, which was very anæmic. Wall of right heart very thin, and cavities somewhat enlarged; left heart, structure much hypertrophied. Thickening of right auriculo-ventricular valves and atheroma of aorta.

Reviews and Notices of Books.

A Text-Book of Human Physiology. By AUSTIN FLINT, M.D., LL.D., Professor of Physiology, etc., in the Bellevue Hospital Medical College. With 316 figures and two plates. Fourth edition, rewritten. New York: D. Appleton & Co. 1888.

This edition is certainly the most suitable for the medical student of any the author has yet produced. The matter is well arranged, the statements clear, and the illustrations well chosen. The author states in his preface his own views as to a text-book for students: "It does not seem to me that the value of a text-book is materially enhanced by elaborate descriptions of apparatus and methods, except as they involve principles susceptible of general physiological application; nor does it seem profitable to follow out the details of intricate mathematical calculations involved in certain studies, such as physiological optics and acoustics, the results of which are universally accepted. It is sufficient to teach by text-books the science of physiology. The art of investigation and the methods employed in physiological research are to be learned in the laboratory and from special treatises and monographs."

With this in the main we have long been in accord; we would,

however, qualify the last sentence by the introduction of some such word as *chiefly* before "learned" in the last sentence of this extract.

The views of Professor Flint as a teacher of long experience are entitled to respect, and he has, in writing his work, certainly adhered to his expressed convictions. For our own part, we think a little more of methods and apparatus would not have been out of place; but with the profuse treatment given to such subjects in some books we do not at all agree. This work is not only comprehensive, but in it the conclusions of the science are arranged in a form readily grasped and remembered.

The work has been executed in the Appletons' best style, and the student's eye must be charmed while his mind is instructed. While the work does not depart as largely from old paths as some could wish, it certainly does avoid the extremes of some modern text-books of physiology. If it does not show great penetration or originality, it does evince discernment and common sense, and, on the whole, may be regarded as a fair compromise between the old form of text-book and the one that has gone to the new extremes. Dr. Flint has run few risks, pursued the safe middle way, and has produced a fairly good work.

A Compend of the Diseases of the Eye, including Refraction and Surgical Operations. By L. WEBSTER FOX, M.D., Ophthalmic Surgeon to the Germantown Hospital, &c.; and GEORGE M. GOULD, M.D. Second edition, revised and enlarged; with seventy-one illustrations. Philadelphia: P. Blakiston, Son & Co. Montreal: E. M. Renouf.

This work, which forms one of the series of handy compends published by Blakiston, Son & Co., has now entered on the second edition. This certainly shows that it fills a popular want. It is very condensed and handy for the student of medicine, who cannot spare the time from the other multifarious subjects of his curriculum to read any of the treatises on the diseases of the eye. The condensation, however, is occasionally carried almost too far, as take, for instance, the subject of corneal ulcers,

which is dismissed in one paragraph. Otherwise it is good, as giving in succinct form the opinions and treatment of various high authorities on the subject. The book is well printed and freely illustrated.

Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

SURGICAL SECTION.

(Specially reported for MONTREAL MEDICAL JOURNAL.)

DR. SHEPHERD of Montreal read an address, entitled *Some Recent Advances in Surgery*. (This address appears in the present number of the JOURNAL.)

In the discussion which followed the reading of Dr. Shepherd's address,

DR. F. W. CAMPBELL of Montreal related a case of tumor of the spinal cord which had come under his notice last winter. The patient had had severe pain on one side of dorsal region for some time; he then became paraplegic. Dr. Seguin of New York was called in and diagnosed tumor pressing on the cord, and ordered large doses of iodide of potassium to be taken daily; if this did not do good in ten days, he then advised operation. The patient was given 250 grains of the iodide daily, diluted in large quantities of potass water. One day he by mistake took the whole 250 grains in one dose without any bad results. Under this treatment the patient rapidly recovered his health, and at the present time is attending to his business and is as well as ever he was.

DR. GRAHAM of Toronto objected to the statement made in Dr. Shepherd's address, namely, that surgery was now leading medicine. He strongly advocated conservatism, and advised practitioners not to attempt the different operations alluded to because they had been successfully performed by men of ability and experience. All men were not fitted to perform these operations, such as that of radical cure of hernia and others described in the address.

DR. RODDICK of Montreal agreed with the reader of the

address in his remarks on antiseptics. The best antiseptics were soap, water and a nail-brush. He stated that he was the first to introduce Listerism into Canada and had good results from it, but experience had taught us that the elaborate ritual might be very much simplified, and that now the method had become so simple that any man in the country could satisfactorily carry out antisepticism. In speaking of lateral lithotomy, he said that he had performed this operation thirty-four times with one death, and hence he did not care to give up an operation which had given him such good results. He had lately performed the supra-pubic operation in a man who had a large stone, and in whom he had operated ten years before for stone by the lateral incision. In these cases he did not favor suturing the bladder, but believed in free drainage through the wound and through the penis. He had had one case of brain surgery during last winter. A man who had received a wound in the head some years before developed epileptic fits. Over the left ascending frontal convolution was a depression. He trephined here and removed a large portion of bone and dura mater. The patient had a fit some hours after the operation, which started free bleeding, and patient died comatose in forty-eight hours.

DR. MULLIN of Hamilton mentioned several cases of intestinal obstruction which had come under his notice and had been operated upon. In some of the cases the obstruction was not found at the place expected, and in others the adhesions were so great that nothing could be done. One case came on slowly, and it was three days before indications for operation appeared. All the cases resulted in death. He asked, "How are we to know the time to operate?" In these cases the general practitioner should not hesitate to transfer them to the surgeon.

DR. HILL of Ottawa stated that he had strong objections to carbolic acid, and that when he was a student in the London Hospital sixty-five years ago as good results were obtained in surgery as at present; it was usual for amputations to heal by first intention. He mentioned a case of a man who was struck on the head with the sharp end of a pike pole and afterwards was subject to epileptic fits. There was a depression in the skull

where the pike pole had struck. The skull was trephined at this spot and the patient had no more epileptic fits for eighteen years. These fits, however, have since returned.

DR. PROUDFOOT of Montreal then read a paper on *Excessive Hemorrhage after Cataract Operations*. Patient was a large-robust man, who was rather intemperate. The cataract was removed without iridectomy. Great hemorrhage followed, which was stopped by pressure; it recurred, and finally the eye had to be removed. The eye was examined and the hemorrhage was found to proceed from the central artery of the retina; a dilatation was found at its exit. Hope of Chicago and Foyer of Kansas City have reported similar cases.

DR. FENWICK of Montreal next read a paper on the *Removal of Retro-pharyngeal Tumors*. Dr. Fenwick gave a short account of the various operations performed for the removal of malignant and sarcomatous tumors in the region of the pharynx. Dr. Cheever of Boston was the first to advocate removal by external incision. Velpeau previously had removed them through the mouth, having first cast a ligature round the carotid artery. Butlin advocates the removal of sarcomatous tumors of the pharynx through the mouth, and says they usually shell out easily. In malignant disease, Czerny makes an incision from the angle of the mouth and thence to angle of jaw and down the neck to the hyoid bone, dividing the jaw in front of the masseter muscle. Langenbeck was the first to practise section of the lower jaw in these cases. Obolinski divides the jaw behind the masseter. Dr. Fenwick had on two occasions removed tumors from the retropharyngeal region, and by an incision commencing above and behind the ramus of the jaw and continuing round the angle of the jaw and for a greater or less distance along the body. The parts were carefully dissected, the vessels pulled outwards, and the tumor reached with the finger; if sarcomatous it could be easily shelled out. In one case, to give himself more room, he cut off the rather prominent angle of the jaw. His first case was operated upon in 1880. The patient was a young girl aged 18, who had a number of painful tumors in various parts of the body. One of these tumors was situated in the

pharynx, behind the right tonsil, and caused her so much pain in swallowing that she was willing to undergo any operation for its removal. An incision was made commencing one and a half inches above the angle of the jaw and following a course a little behind and below the jaw; the dissection was carried down in front of the vessels and below the digastric muscle, the finger was then used, the tumor reached, and easily shelled out. The patient made a rapid and permanent recovery. The tumor was found to be a fibro-neuroma. The second case occurred in 1886, in a woman aged 48. The tumor was situated on the right side, and posterior to the tonsil; it was as large as a hen's egg. An incision was made from the lobe of the ear downwards, a little posterior to the ramus of the jaw, and was continued round the angle of the jaw to the front of the neck. To obtain more room a portion of the angle of the jaw was removed. A careful dissection was made as in the previous case, the tumor reached, and easily shelled out. There was very little bleeding. The tumor proved to be a sarcoma. The patient rapidly recovered from the operation, but the facial nerve had been cut and she suffered from facial paralysis of that side. There has been no return of the tumor, and the facial paralysis is now hardly perceptible.

