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.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☐ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☐ 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.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ 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.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

THE

MONTREAL MEDICAL JOURNAL.

VOL. XX. DECEMBER, 1891. No. 6.

Original Communications.

CONSERVATIVE SURGERY OF THE EYE.*

BY F. BULLER, M. D.,

Professor of Ophthalmology and Otology, McGill University; Ophthalmic and Aural Surgeon to the Montreal General Hospital.

There is probably no disease of the eye so dreaded by the ophthalmologist as the one called *sympathetic ophthalmia.* Unlike other inflammatory affections of the eye, which for the most part are revealed by honest outspoken symptoms, of themselves almost suggestive of suitable remedies, and characterized by a willingness to gracefully yield to the recuperative powers of nature, aided, perhaps, by rational therapeutics, we see in sympathetic ophthalmitis a sort of "snake in the grass" among ocular diseases, an insidious process which may have advanced far in its destructive course before its presence is even suspected, unless, perchance, the subject happens to be under the daily observation of some one keenly alive to the danger; and even then it is doubtful whether a genuine plastic iridocyclitis of sympathetic origin can be arrested or dealt with successfully, when it has once gained ever so small a foothold in the sympathizing eye.

Taking into consideration the subtle character of this disease, its virulence when once established, and when we bear in mind that up to the present time no reliable method of treatment is recognized, also that this disease usually means hopeless blindness of both eyes, for the exciting eye has generally been lost

* Read before the Canadian Medical Association, at Montreal, September, 1891.

by the original disease or injury threugh which it obtained its malevolent influence, we are in a position to understand the anxiety of ophthalmic surgeons to prevent the onset of a morbid condition over which they have so little control. Fortunately an efficient method of prevention was long ago discovered in the early enucleation of the injured eye, and it may be laid down as a law that sympathetic ophthalmia seldom occurs if the diseased or injured eye be enucleated before any manifestations of sympathetic disease have occurred in the sound one. I say seldom, because it is well known that a plastic iridocylitis occasionally occurs at any period, up to three or four weeks after enucleation of the injured eye. A case of this kind I may be excused for placing on record, since it is of great clinical interest, and has not yet been published :

In the month of October, 1885, a boy, 13 years of age, was brought to the Montreal General Hospital on account of an injury to the left eye, received three weeks previously. He was engaged in piling cordwood, when a round stick fell end foremost from above, striking the upper surface of the eye and causing an extensive rupture of the eye-ball through the ciliary region and *parallel with the lower margin of the cornea*, just as commonly happens *above* the cornea when the force comes from below the horizontal meridian of the eye-ball. The ruptured and shrinking eye-ball had already lapsed into a state of chronic iridocylitis, and being lost for all visual purposes an immediate enucleation was performed. The patient remained under observation for about a week, during which time the sound eye was carefully examined for possible sympathetic trouble, but of this there was no discoverable sign. A month later he was brought again, a distance of some two hundred miles, to the hospital on account of failing vision in the remaining eye, which was found to be affected with a plastic iritis, the first signs of which were noticed by his watchful father three weeks after his return home, or four weeks from the date of enucleation. A plastic iritis with extensive posterior synedriæ coming on insidiously, almost without pain and with great impairment of vision, were the principal features of the inflammatory process now affecting the previously sound eye. The eye made a good recovery with a six weeks

course of treatment, illustrating the rule that when *sympathetic ophthalmia breaks out after the exciting eye has been removed, it occurs in a less virulent form than where enucleation has been delayed until the sympathetic affection has actually made its appearance.*

This fact appears to be one of very great importance, not only on account of its prognostic value, but because it gives us an insight as to the nature of the disease, which fully establishes the *rationale* of its prevention. It is the strongest possible proof that the exciting eye continues to supply some morbific influence to its congener so long as it remains undisturbed. This might, of course, be the case whichever theory of the etiology of sympathetic ophthalmia we choose to accept, but since we may discard as untenable every explanation of the nature and origin of so-called sympathetic ophthalmia, excepting the bacterial, we have simplified the problem of prevention, at least to the extent of directing our attack against an enemy no longer in ambush, but entrenched in a camp, easily accessible to our surgical forces.

Speaking of the theories of sympathetic ophthalmia, I have always been at a loss to understand how the neuropathic theory ever came to be generally accepted, its most substantial support being an isolated observation or two (probably imaginary) on the part of an ophthalmologist of high repute in his day, that sympathetic ophthalmia commenced in the sympathizing eye at a point symmetrical with the seat of injury in the exciting eye. The result of this observation shows how a fallacy emanating from some high authority may tend to retard the acquisition of truth. There is certainly nothing else in physiology or in neural pathology at all parallel with the phenomena of sympathetic ophthalmia. If the bacterial explanation be accepted (and even of this positive proof is wanting) we have in it an adequate explanation of the lapse of time between the original injury and the outbreak of sympathetic disease as well as for the immunity which an early enucleation commonly secures, and also of the less virulent form which we occasionally meet with after timely enucleation. But we have also in these facts a forcible intimation that some less radical procedure might accomplish the purpose of enucleation with equal certainty. Here, if anywhere,

conservative surgery presents its strongest claims. Ask anyone who has submitted to enucleation how much he would have preferred a harmless though maimed eye-ball to the artificial one. Observe how much better the appearance of an artificial eye worn over a shrunken globe or a good stump than where enucleation has been performed.

This brings me to the points I wish more particularly to emphasize. It is, I believe, generally conceded that children and young people are more liable to sympathetic ophthalmia than those of maturer years. Whether this belief comes from the greater liability of children to accidents of a certain kind, or whether there actually exists in them a stronger tendency to develop sympathetic trouble, I do not pretend to know, but that very many children do become the victims of sympathetic ophthalmia is a matter of common observation. It is also true that in children a threatened sympathetic trouble becomes a cause for still greater anxiety on account of the difficulty of making accurate observations and detecting slight changes in the eyes of this class of patients.

For these reasons I am aware that many ophthalmic surgeons, especially in England, do not hesitate to advise the removal of injured eyes in children, whenever the sound eye may be considered to run even a moderate risk of sympathetic ophthalmia. A few years ago I myself would hardly have questioned the soundness of this practice, but I have gradually learned to take a very different view of this subject, and indeed I am prepared to maintain that *the eye of a child should never be enucleated on account of an injury unless sympathetic ophthalmia has actually occurred.* In the first place, it is an operation which irrevocably fastens upon the unfortuate a life-long disfigurement, and one which intensifies with advancing years, for no matter how carefully an artificial eye may be adjusted the conjunctival sac fails to develop normally, and there will in many cases, after the eye of a young child has been removed, come a time when it will no longer be possible to adapt an artificial eye to look presentable. Too often, perhaps through negligence, this period is reached long before the child has reached maturity. It is easy to understand how parents hesitate to accept the counsels

of prudence in the face of a disaster so grievous as the sacrifice of an eye-ball, no wonder they run the fatal risk rather than agree to a life-long mutilation of their offspring.

It is the surgeon's task to find a safe way out of the dilemma. It is here that conservative surgery of the eye may achieve its greatest triumphs.

We have only to concern ourselves at present with serious injuries of the eye, which we may divide into two classes:

(*a*) Those which are likely to be followed by great damage to or total loss of vision.

(*b*) Those in which vision is obviously destroyed.

In the first of these two classes, the surgeon will be in duty bound to spare no pains in order to save as much vision as possible, and on no account to sacrifice the eye-ball if there is a reasonable chance of protecting the other eye from sympathetic trouble in any other way. In the second class of cases two courses are open to him; they are, either to remove the hopelessly blind eye immediately, or to preserve so much of it as will afford a good moveable stump for an artificial eye to rest upon.

In class *a* will be found far the greater number of serious injuries of the eye-ball, and it is in dealing with this class that the surgeon's knowledge, skill, judgment and experience will be most severely tested.

One of the leading English authorities of the present day says that "when the wound is in the dangerous region (the ciliary), and complicated with cataract, excision is without doubt the safest course in all cases"; thereby implying that excision should always be done under these circumstances. Even when the wound is entirely corneal, with injury of iris and lens, he says: "If the corneal wound be large and irregular, excision is necessary," the same, too, "if the corneal wound be small, and persistent irritation ensue." I cannot concur in any of these statements, since with antiseptic precautions there are many cases in the first category which will turn out well if all entangled iris or other portions of the prolapsed uvea are carefully removed and the wound united by means of one or more fine silk sutures. In addition to this, cold antiseptic dressings and other well known antiphlogistic measures may be required for some time after-

wards, and the wounded lens, if not sufficiently soft and opaque to be extracted when first seen, may subsequently require to be removed either partially or completely.

If, in the course of two or three weeks, the condition known as chronic iridocyclitis should appear, excision may still be avoided by substituting resection of the optic nerve or evisceration of the eye-ball, either of which would, especially in young persons, be preferable to enucleation of the globe. Of the two procedures I decidedly favour resection of the optic nerve if the condition of the injured eye is such as to indicate grave danger of sympathetic ophthalmia, more particularly if at the same time the eye bids fair to retain a presentable appearance. On the other hand, evisceration and the insertion of an artificial vitreous might well be done when the anterior part of the eye-ball has been greatly damaged, and when with a lost and collapsing eye a sufficient time has not elapsed to endanger its fellow.

With regard to resection of the optic nerve not protecting the sound eye against sympathetic ophthalmia as efficiently as enucleation, the opponents of the former operation claim to have seen sympathetic ophthalmia follow resection of the nerve, and hence they say the operation is not to be depended on. I answer, the same is true of enucleation. Where is the ophthalmic surgeon of long experience who has not seen sympathetic ophthalmia break out several days or weeks after enucleation. Let us, then, be fair in our judgment of the more scientific and more humane operation, at least until wider experience has pronounced against it. Let us be certain, too, that bad results are not due to badly performed operations. Every one knows how much the result of any surgical operation depends upon attention to detail. For some years past I have always endeavoured to repair wounds of the eye, no matter what their situation or extent, if there appears to be reasonable prospect of preserving a presentable looking eye. If after two or three weeks there seemed to be real danger of sympathetic ophthalmia, I have resorted to resection of the optic nerve in preference to enucleation, and I have not once been disappointed in the result. In performing this operation I pay the most scrupulous attention to antiseptic precautions, first washing the face, and especially the eyelids,

with soap and water, then both these and the entire conjunctiva with perchloride solution. The patient must be anæsthetized, and all the instruments used are to be thoroughly aseptic, as well as everything else likely to be used about the eye. As for the operation, it is commenced by dividing close to the ocular attachment, either internal or external rectus. With an ordinary fixing forceps the eye is then rotated strongly outward or inward as the case may be, and the closed blades of a pair of blunt-pointed excision scissors are carried far back, nearly to the apex of the orbit, along the optic nerve; this is then divided about half an inch behind the globe. There is then no difficulty in further rotating the globe till the ocular end of the nerve comes into view, so that it may be cut off close to the eye-ball and the resected portion lifted away. Bleeding may be pretty free at first, but is readily checked by pressure of an aseptic morsel of sponge carried with the fixing forceps to the space behind the eye. When bleeding has pretty well ceased, the deep end of the nerve is syringed for a few minutes with solution of perchloride (1–2000). Finally, the retracted tendon is fished up with a small double hook and reunited by a central and two lateral points of suture, and the eye dressed with antiseptic dressing. It is an important point not to pass the sutures through the conjunctiva on the scleral side of the wound. I use fine needles and No 2 silk. Done in this way only a moderate reaction follows, and the eye is practically well by the fifth day, when the stitches may be removed.