DR. SHEPHERD said that in cases of retropharyngeal growths a distinction should be made between those that were cancerous and those that were sarcomatous. In the former, such an operation as that described by Dr Fenwick would be of but little use, a more extensive incision such as that recommended by Czerny, Kocher and others being needed, not only to remove the cancerous growths, but to extirpate the involved glands. Sarcomatous tumors of the retropharyngeal region usually shell out easily, and could be removed through the mouth if not too large. Dr. Shepherd related a case where he had removed a retropharyngeal tumor by a somewhat similar incision to that used by the reader of the paper. The tumor occurred in a woman aged 40, and was the size of a small orange. It was first noticed eight years previously, and had been treated as an enlarged tonsil; latterly it had rapidly increased in size, and

interfered with articulation and deglutition. An incision was made from the angle of the jaw downwards and forwards, internal to the carotid vessels and below the digastric muscle; the tumor was easily reached and separated, but owing to its size could not be removed through the wound without breaking it up; it was removed with a large spoon. A very severe venous hemorrhage took place at the time, which suddenly stopped on using pressure. For a week the patient went on well, but on the seventh day a tremendous hemorrhage took place from the wound. When Dr. Shepherd reached the patient she was almost pulseless, and the bleeding had stopped. The wound was plugged with carbolized sponges. A second severe hemorrhage occurred on the fourteenth day after operation. This had also ceased before Dr. Shepherd reached the patient. The hemorrhage appeared to be venous. After giving considerable anxiety, the patient finally made a complete recovery and has had no return of the tumor. The tumor proved on examination to be a rounded sarcoma.

DR. PROUDFOOT stated that when he was house-surgeon in the hospital at Boston he had assisted Dr. Cheever in the operations referred to by Dr. Fenwick. There was great trouble in removing the tumors, and some of the cases were followed by severe hemorrhages, as in the case described by Dr. Shepherd.

DR. JAMES BELL of Montreal read a paper on a case of *Exostosis Bursata*. This rare affection occurred on the inner side of the lower end of the thigh of a boy aged 20. The bony growth was about the size of an orange, and appeared to spring from the condyle below the epiphysial line. It had a bony pedicle three-quarters of an inch long and half an inch in diameter. Its surface was covered with cartilage in small isolated nodules. The whole was enclosed in a perfectly-formed synovial membrane, which was continuous with the periosteum of the pedicle. This sac contained half an ounce of clear, amber-colored synovial fluid, in which loosely floated fifty-four cartilaginous bodies, looking exactly like floating cartilages found in the knee-joint. These varied in size from a bean to a small pea. The tumor was first noticed nine years before as a small, soft, mov-

able growth about as large as a marble. It grew steadily, and only four years before had become fixed and felt hard. There never was any pain in connection with it, but the patient complained of its inconvenience and the fatigue of the muscles in walking up stairs. Fehleisen had reported a similar case which occurred in Bergmann's clinic, and refers to another seen in Billroth's clinic in 1863. In Bergmann's case 500 loose cartilages were found, and in Billroth's only 35. Rhindfleisch had investigated Bergmann's case and had come to the conclusion that it had originated, not as an ordinary exostosis from epiphyseal cartilage, but as an enchondrosis of the cartilage of the joint which had pushed out a portion of the synovial membrane; this in time had been cut off from the joint cavity and had formed a separate sac over the tumor. Fehleisen, however, attributes these growths to a developmental error, by which a group of cells separate from the joint and lying dormant suddenly springs into action and produces this form of exostosis. The free cartilaginous bodies form a special character of this form of exostosis. He ascribes the origin of the free floating bodies to tufts of synovial membrane in which are formed minute islands of hyaline cartilage. These develop and are set free in the cavity of the synovial sac.

DR. SHEPHERD said the case was a most interesting and rare one. It threw a great light on the formation of floating cartilages in joints. He was convinced that the little buds of cartilaginous substance growing from the inside of the synovial membranes accounted for these free cartilaginous bodies. This form of exostosis is different from the ordinary and more common form which is seen growing from the epiphysial cartilage. These stop growing with the maturity of the individual.

DR. SHEPHERD of Montreal read a paper on *Mania following Operations*. He said that not a few cases of mania after operations are reported in medical literature. In these cases it was difficult to say whether the mania was caused by the traumatism or the anæsthetic. Again, iodoform may be suspected in some cases. Any shock or disturbance of function may produce insanity in those predisposed. Savage states that people of insane

stock more readily contract infectious diseases, and are likely to have early and severe delirium. The reader of the paper went on to say that not a few cases of insanity are reported after ovariectomy and other operations on the female genital tract. Werth reports six cases in 300 operations. Dr. Savage's paper on Insanity following the use of Anæsthetics was also referred to. Dr. Shepherd reported six cases of mania following operations—viz., one following operation for perityphlitic abscess, one after sequestrotomy of femur, one after amputation of the breast, one after operation for strangulated inguinal hernia, one following incisions and several administrations of chloroform for cellulitis of the arm, and one after opening an abscess in loin following typhoid fever. In two of the cases there was a distinct history of insanity; in one epilepsy; in the others no history could be obtained, but two were either much addicted to alcohol or had been considered queer. Iodoform was used in all the cases except one, but as the mania almost immediately followed the operation, this as a cause was excluded. Two of the cases proved fatal; one of the patients remained permanently insane; the others recovered completely. In conclusion, Dr. Shepherd said that it would be well for surgeons to consider whether, in persons who have a strong predisposition to insanity or who have suffered from previous attacks, it is advisable to operate when the case possesses no great urgency, and an operation is not essential to the patient's life.

DR. BELL of Montreal, in the discussion which followed, related two cases of mania which he attributed to the prolonged and abundant use of iodoform after operation. Both his cases ended fatally. One was a case of most extensive burrowing of pus in the abdominal walls, and the other a case of ovariectomy, where wounding of the bladder was followed by infiltration of urine.

DR. R. W. POWELL of Ottawa said he was sceptical about iodoform producing acute mania. He was not aware that any cases of iodoform insanity are reported where there had been no operation. He thought, in the cases reported by Dr. Shepherd, the mania was due to traumatism in persons who had either been addicted to alcohol or had an hereditary tendency to insanity.

DR. BULLER of Montreal said that mania was not uncommon after eye operations, especially after cataract operations. He thought it was due to the confinement in bed and binding up of the eyes, and perhaps also to the use of belladonna. When belladonna is used without operation, cases of mania may occur. He saw mania follow in a case where belladonna was used for iritis, and another case where an old woman became insane after the removal of a cataract, she ultimately recovered.

DR. DICKSON of Pembroke asked if mania from iodoform would be apt to occur if large quantities of the drug were applied to small cavities or surfaces.

DR. BULLER of Montreal read a paper on *Penetrating Wounds of the Eyeball*. (This paper appeared in the October number of this JOURNAL.)

DR. PROUDFOOT of Montreal reported a case of severe wound of the eye which he had successfully treated. He dwelt on the importance of early treatment in these cases.

In reply to Dr. Dickson of Pembroke as to the proper treatment of inflammation of the eye following injury, Dr. Buller said that he preferred cold compresses; he used warm applications as soon as pus appeared in the corneal wound. The solution used by him was 1 to 10,000 of bichloride of mercury. Internally he gave 10 to 15-grain doses of antipyrin.

DR. STIRLING of Montreal next read a paper on *Some Eye Symptoms due to Cerebral Lesions*. (This paper appears in the present number of the JOURNAL.)

In the discussion which followed the reading of the paper, DR. BULLER stated that in cases of fracture of the orbital plate, the blindness may be due to infiltration of blood in the sheath of the optic nerve. He related a case of blindness from this cause which he had seen in his own practice.

DR. LAPHORN SMITH of Montreal next read a paper on the *Treatment of Varicocele and Orchitis by the Electrical current of Tension*, and also reported a case of *Resilient Stricture of the Urethra cured by Electricity*.

A discussion followed the reading of these papers, in which Drs. Dickson, Buller, Church and others took part. There being no more business before the section it adjourned.

ASSOCIATION OF AMERICAN PHYSICIANS.