In the second class of severe injuries (class *b*) the eye-ball is soft from large loss of vitreous, etc., and the sclerotic cavity is more or less filled with blood, under these circumstances vision being hopelessly lost. I resort to immediate evisceration, first cutting away the cornea and enough of the sclerotic on either side to make a pointed lozenge-shaped aperture. This will admit of inserting an artificial vitreous. After wiping out all the contents of the sclera, and waiting until bleeding has entirely ceased, the glass globe may be inserted and the transverse wound in the sclerotic united with four black silk sutures (No. 2 iron-dyed); a conjunctival suture may also be placed at either angle. Finally, the conjunctiva is again thoroughly washed with per-

chloride solution, dusted with finely-powdered iodoform, and an absorbent cotton pad saturated with the same applied by means of a compressive bandage. A considerable reaction may be expected, with some pain, for a few days. To an adult I give ten grains of phenacetin at night, or morphia if the pain is severe. At the end of forty-eight hours the bandage may be removed. If all goes well the scleral and conjunctival wound will be found united and the conjunctiva free from secretion. If there is much swelling, iced compresses soaked in weak perchloride solution should now be used until it subsides.

Managed in this way the operation of inserting an artificial vitreous has been entirely satisfactory. I have not met with any of the accidents we read about, and which I am inclined to think depend largely on want of attention to details. The mistakes being, first, in imperfect antisepsis, at every step of the operation this must be most vigorous; second, in faulty removal of cornea, the aperture being made circular instead of elongated; third, incomplete arrest of hemorrhage before inserting the glass globe; fourth, in the insertion of too large a globe. The latter should always lie quite loosely in the scleral cavity.

I do not, of course, pretend to have covered the whole ground included in the title of this paper, but enough has been said to indicate the propriety of reform in the matter of enucleating eyes which might in all probability be safely retained. I have not discussed that large class of cases in which foreign bodies are hidden within the eye-ball, but in these also I am under the impression that enucleation is often unnecessarily performed. I hope at some future time to have the privilege of dealing with this part of the subject more fully than the present occasion will allow. Before closing, permit me to show you two patients upon whom I have recently operated.

The first of these is a stone-breaker. On the 8th of August I removed from one of his eyes a rough fragment of iron, about the size of half a small filbert. It had penetrated through the centre of the cornea and of course enormously damaged the eye. Three weeks later the eye-ball was becoming squared, and had all the appearance of a dangerous eye; the other eye as yet,

however, showing no signs of sympathetic trouble. I eviscerated the injured eye and inserted an artificial vitreous according to principle already laid down. This was two and a half weeks ago. You see the result; he is now wearing an artificial eye. It would puzzle any one but an expert to tell which is which. The uninjured eye remains strong and well.

The second case illustrates a class of injury not at all uncommon, but too often badly managed. A week ago to-day this young man came to me a few minutes after having had the right eye cut by an exploding soda-water bottle. There was a penetrating wound about four millimetres in length at the inner sclero-corneal junction, but not through the cornea. Through the wound a knuckle of iris presented. I tried to replace it with spatula and fine probe, but it always popped out again. I then punctured the prolapse with a cataract knife, thus drawing off the aqueous humour; after this I succeeded easily in replacing the iris into the chamber, and instilled a drop of eserine solution four grains to the ounce. A compressive bandage over both eyes for three or four days constituted the after treatment. There is now scarcely a trace of the injury. The pupil is slightly oval and a little displaced towards the seat of injury, otherwise the eye seems perfect. The interesting point in this case is the effect of drawing off the aqueous humour. The prolapse could not be restrained until this had been done, and I believe the eserine was of use in helping to prevent a recurrence of the prolapse before the wound became firmly united.

THE OBSTETRIC FORCEPS.*

By F. A. L. Lockhart, M.B. and C.M (Edin.),
Fellow of the Obstetrical Society of Edinburgh; Late Clin. Assistant in the Gynæcological Wards of the Edinburgh Royal Infirmary.

The Forceps in Labour.—The forceps is an instrument for applying to the presenting part of the child, whereby the maternal efforts at expulsion may be aided or supplanted.

The idea of the forceps first originated with Hippocrates, who suggested applying the hands to the presenting part wherever possible in order to assist delivery of the child. He even had an instrument for this purpose, but history does not say what it was like. Soranus and Celsus also had an instrument for the same purpose, but the real forceps was not invented until the 16th century.

Peter Chamberlen, descended from a long line of medical practitioners, was born about the middle of the 16th century, and to him may be ascribed the honour of inventing and using the obstetric forceps. The exact year of the invention is shrouded in obscurity, but it probably occurred about the end of the 16th or the beginning of the 17th century. The glory of inventing this invaluable instrument is somewhat dimmed by Chamberlen's actions concerning it, for he successfully kept it a secret for the use of himself and his family for many years. However, it is not my place to pass judgment on an action that took place so long ago, when the code of medical ethics must have differed so materially from ours of the present day. In 1670 Chamberlen went to Paris to try and sell his secret, but was unsuccessful through his failing to deliver a woman, although he tried for three hours. He was more successful in 1690, however, for he sold the instrument to the famous Dutch obstetrician Roonhuysen for a large sum. The purchaser, in his turn, made money out of it, for he, with two others, formed a board of examiners before whom all men wishing to practice obstetrics in Amsterdam had to appear and were compelled to buy the forceps before they were granted their license. Fortunately for posterity, a man named Rathlaw obtained drawings of the Chamberlen instrument

* Read before the Canadian Medical Association, at Montreal, September, 1891.

from a student of Roonhuysen's and published a description of it in 1732. From this date the forceps has been common property of the profession, and the improvements and modifications have been innumerable.

The original Chamberlen forceps consisted of two fenestrated blades with handles that crossed, the lock consisting of a pin in one blade which fitted into a socket in the other. The blades were curved laterally in order to fit the child's head, this curve being called the "cephalic curve." Nearly all forceps up to the present day have the blades crossed, but Palfyn, in 1716, introduced a pair of forceps with broad, flat, unfenestrated blades with parallel handles and no lock, but the latter was soon added.

The earliest important improvements were made by Levret and Smellie. Until 1747 the forceps had but one curve, the cephalic, so were awkward to apply unless the head was very low down in the pelvic cavity, but in that year Levret of Paris lengthened the forceps and added another curve—*i.e.*, the "pelvic curve"—thus rendering them more adaptable to the pelvis. In 1762 Smellie lengthened the handles and added a sink lock, called the Smellie lock, which most British and many Continental forceps still retain. Smellie also covered the handles with wood and the blades with strips of leather. He also used the old short forceps, adding his lock. The forceps of Sir J. Y. Simpson is very much like Smellie's, but there are one or two points of difference between them. In Smellie's, the cephalic curve starts from the lock, whereas in Simpson's there is a sharp curve outwards at the lock from which the shafts run parallel to each other about an inch apart for a short distance, and then assume the cephalic curve. Simpson's also has a lateral projection on each side, just where the handle joins the shaft, which gives the operator a good hold.

With all the above-mentioned instruments there is difficulty in exerting traction in the axis of the brim, owing to the perineum being in the way. To overcome this, another curve, the "perineal curve," was added, but this makes rather a clumsy instrument. To effect the same purpose, *i.e.*, to exert traction in the axis of the brim as well as in whatever axis the head may be lying, the

"axis traction forceps" was invented. The idea of this was probably introduced by Stein in 1767, as he passed a cord through the fenestræ of his forceps and made traction by it. Hubert, in 1860, introduced the first instrument that can be called an axis-traction forceps, as he fastened a bar, curved and running downwards, to the handle. Tarnier, however, may be called the true inventor of the axis-traction forceps. He attached curved rods to the back part of the fenestræ of ordinary forceps. These were quite moveable in an antero-posterior axis, and ran backwards to be attached to a transverse bar by which the traction is exerted. This instrument of Tarnier's has undergone various modifications, he making thirty different models himself before he was satisfied. Professor Simpson of Edinburgh applied Tarnier's traction-rods to the Simpson forceps, and the latest and best instrument is a modification of the Simpson-Tarnier forceps by Milne Murray of Edinburgh. This instrument consists of a pair of Simpson forceps, the handles of which are fastened together by a moveable bar attached to one handle, which fits into a slot in the other, and is secured by a nut. This is called the fixation screw. The traction rods consist of a pair of curved steel rods attached to the blades just posterior to the fenestræ. These are fastened together at the other end by a pin on one rod passing through an eye in the other and held there by a sliding bolt. On the posterior surface of the extremity of each rod is a button which fits into an eye on the traction handle. This latter is a transverse bar of wood working with a swivel joint. Dr. Murray has just made another modification of the above forceps, but I have not been able to obtain details of it in time for this paper, so all that I can say about it is that the new instrument is made entirely of metal. In order to avoid any mistake about the handles of this instrument in speaking or writing about it, the handles of the forceps proper are called "application handles," while that attached to the rods is the "traction handle."

Mode of Application.—All here are familiar with the usual mode of application of the old forceps and of the old rule of "left lower first." This last, however, is not practised by all, for, in the *British Medical Journal* of Oct. 25, 1890, Hancock

Steil describes a method by which the upper blade is introduced first. The following are his own words: "The membranes having been ruptured and the os fairly dilated, pass the upper blade (first through the vulva into the vagina inside the os to the left side of the presenting head) just as if it were the lower blade. The handle is raised somewhat above the right buttock and points to the middle of the outer side of the right thigh; as the blade passes in following the curve of the fœtal head, it (the handle) drops and comes opposite the vulva; then, completing the curve, it lies in the fourchette. The concavity of the edge of the blade now faces the hollow of the sacrum. Now gently rotate the handle from left to right, at the same time drawing it downwards towards the bed and a little forwards towards the thighs; by this movement the blade passes from the left temporal region to the frontal. As it passes over the frontal bones, the handle makes a sweep describing an arc of a circle—the convexity of the arc being towards the bed. Continue the movement in the interval between the pains, withdrawing the blade a very little and then reintroducing it, so avoiding any obstructions; the handle then comes back to the fourchette with this difference: at first the outer surface of the handle faces upwards, whereas now it is looking downwards towards the bed. The blade is now accurately applied to the right side of the head. Next introduce the lower blade, only pass it 'posteriorly to the upper.'" This method is practised with the patient in the left lateral position, as is usual in Great Britain. Dr. Steil was not the originator of the method, for it was taught at Belfast as early as 1862, as well as by Mr. Wheelhouse at Birmingham. The advantage claimed for the above method is that you don't require to bring the patient's buttocks over the edge of the bed in order to introduce the upper blade, but I fail to see its superiority over the following way taught in Edinburgh. The patient is on her left side with her knees well drawn up, the right one being supported by the nurse or by pillows. Introduce the lower blade first, as usual. In introducing the upper blade, hold it so that its long axis is horizontal with the bed and at right angles with the patient's body, keeping the blade close to the palm of the guiding (left) hand. If this

is done correctly, you will find that you can introduce the upper blade and lock the forceps without the blade touching the bed at all.

The application of the axis-traction forceps needs a little more careful description, as, unless one is extremely careful, the traction rods are found to be in the way and to interfere with locking the blades. Introduce the lower blade first, as with ordinary forceps, and be careful that the traction-rod is posterior to the handle. Before introducing the upper blade, see that its traction-rod is carried *in front* of the handle. It is owing to this direction not being carried out that difficulty is experienced in locking the blades, as the rod gets in the way. Now introduce the upper blade and lock it. Next carry the upper traction-rod back to its proper place and fasten the fixation-screw. After doing this, fasten the traction-rods and put on the traction handle. In removing the forceps reverse the above order of proceeding, being sure to carry the upper traction-rod in front of the application handles as soon as you have removed the fixation screw.

Actions of the Forceps.—1. *The* use of the forceps is exerting traction, and all other actions are secondary. It is essentially an instrument for supplying vis a fronte where the vis a tergo is inefficient. The traction should be exerted as nearly in the axis of the pelvis in which the head lies as possible, and for this purpose the axis traction forceps is much the best, for the line of traction passes as nearly as possible through the centre of the child's head, the position of which is indicated by the application handles. In making traction with the axis-traction forceps, the traction-rods should be kept nearly touching the application handles all the time that traction is being exerted.

2. The forceps acts also as a *compressor* and where the head is only just too large to pass spontaneously through the pelvis; this action of the forceps is very useful.

3. Some authorities advocate using the forceps as a *rotator*, but this is apt, as a general rule, to be injurious. However, when the head is well down in the pelvis and rotation is insufficiently effected by nature, you may aid the latter by gentle attempts at rotation, using the short straight forceps.

4. As a *lever*, but this action is doubtful, unless, in exerting traction, you use it as a lever of the first or third order. If so, the head is the weight, while the left hand at the shaft is either the fulcrum or power, as the case may be.

5. The *dynamic* action is uncertain. In cases of inertia, the insertion of even one blade into the vagina stimulates the uterus to fresh exertion, acting as a foreign body, but this cannot always be counted on, and I have even seen the introduction of the forceps followed by complete cessation of what few pains there were.

The *indications* for the use of the forceps may be divided into *fœtal* and *maternal.*

Fœtal.—1. In cases where the cord is prolapsed past the head and can't be replaced, you should apply forceps and deliver as quickly as possible.

2. Where the pelvis is normal and head large, delivery may be effected by forceps. This does not apply, however, to hydrocephalic fœtuses, as here you require to draw off the fluid before attempting to extract the child.

3. In breech presentations, you may need to assist delivery of the head by forceps, and this is very good treatment where pressure from above fails, often saving the life of the child.

4. After decapitation, the head should be extracted by forceps.

5. Face cases may require delivery by forceps if the head remains long in the pelvis. Delivery here is difficult, owing to the forceps not getting a good hold and so slipping. Unless the chin is anterior, it is almost useless to apply the forceps, as a living child can but rarely be so delivered.

While speaking of face cases, I may mention a face case, complicated with backward displacement of both arms, reported by Milne Murray, as instancing the superiority of the axis-traction forceps over the old instrument. When first seen, the face was lying transversely above the brim, the occiput being in the left side and the head not engaging. After the escape of the waters the head descended and engaged in the transverse, the fronto-mental diameter of the head corresponding to the transverse diameter of the pelvis. In time the chin slid round and lay impacted against the right sacro-iliac joint, becoming fixed in this

position. For various reasons turning was not employed, but the old Simpson forceps was applied nearly in the left oblique. After exerting as much traction as was considered justifiable without any appreciable result, the forceps was removed, and it was resolved to give the case a chance of terminating spontaneously. As no change in the position of the head occurred during the next six or eight hours. Dr. Murray applied Professor A. R. Simpson's axis-traction instrument. This had to be locked by passing a pin through a fixed eye in the handles, and in order to do this a great deal of compression had to be applied to the head, so an attempt was made to use them as ordinary forceps without locking the blades. This failed, so the handles were forced together and locked, and the traction rods applied. Dr. Murray says, "I then employed the instrument as directed by Professor Simpson, pulling only on the traction bar, and was surprised and gratified at the ease with which the head began to advance.. The pains were still frequent enough, and every time I pulled during one the head made distinct progress. At the same time I found the chin coming round from the oblique to the transverse. After about fifteen miuutes the face arrived at the floor of the pelvis, the mento-frontal diameter making its exit in the transverse of the outlet. There was no movement corresponding to flexion or extension as it passed out; it delivered exactly as it descended." The child in this case was large, weighing 10 lbs., and all the diameters of the fœtal skull were from a half to three-quarters of an inch larger than normal.

6. In transverse presentations, it is often necessary to perform decapitation, and the forceps is often extremely useful in extracting the separated head.

7. Where you have locking of the heads in cases of twins, forceps may be useful in effecting delivery, but authorities differ as to how they should be used. Some say to apply them to the head of the first child. If you have a very roomy pelvis and a small head, and you can push away the second head (as Barnes advises), this may be successful, but I think it is much better to apply the instrument to the head of the second child and try and deliver it past the first. Reiman's rule is that the forceps should be applied without delay to the second head, every other

measure is unsuitable and useless, but you can no more apply a hard and fast rule here than elsewhere.

8. In persistent posterior positions of the occiput, the forceps is of great service, as prolonged pressure of the maternal soft parts causes bruising, hæmatomata, sinuses, etc.

9. Playfair recommends applying the forceps to the head before craniotomy, when the os is sufficiently open to allow of their application, but can't be sufficiently dilated to admit of the passing through of the fœtus, as this often dilates the os when nothing else will.

We now come to the *Maternal* indications.

1. In all weak conditions of the mother, forceps should be applied at once and delivery effected as quickly as possible, but you must use judgment with regard to the rapidity of delivery. Where the patient is suffering from heart disease, put on forceps and deliver as soon as possible, as also in eclampsia occurring during labour.

2. Where inertia uteri has occurred, put on forceps. Here you must deliver very slowly, and the uterus must be followed down by either yourself or an assistant, in order to prevent, as far as possible, post-partum hemorrhage. This condition of inertia uteri is one which ought very rarely to be allowed to occur, for, on the very first signs of its approach, the cervix should be dilated and forceps applied, unless the use of the latter is contra-indicated, as, for example, in cross-birth or very flat pelves.

3. Where the uterus is displaced either anteriorly, posteriorly or downwards, the accessory muscles either do not act at all or else at a great disadvantage, so you should put on the forceps at once, thus saving the mother much unnecessary pain and fatigue, to say nothing of the more serious sequelæ of a lingering labour.

4. In cases of tumours of the uterus, ovaries or broad ligament, the forceps may be very useful, as, for instance, where a small polypus exists in the pelvic canal, you may often deliver by forceps, whereas it would be impossible to do so otherwise. The same applies when there is an ovarian or parovarian tumour,

either tapping the tumour or not, as you deem advisable, before applying the instrument.

5. You may be called to a case of labour where the vagina is more or less occluded by a hæmatoma. You should try to deliver by forceps immediately or you may have to incise the tumour first. The same holds goods where the vagina or labia are œdematous, this condition showing that the forceps should have been applied earlier, unless there is some organic disease to account for the œdema.

6. Where vaginal walls are prolapsed, you should reduce the prolapse and deliver immediately with forceps.

7. One of the most frequent conditions in which the forceps is useful is a flat pelvis, where the conjugate measures between 3¼ and 4 inches. It is here that the forceps is useful as a compressor as well as a tractor. In many cases of flat pelvis where the head cannot be got to engage, if its antero-posterior diameter can be shortened, it will be found comparatively easy to extract the child. In the older books we read that if the head is compressed in the antero-posterior diameter it is bound to expand in a lateral diameter, but Milne Murray proved this idea to be erroneous by a series of experiments. I will not repeat the description of them, but merely state that the antero-posterior diameter of the fœtal skull can be lessened by 1½ inches without increasing the transverse diameters. Of course such compression as would be necessary to lessen this diameter by 1½ inches would be decidedly injurious to the fœtus, but it shows what can be done if necessary, and I would not hesitate to employ slight antero-posterior compression of the head before resorting to other means of delivery.

8. In cases of accidental hemorrhage, whether apparent or concealed, you should put on forceps and deliver as quickly as possible in hopes that the post-partum contraction and retraction may stop the bleeding.

9. The forceps is also useful in cases of uterine rupture, where the child has not escaped into the abdomen, but can be reached.

10. Prolapse of the vagina during labour, unless very slight, is best treated by applying forceps and extracting the child.

Uses of the Forceps.—Like every other instrument, the forceps is used and misused, but to those who use it with judgment, is a most invaluable assistant. The forceps is not indicated in every case, but you must be very careful in selecting your case, neither applying them where delivery per vias naturales is impossible nor where the labour is progressing satisfactorily.

Opinions have changed of late years about the frequency with which it is safe to apply forceps, due chiefly to the introduction of rigid antisepsis into obstetric practice. Formerly instrumental interference was looked upon with great dread by all practitioners, who delayed interfering as long as possible. What was the result? Ruptured uteri, inertia with its frequent accompaniment post-partum hemorrhage, sinuses in the vagina, fistulæ, etc., were accidents of very frequent occurrence! As a good example of the ill effect of delay, take the case of the Princess Charlotte, who was allowed to labour on for fifty-two hours with symptoms of concealed hemorrhage going on, as a result of which she had two attacks of pulmonary embolism before she died of a clot in the heart. On reading over that case, one cannot but come to the conclusion that if forceps had been applied early, the valuable lives of both mother and child would have been saved. Among many practitioners and teachers of the present day, it is the custom to apply forceps once in every three cases or so, and none that I have spoken or written to upon the subject have seen any cause to repent doing so, whereas many had occasion to regret not having applied them earlier. In his private practice, as well as in his service at the Edinburgh Maternity Hospital, Dr. Halliday Croom never allows a multipara to be more than three hours, or a primipara four hours, in the second stage without having recourse to forceps, unless, of course, they are contra-indicated. However, you can lay down no more hard and fast rule than the following as regards the time to apply forceps: Never allow a woman to show signs of excessive fatigue or undue pressure of the soft parts before applying forceps, if the case is one where their application is possible.

As regards injuries inflicted on either mother or child, I think that they are greatly exaggerated. The principal maternal ones

attributed to the forceps are ruptured cervix, torn vagina and perineum, contusions, hæmatoma, etc., but the experience of most practitioners of the present day, if they use the forceps with care and judgment, is that these injuries are inflicted through not applying the forceps sufficiently early or else by hurried delivery. Of the latter, Milne Murray says: "I am certain that the great mistake most frequently made is the attempt to hurry delivery by the forceps. Put them on as soon as you like, but deliver slowly—one hour, two hours; don't grudge time." The forceps is certainly capable of injuring the child, but the injury may be intentional on the part of the practitioner, as where you have to exert a great deal of pressure to the head antero-posteriorly in cases of flat pelvis. The injuries may undoubtedly be quite unintentional, but are rarely serious. You may meet with more or less bruising of the scalp, extravasation or facial paralysis in head presentations, caused by pressure, but these soon disappear. In breech cases, you may have the genitals torn off by slipping of the forceps, if applied in conjugate of the child's pelvis, but breech cases are not suitable for forceps, if any degree of traction is necessary for delivery of the child, unless the child be dead or the instrument is applied to the after-coming head.

It is put forward by many that brain lesions, causing idiocy, epilepsy, and even insanity, are caused by pressure of the forceps. It is very difficult to come to any conclusion upon the subject, but it has always struck me that, where such injurious compression was exerted by the forceps, the instrument was *abused*, not *used*, or else the same amount of compression must have occurred before the head could be forced through the mother's pelvis, in this case causing maternal complications as well as fœtal. It may be put forward that, where the pelvis was so small as to cause such compression, some form of embryulcia should have been attempted. I hold that opinion myself, as the case was not suitable for forceps, and therefore they should not be blamed for causing injury in cases where they should not have been employed. Milne Murray, who has probably devoted as much study to the forceps as any of our British obstetricians, says: "I have never seen any evidence that any mental injury

arises from the use of the forceps. I do not deny that cerebral injury is possible, but I have neither in my own nor other men's practice ever seen a case in which any such relation could be reasonably inferred."