Third Annual Meeting, held at Washington, Sept. 18, 19 and 20.

DR. E. C. SEGUIN of New York opened the discussion on *The Relation between Trophic Lesions and Diseases of the Nervous System*. He said that he excluded from consideration vasomotor disorders, and diffused or quantitative nutritional changes, partly because he considers them to be a distinct subject, and partly because their study would be beyond the scope of a short paper. He divided the so-called "trophic lesions" into two great classes. In one the lesions are probably mostly due to the action of extraneous causes, and are preventable. The second class embraces lesions which seem to be directly due to the nervous disease, and which are its necessary and unpreventable results. He endeavored to show that lesions of the second class, which alone merit the name of *trophic lesions*, occur in organs and tissues which are anatomically continuous, and whose life (or preservation of structure and function) is associated or interdependent. He concluded that disease of the nervous system produces true trophic lesions when it interferes with the associated or interdependent life of continuous tissues. This proposition he offered only as a partial and preliminary answer to the question under discussion.

DR. H. C. WOOD of Philadelphia, as co referee, presented the following conclusions: 1. It is physiologically proven that the nervous system directly affects general nutrition. 2. Various lesions are the immediate result of previous nervous disease. 3. In various cases the lesions are not preceded by circulatory disturbances. 4. No known vasomotor condition is capable of causing any of these lesions. 5. Therefore, it is absurd to attribute changes to preceding vasomotor changes.

DR. W. M. ORD of London said that he felt very much honored at being asked to speak on this important subject, but before he said a word he would beg to tender the Association his gratification at the very high tone and character of the discussions on the papers he had previously heard in this room. As regards the two papers he had heard read, they had cer-

tainly stood in strong contrast with one another: the one critical, the other appealed strongly to the imagination and fascinated one with its strong and logical character of thought and imagery. We would try to prove at the start how, from disturbances of nutrition, there is a starting-point in the nervous system of the local hepatic disturbances. He did not think Dr. Seguin denied that the changes in chronic rheumatism are of a histological character. He would quote two cases bearing upon this point which he saw recently before leaving London, having had them under observation for more than a year. The first was a case of chronic hypertrophic cervical pachymeningitis, which presented a very typical form of that disease. This patient, a young man, at the time of his admission showed very little change in the skin and none in the joints. He was kept in bed, treated, and recovered to a large extent his motor power, and completely his sensation. There was a steady wasting of the tissue around the second and third digits, a distinct and marked change in the joints. The joints of the thumbs and fingers became somewhat tender, and finally loose. All the physical signs of progressive chronic arthritis developed in conjunction with dystrophy of skin and muscle without any local irritating cause. The next case was an old man, who, for many years, lost power and wasted in the upper extremities. This man had a wasting of the skin, and a very remarkable change in the joints. They were considerably swollen, were constantly dislocated and as constantly put back in place. The whole muscles of the upper extremities were wasted. He sat up in bed with great difficulty. These two cases illustrate very well the primary affection of the nervous system in determining dystrophy of the joints. Early in his endeavors to analyze pseudo-arthritis he was brought face to face with a class of cases which interested him very much. As a woman approaches the climacteric period one sees a painful swelling of the small joints of the fingers and toes. Examining this with great care the one thing always present was disorder of the catamenial function, and chiefly such a disorder as consisted of menorrhagia. He had seen cases in which, as the climacteric began to develop,

the joint affections returned with intensified severity ; but the day before he left London he saw two cases ; one was a lady of sixty years, who had troubles of this kind during the climacteric period, and had a large uterine fibroid. Here was an unusually persistent type of the subacute form of this disease long after the cessation of the catamenia. People who suffer in this way are, in all cases, very excitable, anæmic, and sensitive women. It appeared to him that, as affections of the nerves or spinal cord may bring about neurotic dystrophies in joints, so local irritation may produce, in a reflex way, affections of joints more or less parallel to the affection determined by nerve disease. In the same way he has great reason to believe that continued prostatic irritation will produce affection in the joints of the leg. Gonorrhœal rheumatism may itself not be the result of a microbe, but the work of the nervous system. Acute rheumatism might be traceable to similar causes. It seemed to him that acute rheumatism is often developed under conditions which would indicate affections of the nervous system—such affections as would bring about, in a reflex way, the irritation of the joint. It occurs certainly after parturition. It occurs almost invariably in people who are very anæmic, or have lost large quantities of blood, and whose nervous system is brought into a state of over-expansiveness.

DR. M. ALLEN STARR of New York said that he had very little to add to the discussion. It seemed to him that the departure of Dr. Seguin marks a decided advance toward a certain amount of clearness in the study of trophic disturbances. The point he made, that trophic disturbances must be distinctly separated from nutritive disturbances, has not been appreciated, and it seemed to him to be a very important one, and one that threw considerable light on the subject. There is a class of nutritive disturbances that has not been mentioned yet, which has been described by Dr. Osler as cerebral palsies, viz., that class of atrophies which follows hemiplegia in children. In adults it does not appear to be followed by any amount of atrophy on the paralyzed side. It is important to separate vasomotor from trophic disturbances. Trophic disturbances follow very closely

on vasomotor disturbances, and it is not strange that the two should be confounded.

Dr. H. P. BOWDITCH of Boston agreed entirely with Dr. Seguin that any attempt to explain the mechanism of trophic changes must be speculative in our present knowledge. We have to recognize in muscular tissues two distinct metabolic processes, one having its cause in the nitrogenous and the other in the non-nitrogenous metabolic. These are distinct inasmuch as it has been shown that the nitrogenous metabolism is not connected with muscular activity, while the non-nitrogenous is. When the muscular activity is kept within physiological limits urea excretion remains the same. Nitrogenous metabolism of the body is essential for muscular activity. It is essential for muscular activity that an abundant stream of nitrogen should flow into the body and out again. So the nitrogenous metabolism of the muscles goes on quite independently of its functional activity. If we limit the term trophic to the nitrogenous metabolism of the muscle and let the non-nitrogenous metabolism go to the functional activity, we would simplify matters a good deal.

DR. PYE SMITH of London said that he had listened with great pleasure to the two admirable papers read before the meeting. He confessed that both from a physiological and clinical standpoint his judgment would be entirely on the side taken by Dr. Wood with such eloquence and zeal. He did not quite agree with Dr. Wood in imputing a logical error to those who resort to the supposition of traumatism and vasomotor disturbances to explain the phenomenon in question. He would quote the case reported by Hilton of a patient with an ulcer in the hand which got worse and worse in spite of all endeavors to cure it, when it was discovered that a minute exostosis was pressing on the ulnar nerve, and when the exostosis was removed the ulcer healed rapidly. Gangrene caused by an embolus obstructing an artery is a well-known fact. He still thought there are cases of gangrene quite inexplicable on such an hypothesis. They had all seen those strange cases of skin eruption come on rapidly following lesions of the cord. His own experience is that these

trophic cutaneous lesions are bullous or herpetic in character. He thought they must admit from such strong evidence that trophic nerves have a true position not only in physiology but in medicine.

DR. FERRIER of London was of the opinion that there can be no question of the direct influence of the nervous system on the nutrition of the tissues altogether apart from vasomotor changes, and agencies operating *ab-extra*. This is shown, among other things, by the structural modifications which are observed in the glands on stimulation of their secretory nerves; and by the degeneration which ensues in muscles which are separated from the cells of the anterior cornua, or when these latter are destroyed. This degeneration he holds to be the direct result of the severance of the muscles from their trophic centres, and is not due to secondary inflammatory changes, inasmuch as it occurs under conditions which entirely obviates the initiation and propagation of irritation. But he believes with Dr. Seguin that the great majority of the trophic disturbances which so commonly occur in connection with injuries of nerves, such as panophthalmitis from lesion of the fifth, and the herpetic and other cutaneous disorders from lesion of common sensory nerves, are not due to the withdrawal of trophic influence, but are the results of secondary inflammation or injurious agents operating from without. They are observed more especially in connection with partial lesions of nerves and those most calculated to excite irritation. He should, however, expect to find (although he is not aware that the subject has been fully investigated) that section of all the sensory nerves of any given region would induce degeneration of the nerve endings and their annexes, precisely analogous in character to the degeneration which occurs in muscles when the motor nerves are divided, or the anterior cornua destroyed. But the point is, whether these and similar facts are to be regarded as proofs of the existence of a special system of trophic nerves and trophic nerve centres, distinct from those which minister to the general functions of motion (secretion) and sensation, or whether the maintenance of the nutrition of the tissues is merely a different aspect of the