Dr. Haig Ferguson of Edinburgh writes: "I have never seen epilepsy, idiocy or insanity following the use of forceps. Occasionally temporary facial paralysis or temporary bruising of the pelvis were contracted. It is a matter of constant observation that all forceps cases do well. The reasons of this are: (1) the mother does not suffer such prolonged pain, and does not therefore become exhausted; (2) the forceps are put on before inertia sets in, and consequently involution takes place better and there is less danger of hemorrhage; (3) there is less chance of the perineum being torn."

Dr. Haultain, in a letter to me upon the subject, writes as follows: "I may say that I have never yet met with one case of any lesion which could be traced to the forceps, although I must have performed the operation fully two hundred times."

I have only been able to obtain the record of one case, in which insanity could be connected in any way with a forceps delivery, and that one was kindly sent me by Dr. Elkins, Assistant Physician to the Edinburgh Royal Asylum. The patient was a man of 32 when admitted to the asylum. His history was traced back to birth, in which forceps were required. The forceps had torn the scalp and cicatrices were still to be seen. When he was admitted, "he had a female contour, a large, ill-shapen head, was non-developed sexually, and beardless."

A CASE OF SUPPURATIVE HEPATITIS FROM OBSTRUCTION IN THE COMMON DUCT BY IMPACTED GALLSTONES.*

By J. Bradford McConnell, M.D.,
Professor of Pathology and Lecturer on Physical Diagnosis,
University of Bishop's College.

Saw the patient first on May 28th, 1891.

Mrs. L., aged 52, married; six children, youngest 13 years; above medium height, and of spare build. Health has been good, with the exception of attacks, about twice a year during the last twenty-five years, of severe pain in the region of the stomach and liver, accompanied with vomiting; they were referred to the liver by her medical attendant, and were relieved by a purgative and hot applications. Present illness began during the first week of December last. Had one severe attack of pain, accompanied with flatulence and vomiting, followed by jaundice, which disappeared in about two weeks. The next attack occurred on the 26th December, and she has had from one to three attacks weekly since then.

Present condition.—Somewhat emaciated and deeply jaundiced; bowels regular, stools light gray after the attacks of colic, but regain normal colour in a few days; tongue clean and raw-looking; tenderness over stomach and liver, greatest over region of gall-bladder; liver dullness about normal, 3½ inches in the nipple line; slight œdema about ankles.

May 30.—Nausea and a feeling of weight in the stomach immediately preceded a sudden onset of pain, described as crushing, the spasms succeeding each other at short intervals; had severe chills. Codeine pills, which she had been taking during the winter, did not give relief; atropine and morphine hypodermically was required. Jaundice appeared next day, with clayey stools and bile in urine, no albumen, acid; sp. gr. 1016. Pain continued for about eight days, with occasional chills, and temperature ranged about 102°. Skin dry; red blush on each cheek.

June 12.—Acute pain has left, but liver very tender on per-

* Read at the meeting of the Canadian Medical Association, September, 1891.

cussion; pulse 104; temperature 100.3°. 9 *p.m.*—Bowels loose; slight epistaxis every morning for the last ten days.

The temperature was normal on the 20th, and tenderness on pressure over stomach and liver gone; jaundice disappearing; suffers from flatulence after taking food. She improved sufficiently to leave her bed, where she had remained since December, and was able to go out driving.

Aug. 18.—Patient states that during past month has been feverish during afternoon and evening, and pain has returned again. Marked tenderness on percussion; liver dullness four inches in nipple line; liver not felt below body of ribs, and no abnormal hardness can be made out. There is marked hebetude; is very drowsy and dull, with confused thought, and was delirious during last night. Complains of a stitch in right side, at upper border of liver, when inspiration is deep. 1 *a.m.*—Pulse 120; temperature 104°; respirations 32. Several motions of bowels each day lately, coloured. Urine normal in amount, no bile; sp. gr. 1010, acid, no albumen. Two 2-gr. doses of acetanilide caused profuse perspiration, and temperature fell to 97·4°. Her mind became clear until next day, when she had a chill; extremities became cold, followed by a semi-comatose condition, with twitching of right side and lower jaw; temperature 104°; respirations 30; pulse 140. Acetanilide in small doses (2 grs.) produced sweating and a return again to consciousness. She continued in this alternate condition until her decease on the 29th. There was slight œdema of hands and ankles, and on the 24th convulsions with tonic spasms of limbs lasting one and a half hours. Sp. gr. urine this day 1014; no albumen or bile; after evaporation, sediment consisted mostly of urate of ammonia, no leucine or tyrosine. A sample tested by Dr. Ruttan was found to contain only one-fourth the normal amount of urea.

The treatment had been mainly symptomatic; phosphate of soda given after the first attack had subsided, with a bitter alkaline mixture before meals. Exploratory incision was several times suggested and urged by Dr. Geo. Ross—who had, during the winter, seen her in consultation and confirmed the diagnosis of impacted gall-stone,—but was not agreed to.

Post-mortem Examination thirty hours after death, assisted by Dr. Shanks.

Entire surface anteriorly of a light icteroid hue. Post-mortem lividity well marked over dorsal region. Abdomen moderately distended with gas. Permission obtained to examine abdomen only. All the contents were normal except the liver and bile duct; stomach walls thinner than normal. Liver weighed 4¾ lbs. Surface has nutmeg appearance. Gall-bladder contains a mass of small calculi, as does also the cystic and common duct, which are three-quarters of an inch diameter. Opening into duodenum normal. In the diverticulum vateri, immediately behind it, is a large calculus, and a number of others of various sizes distend the ducts throughout. About the centre of the superior surface of the right lobe is a whitish patch, elevated, which fluctuates, and contained thick pus, light yellow in colour and semi-transparent. Several other small abscesses were found near the under surface in the region of the transverse fissure. Microscopical sections of the stomach, spleen, pancreas and kidneys elicited nothing abnormal in these organs. The liver was found to be infiltrated with fat globules; no inter-lobular fibroid growth, but the bile ducts showed increased connective tissue growth, and some of the subdivisions of the portal vein show recent thrombosis; the larger abscess wall was much thickened, and it may have existed for several months.

This case has many points of interest, and presents the following clinical picture. The attacks during the last twenty-five years were apparently of the nature of gastro-duodenal catarrh, extending to the ductus communis choledochus. Acid formation in the morbid secretions led to a deposit of cholesterine about some of the abnormal products in the ducts and the formation of calculi. These may have for a time succeeded in making an entrance to the duodenum until, through some inflammatory thickening at the orifice of the duct, further passage was prevented; then followed severe attacks of biliary colic and futile attempts to pass the concretions, each accompanied by vomiting, chills, and subsequently fever, to which intermittent attacks Charcot has given the designation Intermittent Hepatic Fever

(fievre intermittente hepatique). That it had no malarial taint is proved from the fact that urea was much diminished and quinine was injurious rather than beneficial. It is difficult to ascertain the time of the abscess formation, but this probably occurred some three months previous to her death.

The intermittent fever which existed throughout the last illness resulted either from suppurative angiocholitis extending to the liver—the condition which Charcot believes to be always present in his *fievre intermittente hepatique*—or probably in an earlier stage, and obtaining more or less throughout the illness, from absorption of the products of the degenerative changes taking place in the retained bile. The absence of jaundice and more normal condition of the stools during the last two months of her illness is explained by the possibility of a certain amount of bile having trickled through the duct over the calculi into the intestines.

That surgical treatment might have saved the patient is highly probable, and the lesson to be learned is that in all such cases where medical treatment fails to give permanent relief, and where the symptoms are obscure, an early exploratory incision should be urged, and the obstruction relieved if possible by surgical means.

COLD WATER AS AN ANTIPYRETIC.*

By Richmond Spencer, M.D.

When I was asked to deliver an address on Therapeutics at this meeting, I accepted with considerable hesitation, for I felt that one practicing medicine in, comparatively, a remote part of the Dominion, at a long distance from the hospitals, and not having access to medical libraries, was hardly qualified to write a paper, which might be subject to the criticism of such an assembly of medical men, learned in their profession, as we have present here to-day; but a medical friend well up in the profession, and a respected member of this Association, encouraged me by pointing out that the subject of this paper (water) had, at all events, one great merit, viz., it could not be a dry one. I hope my friend's prediction, although intended for a joke, may prove to be a true one.

Water is familiar (or should be) to everyone. It constitutes by far the greater portion of the bulk of the world's surface and of all organized beings, and possesses remedial properties of great value, and yet it is apt to be neglected, as a therapeutic agent, by a large number of medical practitioners; nevertheless, it is entitled to more study, and more frequent employment, as a healer of disease, than has been accorded to it.

While I do not claim to write much that is new, I may, perhaps, be enabled to impart something which has not been thought of, or, at all events, extensively adopted in its applicability as a factor for reducing fever.

Although I have consulted many medical works, journals and year books, I cannot find any which treats of this subject, in precisely the same way, as I shall introduce to your notice. When I consented to write an address upon water, it was then my intention to write upon some of its therapeutic uses, but lack of time has prevented me from discussing more than one of its therapeutic uses, and this, in relation to its use, in the form of cold, for the prevention or reduction of hyperpyrexia. I here speak of the prevention of pyrexia advisedly, for I believe that a considerable amount of fever could be prevented,

* Read before the Canadian Medical Association, September, 1891.

and the metabolic changes in the composition of the blood averted, by the timely use of cold water.

The chief methods in vogue at the present time for the reduction of fever are found in the internal administration of the antipyretics (old and new), and the external use of cold baths, etc. Pepper, in his *System of Medicine,* says that the cold water treatment may be applied in several ways:

1. The cold bath.
2. The graduated bath.
3. Cold affusions.
4. The cold pack.
5. Cold sponging.
6. Cold compresses.
7. Frictions with ice.

These all act in the same manner, and depend for their efficacy upon their power of abstracting heat from the body, and are useful just in proportion as they do this.

Now, the plan of which I will presently speak might be said to act by abstracting heat, not from the body, but from the blood, and simultaneously reducing pyrexia by keeping the blood cooler.

I will not refer now to the internal administration of antithermics, nor will I attempt to discuss the theory as to whether high temperature is the dangerous element in fever, or whether—as some hold—it is only a symptom of profound disturbance of the nervous system, and, in fact, rather salutary than otherwise; suffice it to say that by far the greater proportion of scientific medical investigators are of the opinion that excessively high temperature in disease must at times be reduced at all hazards.

The method I have used in my practice for the reduction of fever is a very simple one, and has the merit of being easy of application. Perhaps its name would not be inappropriate if designated a hand-bath. It consists in immersing or pouring cupfuls of cold water—I frequently use it ice cold—upon the superficial blood-vessels, notably those of the anterior surface of the wrist, where the blood-vessels lie near to the surface, and continuing the application until the temperature is materially reduced and the patient assures you that he feels more comfortable. Possibly the experiment may need to be continued from half an hour to one full hour before any great reduction is appreciable, but at the expiration of this time the temperature will be observed to decline rapidly. Should he com-

plain of the excessive coldness of the water, discontinue its use for a few moments.

In order to carry out this method with as much comfort as possible, the patient should lie on a narrow bed, with his shoulders slightly elevated, so that his hands may drop separately into deep vessels, one of which vessels should be placed upon a low stool, at each side of the bedstead, in order to hold the water to be used.

One can the more easily believe that the application of cold employed directly to the blood-vessels of the wrists (where its rapid transmission through the veins to the heart is infinitely quicker than in the more distant parts of the body) will have a very decided effect upon the temperature of the blood, when we consider that the velocity of the blood-stream in its circuit throughout the entire body—through arteries, capillaries and veins—only occupies from 25 to 40 or 50 seconds.

For some time this line of treatment has been my only external resource in the therapeutics of fever, and usually with excellent results. The temperature soon falls and the skin feels cooler, the nervous symptoms more tranquilized and delirium less, the patient more comfortable, and perhaps falls into a quiet, refreshing sleep; the pulse is diminished in frequency and respirations slower.

Before I draw a comparison as to the relative benefits arising under the use of antithermics, cold water baths, etc., and affusions of cold water upon the wrists, let me ask, What are the etiology and phenomena of fever?

Roberts and most authorities say that fever originates from the presence of some morbid poison in the blood, either introduced from without or developed within the body.

During its progress the blood is altered in its composition, there being a diminution in the alkalinity of the serum, and after awhile the albumen and red blood corpuscles also become deficient, while the white corpuscles are often increased in number. Nearly all observers find an increase in the number of leucocytes in all acute and chronic febrile affections, and that heat, in proportion to its intensity, directly stimulates the activity of their reproduction.

It would appear from the foregoing that if some agency could be utilized (such as I have proposed) which would pre-

vent the blood becoming heated this metamorphosis might not occur, and although a morbid constituent should flow in its current, its composition (with this one exception) might remain unchanged, and the patient more likely to recover.

While I am not averse to giving the antipyretics in moderation—in fact I usually do—it must be remembered that in repeated doses, and continued from day to day, most of them have a decidedly depressing influence upon the heart, and that they are only permissable during certain periods of the fever.

Water, on the other hand, has neither this depressing influence, nor their irritating action upon the kidneys, but, on the contrary, strengthens the heart and so averts danger from heart-failure. But cold baths in private houses are not always convenient. It is not always practicable, as Pepper points out, to have a bath brought to the bedside of a patient, and ill results may occur from carrying him some distance to a bath-room. But even when the bath is brought directly to the bedside, it involves so much movement, and is the cause of so much excitement, that its good effects are more than neutralized by its bad. Children especially are apt to be terrified and complain bitterly if placed in a cold bath or pack.

The application of cold water to the entire surface of the body at one time may be fraught with some danger. Cold contracts the capillaries and superficial blood-vessels, and, as a consequence, drives the blood to the deeper structures, and may light up congestion of some internal organ. Now the very opposite of this takes place when cold is applied over the vessels of the wrist; the blood, after being conveyed to the heart, is sent out of this organ less heated, and reaches the capillary circulation last, so that any danger arising from internal congestions is almost out of the question.

If it can be shown that cold water, applied in this way, will reduce temperature (and I believe that by its frequent use fever can be controlled), this mode of treatment has great advantages over the other cold water systems. It can be applied without disturbing the patient, nor does it prove irksome like sponging often does. The patient, instead of getting excited, becomes calmer, and perhaps may fall asleep during its performance. It prevents the blood from becoming heated,

and so arrests its metamorphic decomposition, and by its tendency to keep the blood in its normal condition, acts as a factor for good in his restoration to health. It also prevents malnutrition of the brain, and so may preclude delirium ; and also that of the body, and the consequent wasting of the muscles.

In closing, let me say that the principle evolved in this short address must have some value, or else it has been singularly fortunate in my hands.

CASE IN PRACTICE—PLEURISY, ERYSIPELAS, FATAL SYNCOPE.

By Robt. E. McKechnie, M.D., Wellington, B.C.

F. H., a coal miner, aged 40. Patient's past health had been good, his only previous complaint having been facial lupus, the cicatrices from which covered both cheeks and extended on the left side half way down the neck. He sent for me on account of a sharp pain in the left side. On examination, I found him a well-built man in good nutrition. His heart was not enlarged, and no adventitious sounds were heard over it. No area of dulness was found over the lungs, and the air entered them freely in every part ; but along the 7th and 8th ribs, in the left anterior axillary line, a distinct friction sound was heard, synchronous with respiration. The back of the left hand was puffy, and covered with an erysipelatous blush.

During the next three days the pleuritic symptoms remained the same, the chest being strapped and morphia given for the pain. No effusion whatever could be made out. But the erysipelas now covered the forearm as high as the elbow, the parts being swelled to twice their normal size. The temperature was but 101°, and the pulse but 90, regular, full and moderately strong. That night the patient got very restless, a little delirious, and kept getting out of bed. Finally, while standing on the floor he staggered and was caught by a companion, who laid him on the floor. No sign of returning consciousness being seen, I was sent for, and found him dead. The surface of the body was quite pale, the nose pinched, showing a failure of the heart to perform its function.

The case is a little singular, in that without cardiac disease, with no high temperature to weaken the myocardium, with a very satisfactory pulse, giving no indication of an approaching heart failure, he still should have so suddenly died.

Four days previously the patient was at work; the erysipelas had only spread above the wrist in the last twenty-four hours; no evidences of suppuration were present; so unless death resulted from absorption of toxic materials, such as we would expect every case of erysipelas to furnish, I can find no explanation of the case. I am of the opinion this last was the cause, and if so, the case was unusual.

Retrospect Department.

QUARTERLY RETROSPECT OF GYNÆCOLOGY.

PREPARED BY T. JOHNSON-ALLOWAY, M.D.,
Instructor in Gynæcology, McGill University; Assistant Surgeon to the Montreal General Hospital; Gynæcologist to the Montreal Dispensary.

Dr. Henry C. Coe writes upon the important subject of "Adenoma Uteri" (*Amer. Jour. Med. Scien.*, Aug. 1891). Dr. Coe shows the term "Benignant Adenoma" should have no existence indicating a distinct variety of intra-uterine neoplasm as distinguished from "malignant" adenoma. There should be but one variety recognized—the malignant adenoma of Schröder or diffuse papillary adenoma of Winckel. This malignant adenoma is shown to be the incipient stage of adeno-carcinoma so terribly fatal in its career. Their clinical symptoms are identical, but there is an important difference between the two as regards prognosis. It is also shown that there is a distinct and constant transition from adenoma to adeno-carcinoma, and that patients who had the uterus removed during the adenoma period had a much better chance of enjoying after immunity from recurrence than those operated on when the disease had passed that stage. Dr. Coe also wishes to be understood that hyperplastic endometritis is not adenoma at all. In the former we have general hypertrophy of the mucosa and no marked proliferation of pre-existing glands, the process being confined to the mucous-layer.

It is not believed by Ruge and Veit that cancer is developed from this last mentioned condition, and therefore may be carried on this light for the present.

The development, however, of true carcinoma from adenoma is unquestioned. Adenoma is shown to be a distinct pathological condition which, although it is not in its initial stage carcinoma, tends inevitably to pass into it. In the symptomatology there are a few conditions pointed out which tend to show an essential difference between the two diseases.

Three cases are related by Dr. Coe; two of these are cases of adenoma and one of carcinoma. The cases of adenoma were both past the menopause some years; ages respectively were 50 and 53. One had slight hemorrhage for a period of five years before seen by Dr. Coe, and had been curetted twice during the previous year, the hemorrhage returning. Her uterus was removed in December 1889, and she has remained free from recurrence to the present time. The specimen gave evidence of malignant adenoma, not carcinoma, yet the growth had begun to infiltrate the muscular layer, and the symptoms, though of long standing, pointed to its malignancy. The second case had been bleeding three years before operation, and the specimen proved to be one of diffuse adenoma of the corpus uteri. Both of these patients were in robust health when admitted into hospital. The third case showed a marked difference in the symptoms in contrast with the other two. She was 63 years of age, and had been bleeding *only* during the past seven months, her health all this time markedly declining without apparent cause. Specimen removed from the uterine walls with curette showed it to be a diffuse cauliflower growth of the endometrium and the diagnosis that of adeno-carcinoma. Uterus removed by vaginal hysterectomy. Ten months later patient had recurrence in the lumbar glands.

In regard to the treatment of these cases of adenoma uteri, he believed that the more often they are attacked with the curette the more malignant they are in character when they return. The proper treatment, therefore, is total extirpation, and this should be done directly the patient comes under obser-

vation. Palliative measures simply favour the more rapid transition to carcinoma, when prognosis regarding cure becomes more doubtful.

Ventro-fixation of Uterus.—An interesting case of the results following this operation is recorded by Gottschalk (*Central. für Gynak.*, No. 8, 1891). The patient had an ovarian tumour removed and at the same time the uterus was drawn up and fixed to the anterior wall of abdomen. The patient became pregnant about one year afterwards and aborted at the third month. The uterus, on examination, was found firmly fixed in anteversion, cervix drawn strongly upwards and backwards, the posterior wall of the uterus was very thin and distended, the anterior thick, and had not evidently undergone distension, due to the uterus being fixed firmly against the anterior abdominal wall. If this condition should take place in the majority of cases operated on it would be a serious cause in the induction of abortion and would be sufficient to condemn the operation entirely. Kelly's method of attaching the uterus forwards by means of the ovarian ligaments is probably the best, as the uterus would then have more play in case of pregnancy. This, however, might react unfavourably in the direction of allowing the uterus to drop back into its old position during convalescence. Another disappointment in regard to ventro-fixation must not be lost sight of,—the liability of the peritoneal adhesions stretching to such an extent as to allow the uterus to drop back into retroversion. This is most liable to occur in cases of lax abdominal wall from rapidly repeating pregnancies.

Dr. Florian Krug (*N. Y. Med. Jour.*, July 3rd, '91) reports six cases in which he operated upon by a method he calls "transperitoneal hysterorrhaphy" for the relief of retroposition of the uterus. This method consists in incising the abdominal wall in the centre down to the peritoneum, not through it. The uterus is pressed firmly against the peritoneum by an assistant, while the operator passes a handled Hagedorn needle through the walls, a short distance from the central wound, scrapes the anterior wall of the uterus, and then goes on to emerge on the other side of the wound, is threaded with silkworm gut and

withdrawn. This is repeated in accordance with the number of stitches required. Dr. Krug claims that this method renders the bladder or intestine less liable to be included in the bite of the needle than methods heretofore pursued, and that it takes less time than Alexander's operation. This latter we question very much, apart from it not being as rational a method for supporting the uterus forwards. Alexander's operation should not take more than fifteen minutes for both sides. A few minutes one way or the other should not have any weight in the choice of a certain given surgical procedure. Dr. Krug uses the Trendelenburg posture.

A Remarkable High Temperature Record.—Dr. Frank E. Duckworth, of Kearney, Nebraska, has immortalized himself by recording the blood of a patient who was the subject of an ectopic pregnancy to have acquired the very modest temperature of 228°F., somewhat above boiling point. This is a very pretty story, and although it took Dr. Duckworth nine and one half months, one thousand and two visits, and many specially invented thermometers to obtain a record of this unusual temperature, we think it not at all extraordinary for Kearney or Omaha, as things are always pretty hot out there, and is in fact just the kind of country *to make one's blood boil.*—(*Archives of Gynæcology*, Oct., '91),

Perineal Hernia in Women.—Prof. WINCKEL (*Annales de Gynécologie*, Aug. 1890, *Brit. Med. Jour.*) read before the Berlin Congress a monograph on what he termed perineal vaginolabial hernia. A series of drawings of cases were exhibited with statistics of their nature and treatment. In all cases the hernia issued from the pelvis out of the perineum and distended the labium majus. Winckel distinguishes three varieties, which may be combined in the same subject. In the "anterior" form the sac protrudes between the sphincter vaginæ and the erector clitoridis. In the "median" form it bulges between the sphincter vaginæ and the deep transversalis perinei. In the "posterior" form the hernia passes before the levator ani and the glutæus maximus. The sac in all these varieties presents special characters of a nature only to be understood by the study of a good

scientific demonstration. The abdominal orifice of the sac lies in front or behind the lateral true ligament of the bladder. According to Prof. Winckel the best treatment for all forms of perineal hernia in women is a radical operation, which must be performed from the perineal aspect, the sac being exposed by an incision through the vulva structures.