general functional activity of sensory and motor nerves. He has, on the principle "entia non sub multiplicanda," been more inclined to adopt the latter view, and to regard, with Sigmund Mayer and Dr. Seguin, the muscles, nerves, and anterior cornua as forming together a functional and nutritive unity. In combination these structures exhibit what we call normal laws of reaction and nutrition; but when separated they are reduced, each to its own independent vitality, and exhibit the changes which we are accustomed to call those of degeneration, characterized by the retrogression of the more highly organized, and proliferation of the less highly organized structures. The recent important researches of Gaskell have thrown new light on the structure and functions of the nervous system, more especially the nerves which innervate the walls of the bloodvessels and the hollow viscera. There are two sets of nerves possessing diametrically opposite functions. One set, *katabolic*, excite activity and cause waste; the other set, *anabolic*, inhibit activity and promote repair. It may be that the inhibitory or anabolic influence is not, like the katabolic or motor, the direct result of nerve stimulation, but only a question of interference of nerves alike in function. But if the facts cannot be so explained, then there would appear to be (in the case of the muscles of organic life at least) a system of nerves which would be properly called trophic. Whether this differentiation of nerves obtains also among the muscles of animal life is a point which has not been, as yet, determined. He is of the opinion that more light will be thrown on this subject by the researches on thermal or heat centres now being actively pursued, and on which Dr. H. C. Wood and Dr. Ott have given us valuable instructions. The question is whether there are nerve centres which influence and regulate the production of animal heat, apart from those which are related to motion and sensation. Many facts have been adduced in favor of this proposition, but, he thinks, much will have to be done before we can regard it as proved. The muscles are the chief foci of heat production in the body. He should therefore argue that the centres of heat-production must be coextensive with those which minister to the

nutrition of the muscles. He is therefore not readily inclined to believe that there can exist, anywhere in the nervous system, any one centre capable of maintaining (as a nerve centre must) afferent and efferent relations with the whole muscular system. So far as yet appears from experimental research, increased production of heat has been found in association with irritative lesions of nerve centres and tracts; but he is not aware that it has been proved satisfactorily that increased heat-production and increased tissue-waste result from the removal of a centre whose functions could, with propriety, be termed inhibitory or anabolic. But he thinks that researches in this direction are those which are best calculated to throw light on the difficult problem at present under discussion.

MR. VICTOR HORSLEY of London begged to be allowed to communicate the results of experiments performed by Dr. Fred. Mott of London in the laboratory of the Brown Institution, since it seemed to him that Dr. Mott's observations were of the utmost importance, especially in view of the direction which the present discussion had taken. The question appeared to him to present the following points. Destruction of what we regard as trophic centres or cutting of fibres leading from the same may presumably produce disturbances of nutrition in one of three ways or combination of these, viz.: (1) True trophic disturbance. (2) Loss of function. (3) Vasomotor changes. Vasomotor changes, he thought, were anyhow put out of the question by the fact that experimental removal of the superior cervical ganglion of the sympathetic produces practically no change. Dr. Mott's method of experimentation appeared to him to possess the especial merit of excluding not only this complication, but also that due to loss of function. His method was as follows: He ligatured, on one side, certain anterior roots in the cauda equina of monkeys, under strict antiseptic precautions, and then observed the condition of the femora on the two sides. Now the normal metabolic changes in bone are, of course, known since the days of Hunter to be a combination of absorption and restoration. Dr. Mott found that the trophic changes in the bones produced were destructive—*i. e.*, exaggeration of the normal process of absorption.

The femur of the side on which the roots were ligatured was probably atrophied, and on microscopic investigation Dr. Mott discovered that the medullary surface of the interior of the bone was thickly covered with osteoclasts. Considering that the function of the bony skeleton is so essentially passive, especially in contradistinction to the example of muscle quoted by previous speakers, and considering the small influence which vasomotor changes could be imagined to bear on the nutrition of such a resistant tissue as bone, he thought that Dr. Mott's experiments definitely supplied proof for the first time of katabolic changes originated by lesion of efferent nerve fibres.

DR. SEGUIN, in closing, said that he had been very much pleased to find that his conclusion and subdivision of these lesions have not met with more contradiction than they had received. He claimed that true trophic lesions are the result of some mysterious connection between the nervous system and organs in other parts of the body. With respect to the very interesting experiments of Dr. Mott, he would say that there is nothing new in the essence of the experiments. He was very pleased to hear no actual refutation of his conclusions.

DR. FRANCIS T. MILES of Baltimore read a paper on the *Effect of Concussion of the Spine on the Reflexes*. He called attention to some lesions of the spine of a traumatic origin which, while cutting off the influence of the will, destroyed the reflex actions. This is a subject, he said, very little brought to the attention of the profession. Dr. Hammond, in his work on the *Diseases of the Nervous System*, gives a case in which the reflexes were lost. In all the series of cases collected in the *Medical History of the War of the Rebellion* nothing is said of the loss of the reflexes from concussion.

DR. R. T. EDES of Washington said that several cases of this kind came under his observation in the hospital, in which, a number of weeks after the shock, there was very much exaggerated tendon reflex, a fact of much value in the present discussion. In one case, a male, he found him paralyzed and in a state of complete contracture. He had fallen on his back under the wheel of his waggon. On autopsy, the parts above the medulla

oblongata were lost, but all down the cord there was that condition of sclerosis which is found associated with a state of exaggerated reflex.

DR. WM. OSLER thought that as a result of concussion there may be an abolition of the reflexes which may persist for some length of time. Then, in addition to that, there may be a complete abolition of the reflexes from a central myelitis and a destruction of the integrity of the gray matter. He had a case of that kind recently in Philadelphia. The cases to which Dr. Edes referred they had all seen.

DR. H. C. WOOD had seen a number of cases in which the traumatism ended in a subacute myelitis involving the whole cord. Then, again, he had seen cases in which the traumatism ended in chronic lateral inflammation. For instance, a woman gets hurt, may be badly frightened into hysteria, the cord gets badly shaken, a minute hemorrhage perhaps occurs through it, and she gets a myelitis. We may have various lesions following traumatism, as from a blow on the head.

DR. M. ALLEN STARR said that it seemed to him that in those cases of concussion in which the reflexes are arrested and in which there is no injury post-mortem to the part of the cord that governs the reflexes, there is the explanation on the theory of inhibitory impulses coming from a higher region and transmitted downward which arrest the reflexes. Such a condition exists in hemiplegia. No doubt in many of the cases of Dr. Mills the condition was one of irritation at a higher level and so arresting the reflex. He agreed with Dr. Edes that, if the patients lived long enough, the irritation would have ceased and they would have recovered with exaggerated reflexes.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 22nd, 1888.

DR. WM. GARDNER, 1ST VICE-PRESIDENT, IN THE CHAIR.

Case of Multiple Capillary Hemorrhages and Fatty Degeneration of the Pancreas.—DR. LAFLEUR exhibited a pancreas which was uniformly enlarged to more than twice the natural size, of a dark reddish-black color externally, firm on section, and of an almost uniform dark red, mottled here and there by greyish patches which resembled normal parenchyma of the organ. A thin section of the organ showed that the general dark color was due to numerous close-set capillary hemorrhages separated one from another by greyish translucent material. Microscopic examination confirmed the nature of the change, the hemorrhagic portions appearing of a brownish-red color, and presenting a peculiar fissured appearance (probably due to freezing of specimen in process of making sections); in addition there was universal fatty degeneration of tubules and acini. The cellular tissue around the pancreas was blood-stained, but beyond this and a great excess of fat in the omentum, mesentery, and cellular tissue generally, there was no evidence of disease in any of the other organs. There was no peritonitis.

DR. GEO. ROSS stated that the patient was a man of about fifty years, who gave a history of having suffered from some obscure dyspeptic symptoms for several years. These consisted chiefly in paroxysmal pains in the abdomen, lasting from half an hour to six hours. He saw the patient only twenty-four hours before death, and found him suffering from severe pain in the epigastrium and vomiting. He had many of the symptoms of general peritonitis. The attack had come on suddenly, only seventy-two hours before he was seen. He had a rapid, weak pulse, showed signs of collapse, and rapidly sank.

Extirpation of the Uterus by the Vaginal Method.—DR. WM. GARDNER exhibited a uterus, removed for malignant disease by the vaginal method. The case presented several features of unusual interest. The patient, unmarried, aged 43, had suffered

for seven years with pelvic pain, uterine hemorrhage, and other discharges ; at times fœtid fleshy masses had occasionally been expelled from the uterus ; anæmia and cachexia were marked. On examination under ether, the uterus was uniformly enlarged five to six inches in depth, the cavity much enlarged, and the lining membrane nodular and roughened. Extirpation was recommended, and after due consideration the patient consented. Unusual difficulty was expected because of the large uterus and narrow, rigid vagina and perineum. After ligature of the bases of the broad ligaments and separation of the uterus in front and behind, the uterus was reduced in size by excision of portions, and in this, the only way possible, the uterus was removed per vaginam. Dr. Gardner had contemplated the possible necessity or feasibility of electing to partially detach the uterus from above after abdominal section and completing the separation from below, finally lifting the uterus from the pelvis through the abdominal incision. This, however, proved to be unnecessary. Although the operation was a very severe one in the weak state of the patient, she was in a remarkably good condition when put to bed, but she died of peritonitis in forty-eight hours. This is the first death in Dr. Gardner's experience of six cases of vaginal extirpation of the uterus. It was, however, by a great deal the most difficult of all. The specimen showed great thickening of the walls of the uterus. Microscopical examination of the specimen by Dr. Lafleur, acting pathologist to the Montreal General Hospital, showed the disease to be malignant adenoma. The thickened walls were composed of apparently healthy, smooth muscle fibre, a hypertrophy probably the result of the long-continued irritant influence of the disease of the endometrium.

DR. TRENHOLME congratulated Dr. Gardner on his great success in extirpation of the uterus ; a mortality of one in six was a good record. He had himself extirpated the uterus ten times and saved only four cases ; in some of the cases in which the operation had been performed by him the condition was desperate and there was but slight hope of recovery from the first. He was very doubtful of the advisability of extirpation of the uterus for malignant disease, and he had almost given up performing

this operation. In the case recorded by Dr. Gardner, where the growth was apparently non-malignant and did not infiltrate, he thought a thorough curetting of the uterus and the application of electricity by Apostoli's method would have been more suitable than excision. He preferred the abdominal operation, and removed the uterus by a V-shaped incision according to the method recommended by himself. This method of making a flap of the cervix was suitable to cases of myomata, and better than ligature by wire, etc. The two flaps formed by the V-shaped incision should be sewed together firmly with silk or shoemaker's thread, and in this manner the cavity was completely closed and the danger of hemorrhage prevented. If drainage was necessary, he passed a tube through the centre of the stump into the vagina. He thought this operation would have been suitable in Dr. Gardner's case, because the os was not involved.

DR. ARMSTRONG said he would have liked to have heard more about the combined operation. He had no doubt that some of the foetid discharges had escaped into the peritoneal cavity where the uterus was split up. He thought this could have been avoided by the abdominal incision.

DR. GARDNER, in reply, stated that he believed the case to be one of malignant disease; clinically, it certainly was. His experience with removal of the uterus by abdominal section had not been as favorable as by the vaginal method. By the latter method he believed there was a field for operation even in benign cases if they were carefully selected. Leopold had reduced the mortality to six per cent. In reply to Dr. Armstrong, he said it was quite probable that the peritonitis resulted from the escape during the operation of foetid discharges from the uterus.

DR. SHEPHERD read a paper on a *Case of Excision of the Tongue; death from Acute Miliary Tuberculosis*. The history of the case is as follows:—

A. W., aged 64, a strong, healthy-looking Irishman, entered hospital, May 19th, 1888, to be treated for an ulcer of the tongue. The patient has never been ill, never had any cough, and has been a moderate smoker. Last September first noticed a small,

hard nodule on the left border of the tongue, about an inch over the tip, and opposite a sharp decayed tooth. This troubled him, and two months later the growth was cauterized by his medical attendant; an ulcer soon formed, which had increased up to the time of entrance into hospital, and was attended with considerable induration at the base. Last March another lump appeared nearer the tip, which also ulcerated. Family history negative. His condition on entering hospital was as follows: Small, spare, active-looking man of considerable vigor, aged 64, but looks younger. On the left side of the tongue, commencing about half an inch from the tip, is an irregular fissured ulcer divided into two parts by a nodule of induration. The ulcer has an indurated base, and the whole mass of induration about the size of an almond. The ulcer is painful, there is not much salivation and no foetor, but the patient is unable to masticate on that side of the mouth. Very little interference with articulation. On examining the submaxillary region some small hard glands were felt, which were quite movable. Examination of his organs revealed no evidence of disease. Dr. Lafleur snipped off a portion of the ulcer and examined it microscopically, but found nothing but epithelial elements. In consultation with my colleagues, and taking into consideration the history of the case, the age of patient, the appearance of the ulcer, with surrounding induration, and involvement of the submaxillary lymphatic glands, it was thought the disease was epithelioma and demanded immediate operation. On May 23rd I performed the operation which I usually do in such cases, viz., preliminary ligature of the linguals and excision of the tongue by scissors. On examining the state of the glands through the submental incisions, more were found involved than could be made out by external manipulation, and they were removed with the submaxillary glands through the incisions made for ligature of the linguals. Drains were introduced into the mouth through the incisions. The wound was packed with Billroth's sticky iodoform gauze, but this not remaining on more than thirteen hours, the surface was painted over with a solution of iodoform, castor oil, and alcohol and resin. The patient recovered well from the opera-

tion. He was fed by the rectum for three days, and everything went on well. On the fourth day he sat up and fed himself, but in the evening his temperature rose to 101° and he had a pain in his right side. Next day a well-marked friction sound was heard. The wound was doing well, and the very slight fœtor emanating from it was dissipated by a wash of Condy's fluid. Next day (the sixth) his temperature rose to 103° ; respiration 41; he became very weak, and died the next day about 2 P.M. Dr. Lafleur, who performed the autopsy, has kindly given the following report: "External wounds in neck healthy and granulating; wound in mouth perfectly healthy, without fœtor, and apparently healing kindly. In thorax was found a complete adhesive pleuritis of right side. Adhesions recent, tearing easily. Similar recent adhesions over upper two-thirds of left lung. Surface of both lungs covered with numerous miliary tubercles. On section, right lung from apex to base is crammed with grey miliary tubercles the size of a millet-seed. Left lung, on section, also contains numerous miliary tubercles scattered throughout the upper two-thirds. In both lungs the tissue between the tubercles is intensely congested. No caseating bronchial glands found. Bronchi normal in appearance. Liver and kidneys contain a few miliary tubercles. Pelvic organs normal. Epididymis of right testicle is enlarged, and on section found to be entirely caseous. Vas deferens thickened. Body of testis appears normal. Left testicle and appendages normal. A microscopic examination of the growth of the tongue shows numerous tubercles on floor of ulcer, and around them abundant small-celled infiltration. Tubercles also found among the muscle fibres. Under high power numerous giant cells are visible. The glands show merely a condition of inflammatory infiltration."

There is now no doubt in my mind that the case was one of tubercular ulcer of the tongue, with a latent condition of general tuberculosis, which was lighted up into activity by the operation. The case is a unique one as far as my experience goes, and I do not see how in such a case a similar diagnosis of cancer could be avoided. An intractable ulcer with indurated base, with enlarged lymphatic submaxillary glands, occurring in an old man

of 64, would naturally be looked upon as of a malignant character. The diagnosis between tuberculous and cancerous ulcer of the tongue is always a difficult one, and tuberculous ulcers have been frequently excised on the assumption that they were cancerous. In both diseases the same parts of the tongue are affected, the lymphatic glands involved, and both forms may have their origin in injury or irritation. The diagnosis of tuberculous ulcer is still more difficult when no other signs of tubercle are present, and when the ulcer occurs, as in the present case, between 61 and 70 years of age, and in a male. Excision of tuberculous ulcers is now a recognized treatment, and one that offers the best chance of non-recurrence, especially when the disease is primary. The present case is interesting from the fact that the patient had a previously unsuspected general miliary tuberculosis which was lighted up into activity by traumatism or severe injury caused by the operation. Such cases occur also after typhoid fever and other fevers. In the present case, as far as the operation was concerned, everything did well, and there was no evidence post-mortem of the patient having died of any of the forms of septicæmia. At one time it was thought that the ulcer might have been a cancerous one in a tubercular subject, but a careful microscopic examination of the tongue and glands failed to show any evidence of carcinoma, but distinct evidence of tubercle was present.