Oophorectomy for Menorrhagia, Prolapsed Ovary, and Epileptic Fits.—(CHAS. PINKERTON, M.D., in *Brit. Medical Jour.*) —In July, 1884, Miss L., aged 35, consulted me with reference to pelvic pain and menorrhagia of some months' duration. The usual drugs were prescribed with no beneficial result, and after some time a vaginal examination was made, and showed the presence of a prolapsed and tender ovary on the left side. About Christmas of that year the patient began to have epileptic fits, which occurred about once a fortnight. The menorrhagia and pelvic pain were also by this time much worse, and the former was on several occasions so profuse that I plugged the vagina. In this state she continued for the next nine months, by which time all the usual remedies had been tried in vain. Her condition on October, 1885, was so bad that I asked Dr. Imlach to see her. He advised an operation for the relief of the menorrhagia and pelvic pain, but refused in any way to promise that the operation would cure the fits. For the relief from pain and menorrhagia the patient and her friends gladly consented to the operation, which was performed by Dr. Imlach on November 7, 1885, both ovaries being removed. We found also a small intra-mural fibroid, though the sound had not shown any enlargement of the uterus. She made an excellent recovery, and was out and about in some weeks. Bromide of potassium was again administered, and though at first the fits continued frequent, yet when belladonna was added to the mixture they gradually diminished in number, and the last one took place in 1888, the medicine, however, as a precaution, being continued until the end of 1889. There has been no return of pelvic pain or menstruation since the operation. The patient has now been quite well for more than two years.

Resection of Tubes and Ovaries.—A. MARTIN (*Med. Press*) at Berlin Gynæcological Congress, from a series of resections of

the tubes (24), and of the ovaries (21), endeavoured to show that the operation was well borne, and that the fear that disease would be set up afresh from the parts left in was not justified. Menstruation and the possibility of conception remained in all the cases operated on. On the proposal of the speaker a committee was appointed to inquire into the ultimate results of operation on the "so-called" adnexa. A discussion followed, in which considerable differences of opinion were expressed as to the advisability of "salpingostomy." Andbak thought it would be very likely to lead to extra-uterine gestation. Müller cauterizes ovarian follicles with the actual cautery. Leopoln Landau thought that in the case of gonorrheal tubes the way would be opened for the dissemination of germs. Schatz referred to a case of his own, in which he had designedly left behind a small portion of ovary, and in which conception afterwards took place. Leopold did not look upon cauterization as salpingostomy. He had not been satisfied with leaving the second ovary. Martin, in reply, said he had been careful to distinguish between follicles and neoplasms, and if the contents of the tubes were suspicious he removed them.

Kraurosis Vulvæ.—Dr. ORTHMANN of Stettin (*Zeitschr. f. Geburtsh. u. Gynäkologie*, vol. xix, page 2, 1891), has collected twenty-six cases, and adds five from Dr. Martin's clinic at Berlin. The disease consists mainly of premature atrophy of the vulvar structures. A hyperplastic stage precedes the atrophic processes which are manifested by stenosis of the vestibule, with dryness, sliminess, and a cicatricial condition of the integuments, including the labia minora. No reliable results followed bacteriological researches. The affection often gives rise to intolerable itching and burning. Dr. Martin finds that no measure intended for cure is of any avail short of excision of the affected area of integument and closure of the wounds thus made by sutures. No recurrence was observed in these cases.

Puerperal Endometritis.—Herr BUMM, Würzburg (Report of Gynæcological Congress in *Medical Press*), had ascertained from microscopic examination that the grave form of puerperal fever generally proceeded from the endometrium; the first object in local treatment should be, therefore, the endometrium. A

putrid and aseptic form should be distinguished, but the two generally ran together. In a fulminant case of puerperal sepsis, he found that the streptococci had grown through the uterine wall as in erysipelas of the skin, and set up general peritonitis. In two other less acute cases the streptococci had followed the course of the lymphatics. The infection of the peritoneum, however, always took place through the wall of the uterus; the tubes were free from germs in their interior. In the thrombotic cases the fungi spread through the mass of the thrombus. As regarded treatment, benefit was only to be expected at the commencement of the disease from disinfection of the endometrium, in milder cases recovery could take place with or without local treatment. In the severer form local treatment generally came too late, even scraping them did not help. Measures for preventing the spread of the disease were very important, careful removal of placental remains, the best possible contraction of the uterus during childbed (by ergotine), and, finally, by procuring, if possible, closure of the uterine vessels by simple contact, not thrombosis.

Absorbing Power of Uterus and Vagina.—Dr. L. LANDAU (*Berlin. klin. Wochenschr.*) has found that the vaginal mucous membrane has but a feeble absorbing power, while the uterine mucous membrane possesses that power to a very high degree. This fact is of extreme importance in gynæcology, as strongly medicated tampons may fail to act if inserted into the vagina, while if passed into the uterus they may set up grave complications. The vaginal mucous membrane is really skin, and becomes true dry skin in cases of prolapse. The free surface of the cervix has hardly any power of absorption. Dr. Landau demonstrates from cases how different it is with the endometrium. After the introduction of a solid ten per cent. preparation of resorcin into a uterus, severe and long standing uterine colic was set up. The introduction of a one per cent. cocaine compound caused the pain to cease. The cocaine was absorbed, and by paralyzing the sensory nerves it produced anæsthesia.

Examinations: Trendelenburg's Position in Gynæcology.—Dr. A. STROYNOOSKI of Lemberg, Austria (*L' Univers Médical*, No. 8, 1891), has found Trendelenburg's position, the elevated

pelvis, to extraordinarily facilitate gynæcological examinations by removal of the intestines and ascitic fluid, when present, from the uterus and its appendages. By means of this position he has succeeded in quite easily palpating, in several cases, tumours which had escaped his touch in examinations made in the usual position. These were an ovarian tumour situated very deeply in the pelvis, an intra-ligamentous cyst; a subserous fibroma anterior to the uterus in a nullipara of an advanced age in whom the abdominal walls were very rigid; and, finally, in a case of ascites, he has been able to palpate the body of the uterus and its appendages where before they were not to be reached. Finally, where the ordinary position does not give definite results, he recommends the employment of the elevated position.

Etiology of Hemato-Salpinx.—WALTHER (*Centralblatt für Gynäkologie*, No. 21, 1891), after careful microscopical studies, entertains no doubt of the existence of true hemato-salpinx independent of tubal gestation. Hemorrhage into the tube may be due to primary salpingitis, to retained menstrual blood resulting from atresia and malformations, to catarrh of the tube (which may be caused by an ectopic gestation on the opposite side), or to acute congestion from suppression of the menses or infectious diseases. On comparing true hemato-salpinx with tubal gestation it is evident that in the case of the former there is more evidence of inflammatory thickening of the serous coat of the tube; moreover, symptoms of localized peritonitis are more marked. The contents of a hemato-salpinx may be absorbed or may remain unchanged; the blood may escape into the uterine cavity or through the distal end of the tube, gradually forming a hæmatocele; or the sac may rupture, with symptoms of internal bleeding and the rapid development of a hæmatocele. Abdominal section is indicated under all circumstances.

VEIT (*Centralblatt für Gynäkologie*, No. 22, 1891) would limit the term hemato-salpinx to cases in which either the tube is gradually distended by the escape of blood into it, or in which hemorrhage takes place into a previously dilated tube. The latter may be due to torsion of a hydro-salpinx (as in a case reported by Sutton), or more rarely to trauma or neoplasms.

An important point in the microscopical diagnosis of true hematosalpinx is the fact that the *distal openiug of the tube is closed*, which is not the case in tubal gestation.

Treatment of Post-Operative Peritonitis.—Dr. JULIEN of Paris (*L' Univers Médical*, No. 8, 1891), in cases of peritonitis after operations, reopens the wound and profusely flushes the abdominal cavity. By this method one may save apparently hopeless cases. On November 20, 1890, he opened with much difficulty, a pelvic abscess, during which operation the pus escaped into the peritoneum That very evening, that the patient was suffering from subacute peritonitis was apparent, and the next morning the end seemed near. The abdominal wound was partially opened and the peritoneum flushed from diaphragm to bladder with seven quarts of a boric acid solution. The result was, as it were, a resurrection. Four days later the flushing was repeated. Recovery was uneventful.

Drainage after Laparotomy.—M. Saenger of Leipzig contributed a paper on this subject at the Berlin Congress (*Annals of Gynæcology*) in which he says: Complete closure of the abdominal cavity, even after "unclean laparotomies," is at present the choice of most German operators. When certain definite indications are present, however, drainage tends to make the course of convalescence after operation less critical. He divides drainage into three forms—first, *simple drainage*, with glass tubes, either straight or curved; second, *intra-abdominal tamponade* by means of absorbent gauze; and third, *combined drainage*, by means of glass tubes filled with some absorbent substance. The author employs usually the last method; exceptionally the second, and never the first. After closure of the abdominal cavity any fluid present is expelled by lateral pressure, and then by means of a fine copper sound bent exactly parallel to the tube an aseptic strip of gauze is introduced down to the very bottom of the drain, which is open. He does not advise the use of wicking for this purpose. Fresh strips of gauze are to be introduced until little or no fluid can be extracted; then the top of the drainage tube is to be covered with crumpled gauze and masses of wood wool, and the whole is to be sealed

hermetically with pieces of adhesive plaster as large as a handkerchief, held smoothly in place by strips passing in various directions. This dressing is not to be changed for twenty-four hours. There is no drawing out of the fluid with syringes, but the absorbent qualities of the dressings are utilized until they are fully saturated.

Drainage, according to Lande, is indicated, first, when local collections of blood, or of infected or decomposed secretions, are present, which it is beyond the power of the peritoneum to make harmless by absorption, inasmuch as this power is diminished from local or general causes; secondly, if a secondary collection of secretions is to be expected from infection of which septic poisoning is to be feared; thirdly, if perforation of (injured) organs with various contents, such as bladder or rectum, is to be feared; fourth, if it is desired to shut off large, profusely secreting, raw cavities from the rest of the abdominal cavity.

Drainage in Abdominal Section.—(ALBAN DORAN, M.D., in Trans. of West London Medico-Chirurgical Society, Nov. 8th, 1890.)—The term "drainage," when used in reference to abdominal section, was employed by the reader to signify a method by which noxious fluids collected in the peritoneal cavity after operation might be removed. It was in no way an arrangement which enabled fluids to escape by reason of physical laws, thus saving trouble to the surgeon; vaginal drainage allowed of this to a great extent, but was seldom satisfactory, and in abdominal sections should never be preferred to drainage through the abdominal wound. A glass drainage tube should be so placed that its extremity lay in Douglas's pouch while its mouth projected above the level of the lower angle of the wound. It was necessary whenever there was free oozing from adhesions, or much capillary hemorrhage, as in complicated ovariotomies or in operations for general peritonitis. When there was an extra-peritoneal pedicle, drainage was less satisfactory. Mr. Doran noted certain precautions necessary to prevent weakening the odges of the wound by the use of the drainage tube, and then detailed precisely his mode of using the tube as practiced in his wards at the Samaritan Hospital. The great principle was the

frequent evacuation of fluid without seriously disturbing the patient. The tube should be emptied every two hours for the first two days.