DR. GEO. ROSS said the surgical points in this case which had been considered by the reader of the paper were most interesting, but the medical questions which were suggested were of far greater interest to him. He had no doubt that in certain cases the diagnosis of a tuberculous from a cancerous ulcer was impossible, but the case interested him, firstly, from the fact of an acute miliary tuberculous ulcer occurring at such an advanced age. Such cases were by no means common; still he had seen not a few cases of acute miliary tubercular meningitis in persons between 50 and 60. Secondly, the occurrence of acute miliary tubercle after operation was new to him. There was no doubt that this affection had come on rapidly, yet it was not in his experience to see acute tuberculosis running such a rapid course

(seven days). He was inclined to think it was a case of coincidence, and that the acute tuberculosis would have occurred without operation; the focus of infection was no doubt in the tongue or testicle. He did not think the tuberculosis was latent and had been lighted up by the operation into activity, as suggested by Dr. Shepherd. The tubercles were all of the same age, and were recent. The patient's temperature before operation was normal, and an examination of the chest had revealed nothing. The acute pleurisy, no doubt, was the immediate cause of death.

DR. BELL said that he did not believe the operation had lighted up into activity an already existing miliary tuberculosis. How often do we see tubercular testicles and glands removed and yet no such conditions result. The man may have been in a condition ripe for the development of the acute tuberculosis, and the shock of the operation or more likely the prolonged etherization involved in such a radical operation as that performed by Dr. Shepherd have started the process, but, in his experience, he never saw tuberculosis run such a rapid course. Dr. Bell related a case of acute tuberculosis which had supervened three weeks after an excision of the hip for strumous disease. In this case, however, there was old tubercular disease of the lung. He thought tuberculous disease of the various parts were often overlooked, especially those of the rectum, bladder and skin.

DR. LAFLEUR suggested that rapidity of the disease might be accounted for by the mode of infection, which was probably through the bloodvessels and not the lymphatics. In such cases acute tuberculosis runs a very rapid course.

DR. REED asked if tubercle bacillis had been searched for.

DR. BULLER then read a paper on a *Case of Pulsating Exophthalmos cured by Ligation of the Common Carotid* as follows:—

Pulsating exophthalmos occurring spontaneously or as a result of traumatism is met with so seldom that every new case of this kind may still claim a place in the records of ophthalmic surgery; at the same time, the pathology of this affection is now so well

understood, in the light of cases already recorded, that little or nothing new in this direction remains for present or future observation.

In the matter of treatment, however, there is no rule so firmly established but that much must be left to the judgment and discretion of the surgeon. Injury to the common carotid in the cavernous sinus is no doubt much more common than the records of surgery seem to show. The case I am about to describe is the fourth of the kind I have myself seen, two of which have certainly not found their way into ophthalmic literature.

The first occurred in a man 45 years of age, who was thrown from his horse, striking the head violently on the frozen ground. A few weeks later pulsating exophthalmos gradually made its appearance and steadily augmented for several months. At this time (*i.e.*, after the lapse of three months from the date of the injury) there was enormous proptosis and a large, soft, pulsating swelling over the inner end of the right eyebrow. Here, too, a harsh bruit could be heard with the stethoscope, and the patient was much troubled with a pulsating noise in the head. Ligature of the common carotid was finally performed, but I believe the patient died a few weeks later from repeated attacks of epistaxis.

The second case has been placed on record by Mr. Walter Rivington (*Med.-Chirurg. Transact.*, vol. lviii, p. 183).

The third case was that of a young man who, in a boiler explosion, was struck over the left brow by a large fragment of iron, receiving a depressed fracture of the frontal bone. About four weeks later he came to me on account of defective vision of the left eye. I found the vision of this eye very much impaired, and a pronounced atrophy of the optic nerve. He was under observation about ten days, during which time he had two slight attacks of epistaxis. A day or two later, just as he was about leaving home to visit the hospital, he was suddenly seized with a violent epistaxis and bled to death in a few minutes. The post-mortem showed a depressed fracture of the frontal bone, a fissure extending from this across the left orbital roof, the optic foramen, and body of the sphenoid, directly beneath the cavernous sinus. Here ulceration of the bone had taken place and

a direct communication was established between the vault of the left nostril and the left internal carotid, which had either been perforated by a spicula of bone at the time of injury or had subsequently become involved in the ulcerative process affecting the bone beneath it. In this case the aperture in the artery did not communicate with the cavernous sinus, hence there was no artero-venous aneurism.

The fourth case, being the subject proper of this communication, came under my observation on the 24th of May last. My notes of the case, taken that day, are in substance as follows:

“Early last February, W. G., aged 28, a robust and healthy young man, fell from a railway bridge, a distance of 20 feet, striking the right side of head and face on a piece of square timber. Was said to have been unconscious for about twenty-four hours. Both upper and lower jaw on the right side were supposed to have been fractured, but there are no signs of these lesions now discoverable. The right side of head and face were greatly swollen for several days, the right eye remaining closed for five days after the injury. During this time he suffered a good deal of pain in the injured parts. When the swelling subsided so that he could see again with both eyes, there was diplopia, one object appearing higher than the other and less distinct. As soon as he recovered consciousness he also became aware of a low beating sound in the right ear, which has continued unabated ever since. After a few days there was no more pain, but the eye remained moderately swollen and the diplopia was constantly present. The higher false image moving perceptibly up and down with each heart-beat. During the succeeding eight or ten weeks there was no perceptible change in his condition, and he was able to follow his employment. About two weeks ago he again became troubled with pain, which was chiefly referred to the orbit and brow. With this there was a marked increase in the prominence of the eye and swelling of the eyelids. Four days ago the pain became intense, so that he was unable to sleep at night. It was, indeed, the severity of the pain that finally induced him to give up his work and seek relief.”

When I first saw him the appearance of the eye was strongly

suggestive of orbital cellulitis. The lids had a tense, dusky and swollen aspect, the eyeball was strongly protruded and stationary, whilst the swollen and œdematous ocular conjunctiva, extending far in advance of the palpebral fissure, was covered with a watery and mucous secretion. The conjunctiva generally was in a state of well-marked venous hyperæmia. The refractive media were unimpaired, and when the upper lid was slightly raised, no difficulty was experienced in making a satisfactory ophthalmoscopic examination; this showed a somewhat œdematous condition of the retina, this structure being cloudy, with enlargement and tortuosity of its venous system. The optic nerve was not swollen, though its margins were rather indistinct. In other respects the fundus oculi was perfectly normal. Vision was reduced to $\frac{1}{200}$, the pupil slightly dilated and fairly active; the visual field unimpaired. Displacement of the eye amounted to about 5-10" in an outward and 6-10" in a forward direction. At the inner extremity of the eyebrow there was an ill-defined swelling, soft and elastic to the touch, and imparting a distinct thrill to the examining finger; just at this point, too, the stethoscope disclosed a harsh rasping bruit synchronous with the action of the heart. This sound was distinctly audible for a considerable distance upwards, and also outwards as far as the zygoma; pressure over the common carotid greatly diminished its intensity. The eyeball could be pressed backwards nearly into its proper place, but in so doing communicated to the fingers a strong pulsation. A pulsating motion of the eyeball was also readily seen in profile view. Pressure over the common carotid caused almost complete cessation of the pulsation, with softening and reduction of the swelling in the orbit. Under these circumstances there could be no reasonable doubt that we had to do with an arterio-venous aneurism.

Dr. Shepherd and several other members of the hospital staff kindly examined the case with me, and it was decided to ligate the common carotid without unnecessary delay. The reasons for this decision were as follows: Pressure over this artery caused reduction of the protrusion of the eye, softening of the orbital swelling, and almost complete abolition of pulsation, without distress or inconvenience to the patient, who was, moreover, a young,

healthy and vigorous man, and likely to bear the operation well. The recent increase in the swelling, attended as it was with severe pain and rapid deterioration of vision, threatened irreparable damage to sight unless some speedy means of relief could be obtained. The man himself was exceedingly averse to any form of treatment that did not promise an immediate cure.

On the following day, May 25th, Dr. Shepherd ligated the common carotid in the upper part of its course, with the usual antiseptic precautions. Two ligatures were placed around the artery and the vessel severed between them. The edges of the wound were brought together over a decalcified bone drainage-tube and an antiseptic dressing applied. The immediate effect of the operation on the orbital tumor was the same as had been temporarily obtained by digital compression, only somewhat greater—*i.e.*, softening of the swelling, partial reposition of the eye, great diminution in the pulsation, and total cessation of the bruit. Recovery from the anæsthetic (ether) was perfectly normal, without the slightest sign of impairment in the cerebral or nervous functions.

May 26th.—Proptosis greatly diminished, the conjunctival œdema has nearly disappeared, vision greatly improved, and the voluntary movements of the eyeball are tolerably free. There is no diplopia, and the patient feels perfectly comfortable.

27th.—Uninterrupted improvement.

28th.—Feels quite well and “can see nicely” with the affected eye. V. $\frac{2}{3}$. States that since the operation there has been no noise in the ear. Proptosis now only slight in degree.

June 4th.—Dressings removed from the neck to-day; the wound found to be completely healed and the bone drainage-tube entirely absorbed. Can see as well as ever. V. $\frac{2}{3}$. Movements of the eyeball appear to be entirely normal; the globe, however, is still somewhat displaced forwards.

June 12th.—Patient thinks himself cured and declines to remain longer in hospital. Beyond a slight fullness of the orbit there is no indication of the recent orbital affection.

Compound Dislocation of the Astragalus.—DR. HINGSTON reported a case of dislocation of the astragalus, in which the

patient removed the dislocated bone. The patient was a man of about 25 years of age, who fell with his foot twisted under him; on endeavoring to rise he noticed a bone protruding from the region of the ankle-joint. This was loose and he removed it himself with a penknife and brought it to Dr. Hingston, who said it was the astragalus. The patient made an excellent recovery.

Selections.

On the Treatment of Cholera.—Dr. George Johnson, Emeritus Professor of Clinical Medicine at King's College, London, in a clinical lecture published in the *Medical Press* of September 26, gives the following important views regarding the treatment of cholera:—

“In reference to the production of cholera in animals artificially, Dr. Koch has shown that he could produce cholera in guineapigs if he was careful before introducing the poison to inject opium in order to prevent the rapid escape of the poison from the intestinal canal. Now the opium treatment is somewhat analogous to this, since it tends to prevent the escape of the poison. Some men who have been constrained to admit that after all it might be best to allow the choleraic discharges to go on, object to encourage them by giving castor oil. But as a matter of fact the oil does not increase the discharges from the blood at all, but merely expels what is lodged in the intestines. The poison in this way is got rid of, and large masses of a gelatinous foetid material are often brought away, which have been left behind in spite of profuse diarrhoea. More than one Indian surgeon alludes to the necessity of giving purgatives to get rid of this offensive and injurious material. It is quite obvious that the main object of treatment in the early stage of cholera is to prevent it from passing into a stage of collapse. My personal experience during the two epidemics I have had to deal with is very conclusive. I may safely say that I have never seen a case of diarrhoea pass into collapse under the castor oil treatment, and my experience is confirmed by that of Drs. M'Cloy and Robertson, of Liverpool, as recorded in the

5th volume of the *Med. Chir. Transactions*. They state that of several thousand cases of choleraic diarrhoea treated by evacuants, not one passed into collapse, and they declare that 'in every case relief was afforded pleasantly, quickly, and safely.' In contrast with that I may quote the result in two hundred cases treated with opium by two well-known French physicians; of that number twenty-six passed into collapse, though whether they died is not said. Fortunately in most cases the diarrhoea goes on in spite of the opium, and this is no doubt the main reason why the opium treatment is not more fatal than it actually is. Even in such cases, however, it often prolongs the illness. I may mention the case of a celebrated surgeon who returned to England at the close of the epidemic after his autumn holiday. He was seized with diarrhoea on his arrival home, and took several doses of opium. The diarrhoea continued and he came to me at the end of the week in great discomfort with a pale face, coated tongue, etc. He had evidently stored up in his intestines a quantity of abnormal excretions. I persuaded him to take a dose of castor oil, and he got well at once. The case shows you the ill-effect of opium even in ordinary cases.

"One author has published several cases treated by opium, which he calls 'consecutive fever without collapse.' These cases were really cases of diarrhoea, in which formidable symptoms had followed the retention of poisonous matter in the alimentary canal. A case which occurred during the epidemic of 1866 is interesting as showing the comparative effect of opposite treatment in the same individual. The patient was a youth in Blackfriars, who had drunk water from the Temple pump, which was recognised to have given rise to cholera. The diarrhoea had been arrested with opium. I found him in state of collapse and pulseless. The alimentary canal was obviously distended by a large quantity of fluid, which had accumulated in consequence of none having passed for several hours. I am convinced that if left alone he would have died soon. He was given several doses of castor oil during the night, had a free action of the bowels, the next day he was much better, and he gradually made a good recovery.

“ This is a very striking and valuable lesson. The effect of the opium was to cause distention of the bowels, and you see the good results that follow the evacuation of the resulting accumulation. During the epidemic of 1854 I saw more than one case in which the bowels were quite unable to empty themselves in consequence of detension thus caused. Even castor oil did not give the slightest aid, and they all proved fatal.

“ In consequence of the futility of giving drugs by the mouth, some practitioners have given hypodermic injections of morphine. These are peculiarly dangerous, because absorption from the subcutaneous tissue is so very rapid that they prove directly poisonous. I have already pointed out that absorption is suppressed in the alimentary tract, hence drugs requiring to be absorbed are quite inert. Castor oil acts locally, and, therefore, still produces its physiological effects. It is worse than useless to feed patients in collapse; even milk does harm. The only thing to give them is cold water. In extreme cases, when circulation is almost at a standstill, I think it is perfectly justifiable to inject hot saline solutions. Out of twenty patients injected at the London Hospital five recovered, a very good result when one considers that under ordinary circumstances they would probably all have died. Venesection, as I have said, owes its effects to the relief of the cardiac and venous congestion. The cramps are best relieved by fomentation and friction, they rarely occur during reaction, and are probably caused by the presence of the poison in the blood.

“ When a patient dies from cholera muscular movements have often been observed for a considerable time after death. People have supposed from such movements that the patient was put on the table before he was dead, but they are really due to the stimulus of the cholera poison acting on the muscles or nerve centres after death.

“ During reaction it is necessary to be very careful in feeding a patient. The fever is often of considerable severity; the lungs get congested by the intense oxidation which goes on in the blood, resulting in the production of more carbonic acid than can be got rid of. There is a very marked contrast be-

tween the lungs of patients dying during collapse and during reaction. In reaction the lungs are gorged with blood, and very heavy.

“The principles which underlie my treatment of cholera apply to some extent to the diarrhoea of typhoid fever. Many years ago it was the practice in this hospital to give opiate injections to stop the diarrhoea, and I have had a large experience of this method of treatment. The effect of the opium is to render the bowels more or less torpid, a large amount of putrid material in the bowels accumulates, which undergoes decomposition, and gives rise to distension and further irritation. The general practice here of late years has been to leave the diarrhoea alone, discontinuing the beef tea and giving milk alone if it becomes troublesome. It is evident that nothing is more likely to lead to rupture of the ulcerated intestines than their distension, and this distension, as I have shown, is the only effect which can reasonably be expected to follow the opium treatment.”

The Sacrifice of Education to Examination.—There is a natural tendency in all students to look upon the purposes of education as fulfilled by passing those examinations which are necessarily preliminaries to their professional career. Some men work for a pass diploma, others for university honors, but few work with the steadfast object of obtaining mental culture and true knowledge. Sir Andrew Clark, in his address at the opening of the new medical school at Sheffield, vehemently and eloquently expressed the opinion that this domination of education by examination was inimical to much that was vital in true education and essential to thorough work, and Mr. Teale at Leeds spoke weighty words to the same effect. Educational methods and the ever-rising standard of professional examinations have much to do with the lack of a desire for higher learning. It is, of course, necessary to have a high and uniform standard of examinations; but is it wise constantly to raise the severity of these pass tests, which intensify the work of the curriculum but too often limit the field of thought? The time

of the student and the teacher are so much absorbed by the necessary routine work of preparation for examination that but little opportunity is given for reviewing general principles and the bearing of cognate sciences upon medical practice. The average London student has no time to make acquaintance with the Hunterian museum, and to see the bearing of comparative anatomy upon pathology as the founder of that great museum would have taught it; to most students the evolutionary hypothesis and the works of Charles Darwin have no connection with the knowledge of physiology and disease; examinations leave no time to give instruction in such matters. Medical students have but little acquaintance with medical literature, the best books of the past are rapidly becoming unknown, even by name, to most of the rising generation, so that they are not likely to read them in their post-graduate leisure before the pressure of business life begins. It is thought that a knowledge of the latest theory, fact, or physical sign is of more importance than an acquaintance with the thoughts of great men of the past; certainly this is true as regards examinations. It is for such reasons that many a pass man excels the successful candidate for university honors, excessive work for examinations cripples rather than expands true mental growth. The preponderating influence of examinations tends to destroy the best teaching; under it the teacher tends to lose his own intelligent self-direction. Examination is a good educational servant, but a bad master; it is useful for mediocre men, but to the really intelligent student it affords but a mechanical guide, leading him to seek academic successes rather than the full possession of his mental faculties. The real object of medical education, as Mr. Erichsen well put it in his address to the students of King's College, is to train the mind to remain open for the reception of truth throughout life, and to enable it to meet the varying emergencies of professional life. Still a system of examinations appears to be a social necessity; the only practical question is, how to lessen its evils? Examination questions might be less directly taken from books; the candidate's personality might be stimulated by calling upon him to state how he would proceed

under certain difficult circumstances. Scholarships are founded for the encouragement of learning, and in framing examinations for the selection of scholars it might be well to extend the plan followed in some cases of making these tests serve the purposes of extending knowledge on a wider basis, rather than of intensifying the acquisition of bigger heaps of facts.—*Brit. Med. Jour.*