Morbid Changes in the Fallopian Tubes in Acute Infectious Fevers.—Dr. DMITRY D. POPOFF of St. Petersburg has examined (*Vratch; Brit. Med. Jour.*) twenty fallopian tubes from ten women who died from relapsing fever (7), relapsing fever with croupous pneumonia (1), typhoid fever (1), and croupous pneumonia (1). In all the cases the epithelial lining of the oviducts showed more or less extensive desquamation, the whole lumen of the tube being sometimes blocked by enormous masses of epithelium cells lying in heaps or rows about the base of the folds of the mucous membrane. The outlines of the detached elements were irregular, the protoplasm opaque and granular, the nuclei staining badly or not at all. Amidst the cells there were frequently seen structureless masses of varying size and appearance, which were stained with hemotoxylin fairly uniformly. Sometimes there were also small heaps of red blood corpuscles, and still smaller ones of leucocytes. In the outer or abdominal portion of the tube the desquamation and accumulation of the corpuscles were always much more pronounced than in the inner or uterine end. The tubal capillaries and small veins were invariably engorged with blood, even large-sized veins being occasionally entirely blocked with blood corpuscles. The congestion was especially marked in the mucous, subserous, and longitudinal muscular coats. In two of the ten cases the latter two strata contained scattered accumulations of red blood corpuscles, while in the remaining cases the elements were lying singly, being scattered all over the mucosa, subserous, and, more rarely, the muscular coats. As a rule, the corpuscles were seen in the vicinity of the engorged vessels, but not uncommonly they were also met with in non-vascular areas. In some cases a fairly abundant leucocytic perivascular infiltration was also detected, though more frequently the lymphoid elements occurred in much more scanty numbers than red blood corpuscles. In climacteric cases, the congestion, as well as all other morbid alterations, was as intense as in sexually active women. It was noticed, further, that in protracted cases the inflammatory changes were more

intense than in those of a shorter duration, and that in the presence of croupous pneumonia they attained a higher degree than in the case of a non-complicated relapsing fever.

Significance of Uterine Displacements.—NIJHOFF (*Centralblatt f. Gynak.*) makes the following summary :—

1. Uterine displacements are often secondary to peri-uterine inflammation or to pathological conditions of the uterus itself.

2. The symptoms accompanying a displacement are nearly always referable to the co-existing pathological deviation.

3. Treatment should be applied to the *lateral* deviation; when this is overcome the actual displacement of the organ may be cured without further treatment, or if it persists, it gives rise to no pain or functional disturbance.

4. In classifying the different varieties of retro-displacements, it is more important to lay stress upon the mobility or fixation of the uterus than upon the degree of displacement.

The Influence of Surgery on Gynæcology.—Dr. Murphy, in the *Provincial Medical Journal*, says: "Surgery came to the aid of gynæcology when such aid was sorely needed; gynæcology accepted that aid to such an extent that it has enabled her to pay her debt by placing surgery in such a position as it never was before, and developing it beyond all expectation." Truer words were never spoken. The gynæcologist of to-day is simply the erudite surgeon especially skilled in operations upon certain parts of the female body. And he gets this skill in technique solely through concentration of thought and constant application of his mechanical instincts in a practical way. When only the medical mind was confined to diseases of women there was a lamentable groping in the dark. The speculum was considered a complete outfit, in the same light as the stethescope for treatment of diseases of the chest. And these men possessing little manual dexterity sought to retain with timid hand and by trivial means, conditions which require the bold interference of the surgeon's art. But as soon as surgical minds found themselves interested in gynæcological problems, obstacles gradually melted away. There are many whose practise are rather medical than surgical, but these have all in action a certain amount of

surgical dexterity which shows that opportunity would probably have made good surgeons of them.

Extra-uterine Pregnancy; Retention for Seven Years; Intestinal Perforation; Laparotomy; Recovery.—A most remarkable case is related by Dr. Flothmann of Ems. The patient became pregnant in 1882, and after undergoing considerable suffering and many months of treatment was operated on in 1889. The remains of a fœtus was removed from a sac which was firmly bound down in the pelvis, and which had perforated the rectal wall. This perforation occurred about 25 cm. above the anus, and was caused by one of the sharp edges of a parietal bone. The contents of the cyst were removed and the edges attached to the parietal peritoneum. For a while fæces passed through the sac out through the abdominal wound, but by irrigation and drainage the natural channel was established and defæcation took place normally. The patient finally made a good recovery. —(*Deutsche med. Wochenschrift*, April 23rd, 1891.)

Infection through the Drainage Tube.—Drs. Robb and Ghriskey have been conducting very interesting experiments in regard to this subject at the Johns Hopkins Hospital. No antiseptic drugs were used at the dressings. In one instance they prove that where the case was absolutely free from organisms at the operation and also at the first dressing, the dressings upon the second occasion were found filled with colonies of *staphylococcus pyogenes aureus*, and suppuration followed in the track of the tube. The plan of treating the tube followed by these gentlemen is as follows: A piece of pure rubber sheeting about 18 inches square and well sterilized by a solution of sublimate (1 to 2000) and then kept in a salt solution until required, has a hole made in its centre large enough to allow the drainage tube to pass through. This is laid over the abdomen and the tube drawn through, which has already been properly placed and filled with sterilized gauze. Over this is placed a piece of cotton wool and over all is folded the ends of the rubber sheeting. Over all, then, is placed a large piece of sterilized cotton wool firmly kept in place by a bandage. At each subsequent dressing the tube is cleansed by means of little pieces of absorbent cotton in the claws of the special tube forceps, and refilled with sterilized

gauze as before. The authors prefer the gauze drainage to the suction syringe, a similar preference being now shown by most German surgeons. The authors show that pus in all cases does not contain virulent organisms, otherwise washing out of the abdominal cavity would not avail in many cases. They give a total of sixteen cases examined in which the tube was used. The *staphylococcus pyogenes albus* was found in six cases and *staphylococcus pyogenes aureus* in one case. This demonstrates that infection does take place through the agency of the tube. It is, however, noticeable, in closely examining the table given in the paper, that it was in all cases but one the infection took place on or after the third dressing. This important fact shows that it is wise to remove the tube as early as possible, probably after the first twenty-four to thirty hours. After this period it would be well to depend upon intestinal drainage by purgation. The authors draw attention to the now well known fact that the staphylococcus pyogenes albus is not the terrible fellow that staphylococcus pyogenes aureus is, and that it is only the latter we should stand in fear of. It is the true agent of sepsis.

The valuable conclusions to be arrived at from a perusal of the paper in question are, briefly: How necessary it is to carry out the technique of our operations and dressings in absolute purity so far as it is within human endeavour; that frequent dressings are bad in the direct proportion to their number; that the suction syringe is a source of great danger from the necessity of its frequent application, if for no other reason; and that the gauze capillary drainage and the employment of the tube forceps as a method is superior to all. Sänger of Leipzig says "hollow-glass drainage never, gauze drainage seldom, the combined glass tube and gauze drainage *always*." When the writer has had occasion of late to use drainage he has *always* used the Keith tube filled with sterilized gauze drainage saturated with boric acid and iodoform (seven parts of the former to one of the latter). This drain is changed only once in twenty-four hours, and the tube could then be removed if necessary without any chance of infecting the peritoneum.

Dr. Robert Bell (*Brit. Gyn. Jour.*), in a paper on *Uterine Adnexa*, says: "So much diversity of opinion at present exists

regarding the treatment of diseased ovaries and tubes, that one is almost forced to conclude that prejudice in many instances has usurped the domain of calm judgment, and sentimentality that of common sense. On the other hand, however, we find men who are much too ready to ignore and even scoff at the scruples of those opposed to them in practice, and who have no hesitation in bringing surgery to bear when less drastic measures might possibly, and probably have, a more beneficial effect upon the case. No one could possibly have been more averse to surgical interference in these diseases than I at one time was, and for years I have laboured to throw discredit upon the operation. I was even so blinded by prejudice that I felt inclined to denounce every man who attempted the operation, and looked upon those poor sufferers on whom he operated as victims to his surgical rapacity. For years I held these extreme views, and not, I trust, without some benefit accruing to gynæcological science, yet it must be confessed, in many instances, a vast amount of suffering and ill-health might have been spared had operative measures been resorted to at an earlier stage."

The above views and confession of a man—"blinded by prejudice"—regarding the operative treatment for relief of inflammatory disease of the uterine appendages, should be carefully thought over by every conscientious physician in general practice. Many of these cases, as Polk has shown, need not lose their uterine appendages, but merely have the adhesions broken up, small cysts incised, and the displaced organs replaced and held there by suture in such a way that they will be freed from pressure and constriction. There is undoubtedly some reason for improvement in the technique of this operation, and our future endeavours will be, I feel confident, directed in this way.

Results of Extirpation of the Uterine Adnexa.—The *Gazette des Hôpitaux* gives M. Routier's conclusions on this subject, presented at the recent French Surgical Congress, as follows: The more advanced the lesions of the adnexa the more does their ablation give an excellent therapeutic result. The best result is obtained by cure of the pyo-salpinx. In the milder cases, also, ablation is an excellent operation; but in certain young

women there persist hot flashes and sweating crises, in evident *rapport* with the sudden suppression of the menses. Unilateral extirpation in salpingo-oöphoritis is a mediocre operation.

Early Curetting in Puerperal Infection.—M. CHARRIER (*Archives Générales de Medecine*, Aug. 1891) speaks of early curetting in puerperal infection. Most often the operation of early curetting is one of urgency, and there is little time for preparing the patient. M. Vassi looks upon repeated shivering, a temperature of over 39°C., the general state of the patient, pulse, etc., as affording pressing indications. After the curetting, which should be done thoroughly, the cavity is washed out and filled with iodoform gauze as a drain. The amount of fœtid *debris* brought away in some cases is extraordinary. The author says that curetting is indicated in cases of slight infection, when abdominal tenderness, less marked fever, and fœtid lochial discharges are present. Antiseptic injections improve matters for a short time, but are not finally remedial. If any adherent portions remain in the cavity washes will not remove them, and if curetting be done by one specially skilled in such manipulations it is impossible to do injury. Puerperal accidents, rare now-a-days, will no longer be feared if curetting the uterus be properly carried out. When failure to relieve ensues, it is because the operation was done too late, when probably the general peritoneal lymphatic system and tubes had become affected. The author gives five cases in illustration.

Early Diagnosis of Carcinoma Uteri.—Dr. WINTER (*Berl. Clin. Wochensch.*, August 17th, 1891) draws attention to the great importance of making an early diagnosis in cases of carcinoma uteri, in view of the success now attending the operation of total extirpation. During the last few years there have been 64 such operations performed in Berlin alone without a single death. The primary results are therefore very satisfactory. As regards the secondary results, it is thought that about 25 per cent. remain alive after five years have elapsed. In view of these facts it is lamentable that only 28 per cent.—that is, about one quarter—of the cases of uterine cancer are operated on, and if of this number only a quarter survive for five years, not more

than about 7 per cent. of patients are permanently cured. The chief reason for this is that women are not advised to apply to the surgeon early enough. The physician in attendance often fails to examine, and therefore does not make a diagnosis. In other cases the patient is unwilling to be examined, through a dread of something serious being discovered. In a few cases the symptoms are so slow, insidious, and ill-defined, that no attention is paid until the progress of the disease has been well established. If medical men would only bear in mind the great necessity for making themselves absolutely certain in regard to the condition of suspected cases, many valuable lives might be saved.

Cæsarian Section and Porro's Operation.—Dr. Harris has published in the October number of the *American Journal of Medical Sciences* a memoir on "The possible results of Cæsarian delivery as shown by the results obtained in Leipzig under seven operations from 1880 to 1891."