Students and Work.—To students who are diligently inclined, it is as refreshing to get back to systematic work once again as it is, at the end of the session, to lock up the books and turn to less arduous occupations. The discipline of lectures and classes is as invigorating as the cold blast which heralds the approach of the winter, and the fact of having plenty of work to do, coupled with the will to do it, is an excellent and consoling set off to the dreariness of the autumnal skies. The energies must be braced up for a good six months' "spell" of work, broken only by the ephemeral and short-lived festivities of Christmas time. No one can dawdle with impunity under present requirements. Every moment lost at the beginning will have to be paid for later on, a fact that the beginners are apt to ignore in the happy excitement of their new surroundings.—*Hospital Gazette.*

Physiological Action of Iron.—In a preliminary note in the *Vratch*, No. 29, 1888, p. 561, Dr. Skvortzoff publishes the results of experiments on dogs, carried out by him in Professor Tümas's Pharmacological Laboratory in Warsaw, with the view of determining the action of iron on nitrogenous metabolism in a healthy organism. The following are his conclusions: 1. Iron has no marked influence on the nitrogenous metamorphosis in a healthy system. 2. On the internal administration of iron in daily doses over 0.02 or 0.03 gramme, the assimilation of the nitrogenous ingredients of food decreases, though but slightly (from 98.4 per cent. before the experiment to 97.0 per cent. during it). 3. After venesection the assimilation somewhat increases, both on the administration of iron and without it. 4. On the administration of iron with food after venesection, the restoration of hæmoglobin proceeds more rapidly than without iron. 5. The same holds true in regard to the body's weight.—*Brit. Med. Jour.*

THE

Montreal Medical Journal.

VOL. XVII.

NOVEMBER, 1888.

No. 5.

THE TREATMENT OF THORACIC ANEURISM.

Prof. Sée of Paris has recently given an account of the result of the treatment of twenty-four cases of thoracic aneurism under his care. The treatment employed in the majority of the cases reported was a combination of the iodine of potassium with antipyrin. In twelve out of seventeen cases treated after the manner described there was a considerable reduction in the size of the tumor, and a disappearance of the painful and distressing symptoms so frequently present in cases of thoracic aneurism. It is claimed for the antipyrin that it greatly assists the action of the iodide of potassium—that it calms the circulation and therefore tends to promote coagulation in the sac. Our knowledge of the action of antipyrin on the circulation is as yet in a very imperfect state, and from what we do know it is doubtful whether the claims advanced for this agent by Sée are likely true. Antipyrin has no doubt an influence, when given in full doses, of increasing the blood pressure. This action, instead of promoting, would certainly retard the coagulation of the blood in the sac. No doubt good indirectly will follow the use of antipyrin in relieving pain, but it may be a two-edged weapon, and until our knowledge of its action is more precise, its administration in aortic aneurism should be very carefully watched.

It appears to us to be more clearly proved that the action of the iodide of potassium in aneurism is brought about by its lowering influence on the blood pressure, and to combine it with a drug (antipyrin) which increases the pressure is very empirical work. Sée points out the great advantages of the potassium

over the sodium iodide in these cases. This is evident when we remember that it is the potassium and not the iodine which is the active vascular agent.

PROFESSOR WILLIAM OSLER.

Dr. Osler has accepted the positions of Professor of Medicine in the Johns-Hopkins University and Physician to the Johns-Hopkins Hospital. This great school is now gradually making preparations for an early opening. Among many good appointments, none have been wiser than that of Dr. Osler's. Much will be expected of him in his new position, and we confidently predict that the response will exceed the expectations.

THE NEW VOLUME OF THE INDEX CATALOGUE.

We have received the ninth volume of the "Index Catalogue of the Library of the Surgeon-General's Office, United States Army." The present number begins with "Medicine" and extends to "Nymelt." No pains have apparently been spared to make it a complete and exhaustive account of the literature embraced under the above letters. The editors of this monumental work deserve the warmest thanks of the profession.

INTERCOLONIAL MEDICAL CONGRESS, MELBOURNE, 1889.

We have received the following letter, which we take pleasure inserting in full, from the General Secretary of the Intercolonial Medical Congress. We congratulate our Australian brethren on their enterprise, and hope that their Medical Congress will prove in every way a successful meeting:—

UNIVERSITY OF MELBOURNE,
6th August, 1888.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,—I have the honor to inform you that an Intercolonial Medical Congress of Australasia will assemble in Melbourne in 1889, meeting on January 7th and rising on the 12th. I

forward by the same post the circular issued by the Executive Committee. On behalf of the Committee I request you to be good enough to give prominent notice in your journal to the fact that such a Congress will be held, and to announce that accredited members of the profession in Canada who visit Melbourne at that time will receive a very hearty welcome, and will be associated in all the work of the Congress. At least four or five hundred of the most representative members of the profession in Australasia will then meet in conference, including the medical advisers of the various governments, nearly all the professors and lecturers in our medical schools, the inspectors of lunatic asylums in the various colonies, etc. The Congress is under the patronage of the governors of all the Australasian colonies, and the premier and ministry of Victoria have promised their active support, and, in particular, have undertaken the publication of the transactions of the Congress.

Free passes over the Victorian railways will be granted to visitors attending the Congress from America.

The Centennial Exhibition will be in full activity, and no better occasion could be found for a visit to Australia.

Addresses will be given in all the sections. General debates will be held in full session on the diseases peculiarly prevalent in Australia. Abundant papers and exhibits will be submitted in the sections by our leading men.

A Congress museum will be prepared, and as complete a collection as possible of Australian drugs will be exhibited.

Requesting you kindly to give extended notice to the Congress, and to publish our invitation and promise of welcome,

I am, dear sir,

Very faithfully yours,

H. B. ALLEN, M.D., *Secretary to the Congress, and
Dean of the Faculty of Medicine in the University of Melbourne.*

Medical Items.

—There are 256 practitioners in Los Angeles, California.

—It is reported that a case of hydrophobia has been cured in St. Louis. From the symptoms, it looks more like a case of hysteria.

—During the last three years nine deaths have been reported in Australia from the inhalation of chloroform. It takes a long time for some surgeons to recognize the deadly effects of this anæsthetic.

—The *University Medical Magazine* is a new monthly periodical issued by the professors and alumni of the University of Pennsylvania. The first number contains a number of valuable articles.

—When Dr. William Pepper of Philadelphia was asked for the bill of his services in connection with the case of the late Dr. Sheridan, he replied that he desired that his services should be regarded only as an expression of that deep and lasting obligation which he in common with others owed the deceased.

ALCOHOL AND CIRRHOSIS OF THE LIVER.—M. Alison (*Archives Générales de Médecine*), after an exhaustive consideration of the effects of alcohol on the economy and its special action on the liver, believes that the business of the individual, outside of the cause commonly attributed to cirrhosis, plays an important rôle in its development. Field laborers are rarely attacked by it, and it is more rare in persons given to manual labor than in those who lead sedentary lives. He advises physical training as an effective therapeutic.—*Med. News.*

Publisher's Department.

—Dr. A. J. Willard of Burlington, Vt., U. S. A., expects about the first of November to occupy a new sanitarium which he has been building for his Nervine Establishment. This institution appears to have met with excellent success, and Dr. Willard has every reason for encouragement. The Rest Treatment of Dr. S. Weir Mitchell is here made a specialty, although other methods of treatment are used as they seem indicated.