Twenty-two operations were done in America between 1828 and 1880. In these cases the small number of sutures applied is noticeable; twelve mothers and thirteen children were lost. This mortality is attributed to the fear on the part of the operators of applying a sufficient number of sutures, and in this way poisonous fluids were allowed to escape into the peritoneal cavity. In the history of the improved operation Zweifel stands foremost, having lost but one mother and one child in eighteen cases. He has completed an operation in twenty-four minutes. He uses many sutures, and prefers chromic acid catgut. The total number of operations in Leipzig is thirty-five, with two maternal deaths and two children lost. Dresden furnishes more operations, but with a higher mortality. Leopold has had more Cæsarian deliveries than any living man, but he had lost three women when he had reached Zweifel's number of cases.

Dr. Harris states that the Porro record for all countries from 1885-89 amounts to 157 cases with 48 deaths and 25 children lost. The lowest mortality ever reached was 15⅝ p.c. (1888). In 1889 it rose to 32¼ p.c. Milan gives the best Porro record in Europe—29 per cent. as against 5 per cent. in Leipzig under

the Sänger-Cæsarian section. Vienna has had more Porro operations than Milan, but 15 women out of the first 32 were lost. From these facts the conclusion is drawn that the general average mortality of the Porro-Cæsarian section is about 28 per cent. Whereas it is thought that the average mortality of the Sänger-Cæsarian section ought to be about 6 per cent. Sanger and many other European operators are opposed to removing the ovaries or tying the tubes, as it is not recognized that rachitic mothers will necessarily bear puny children. If the operation can be reduced to 6 per cent., then the question of sexual mutilation must be very seriously considered.

Treatment of Severe Prolapsis Uteri.—Dr. RICHELOT (*Union Méd.*, Oct. 3rd, 1891) advocates hysterectomy (vaginal) in extreme cases of prolapsis, and adds that from his experiences it is not at all a difficult operation. That it will be necessary afterwards to do a colpo-perineorrhaphy or a Le Fort's operation to obliterate the vagina.

Reviews and Notices of Books.

Foster's Physiology. Latest American edition, published with illustrations by Lea Brothers, Philadelphia, Oct. 1891.

The newest edition of this work, long and favourably known in America as well as Britain, has just been issued from the American press in a single large volume at a moderate price. Dr. Foster has at last yielded to the demand for more or less histological illustration and reference rather, probably, from pressure of circumstances than from any alteration in his own convictions. All the changes in the book seem to be improvements, while it remains, as before, one of the best digested works on physiology ever written.

For ourselves we are glad to see recognized in this work what has been so long neglected—the differences for species and individuals, to the knowledge of which differences has been largely due to work done in America. Professor Foster rarely mentions the names of authors of method or researches, and where he has done they have been those of the Cambridge school. This is a bit of narrowness we scarcely expected.

It is gratifying to note that in this work there are signs of a reaction against the physico-chemical physiology which has been in vogue of late years, and for which Prof. Foster was as much responsible as any one. As we have for years taught in opposition to such views, it is no small pleasure to find a change in so important a work as the present one. This book will still be a large and difficult one for many students; but teachers should try and bring their classes up to the better sort of physiology. The work deserves success. W.M.

Differences in the Nervous Organization of Man and Woman. Physiological and Pathological. By HARRY CAMPBELL, M.D., B.S. (London), Member of the Royal College of Physicians; Senior Assistant Physician and Pathologist to the North-West London Hospital. London: H. K. Lewis, 136 Gower street. 1891.

Dr. Campbell is now so well known as a clear, forcible and

philosophical writer on medical subjects that any production from his pen is gladly welcomed by the profession. The work under consideration is in all respects fully equal to the previous volumes which we have had the pleasure of carefully reading and reviewing. No practitioner can read the present work without being in a better position to intelligently treat the various forms of diseases it is his lot to meet with. We have much pleasure, therefore, in recommending it to the favourable notice of our readers, and can assure them they will find it both pleasant, entertaining and profitable reading.

A Text-Book of Practical Therapeutics, with especial reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By HOBART AMORY HARE. M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Second edition, enlarged and thoroughly revised. Philadelphia: Lea Brothers and Co. 1891.

In the short space of six months the first edition of this book was exhausted, showing that it was written in a manner that commended itself to both practitioners and students. The present edition contains a description of a number of new agents, together with an account of the method of carrying out the rest-cure. A description is also given of the means of treating tabes and allied diseases by suspension.

A Manual of Hypodermatic Medication: The Treatment of Diseases by the Hypodermatic or Subcutaneous Method. By ROBERTS BARTHOLOW, A.M., M.D., LL.D., Emeritus Professor of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia. Fifth edition, revised and enlarged. Philadelphia, J. B. Lippincott Company; London, 10 Henrietta street, Covent Garden. 1891.

It is a great pleasure to know that Dr. Bartholow's health has been restored, thus enabling him to give to the profession a late and greatly improved edition of his excellent manual on hypo-

dermatic medication. The fifth edition contains much new matter and the work is now the most complete on its subject in the English language. The advantages and disadvantages of the hypodermatic method of introducing drugs in the blood are fully and clearly explained in the case of every drug used in this way.

Annual of the Universal Medical Sciences. A Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHAS. E. SAJOUS, M.D., and seventy Associate Editors, assisted by over two hundred Corresponding Editors, Collaborators, and Correspondents. Illustrated with chromo-lithographs, engravings and maps Philadelphia and London: F. A. Davis. 1891.

This, the fourth series of this valuable annual, is in every respect up to the previous issues. The subject matter occupies the whole ground of medicine, and is dealt with in a very complete manner. These volumes should be on the writing table of every practitioner who desires to keep abreast of the ever advancing tide of medical progress. In the English language there is certainly no work dealing with the yearly progress of the medical sciences that can compare with the one under consideration in completeness and thoroughness. A great improvement is to be noted in the present issue in the matter of having a reference list at the end of each volume.

Practical Pathology and Morbid Histology. By HENEAGE GIBBES, M.D., Professor of Pathology in the University of Michigan; formerly Lecturer on Normal and Morbid Histology in the Medical School of the Westminster Hospital, London; formerly Curator of the Anatomical Museum, King's College, London. With sixty photographic illustrations. Philadelphia: Lea Bros. & Co. 1891.

The first seven chapters of this work deals with the most approved methods of preparing tissues for microscopic examination. In the second part we have a very clear account of the more important details connected with practical bacteriology. The third part, which occupies more than half the work, deals

with morbid histology. The fourth part is photography with the microscope. The work is one which presents in a clear and concise manner our present knowledge of the subjects with which it deals. It is admirably and profusely illustrated with photo-engravings.

The Medical News Visiting List, 1892. Philadelphia: Lea Brothers & Co.

The Medical News Visiting List for the year 1892 contains certain improvements as compared with previous issues. In addition to blank spaces for a daily record of office consultations and visits, we have short chapters devoted to the following subjects among many others: Signs of Dentition, Examination of the Urine, Important Incompatibles, Artificial Respiration, Poisons and their Antidotes, etc., etc. It is difficult to imagine any ordinary emergency occurring in medical practice that is not treated of in this useful work.

The Physician's Visiting List (Lindsay & Blakiston's) for 1892. Forty-first year of its publication. Philadelphia: P. Blakiston, Son & Co. (successors to Lindsay & Blakiston) 1012 Walnut street.

This always popular Visiting List presents one or more new features for the coming year. There is a short account, compiled by Dr. Geo. M. Gould, of the diagnosis and treatment of the simpler superficial diseases of the eye. A table showing the characteristic characters of the urine in the various forms of Bright's disease may prove of value when more important sources of information are not hand. The publishers deserve credit for their efforts, year after year, in bringing out a list which fulfils such a useful purpose.

BIBLIOGRAPHY.

Traite Pratique de Matière Médicale Therapeutique et de Toxicologie. Par H. E. Desrosiers, M.D., Professeur de Therapeutique à l'Université Laval, Professeur de Matière Médicale au Collége de Pharmacie de Montréal, Médicin de l'Hôpital Notre Dame. Montréal: J. M. Valois, Libraire-Editeur. 1892.

A Clinical Text-book of Medical Diagnosis for Physicians and Students, based on the most Recent Methods of Examination, by Oswald

Vierordt, M.D., Professor of Medicine at the University of Heidelberg. Authorised translation from the second improved and enlarged German edition, with additions by Francis H. Stuart, A.M., M.D., Member of the Medical Society of the County of King's, New York: Fellow of the New York Academy of Medicine. With 178 illustrations, many of which are in colours. Philadelphia, W. B. Saunders, 913 Walnut stseet. 189I.

Twenty-Second Annual Report of the State Board of Health of Massachusetts. Boston, Wright & Potter Printing Co., State Printers, 18 Post Office Square. 1891.

Essentials of Bacteriology, being a Concise and Systematic Introduction to the Study of Micro-organisms. For the use of Students and Practitioners. By M. V. Ball, M.D., late Resident Physician German Hospital, Philadelphia; Assistant in Microscopy, Niagara University, Buffalo. With 77 illustrations, some in colours. Philadelphia, W. B. Saunders, 913 Walnut street. 1891.

A Manual of Venereal Diseases, being an Epitome of the most Approved Treatment. By Everett M. Culver, A.M., M.D., Pathologist and Assistant Surgeon, Manhattan Hospital of New York City, etc., and James R. Hayden, M.D., Chief of Clinic Venereal Department of Vanderbilt Clinic, College of Physicians and Surgeons, New York. With illustrations. Philadelphia, Lea Brothers & Co. 1891.

History of Circumcision from the Earliest Times to the Present. Moral and Physical Reasons for its Performance. By P. C. Remondine, M.D. Philadelphia and London, F. A. Davis. 1891.

Essentials of Physiology, arranged in the form of Questions and Answers. Prepared especially for Students of Medicine. By H. A. Hare, B.Sc., M.D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia, etc. Third edition, thoroughly revised and enlarged, by the addition of a series of handsome plate illustrations taken from the celebrated "Icones Nervorum Copitis" of Arnold. Philadelphia, W. B. Saunders. 1891.

Manual of Physical Diagnosis, for the use of Students and Physicians, by James Tyson, M.D., Professor of Clinical Medicine in the University of Pennsylvania and Physician to the University Hospital; Fellow of the College of Physicians of Philadelphia, Member of the Association of American Physicians, etc. Philadelphia. P. Blakiston, Son & Co., 1012 Walnut street. 1891.

Ptomaines, Leucomaines and Bacterial Proteids, or the Chemical Factors in the Causation of Disease. By Victor C. Vaughan, Ph.D., M.D., Professor of Hygiene and Physiological Chemistry in the University of Michigan, and Frederick G. Novy, Sc.D., M.D., Assistant Professor of Hygiene and Physiological Chemistry in the University of Michigan. Second edition, revised and enlarged. Philadelphia, Lea Brothers & Co. 1891.

Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph.D., M.D., Professor of Chemistry and Toxicology in the College of Physicians and Surgeons; Professor of Chemistry and Analytical Chemistry in the Maryland College of Pharmacy. Baltimore. Third edition, thoroughly revised. With forty-four illustrations and seven coloured plates, representing fifty-six chemical reactions. Philadelphia, Lea Brothers & Co. 1891.

Essentials of Nervous Diseases and Insanity: Their Symptoms and

Treatment. A Manual for Students and Practitioners. By John C. Shaw, M.D., Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital Medical School; formerly Medical Superintendent King's County Insane Asylum. Forty-eight original illustrations. Philadelphia, W. B. Saunders, 913 Walnut street. 1891.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, November 6th, 1891.

F. BULLER, M.D., PRESIDENT, IN THE CHAIR.

New Members.—Drs. John McBain, J. E. Molson, R. H. Berwick and J. A. McPhail were elected members.

Late Perforation in Typhoid Fever.—DR. LAFLEUR exhibited this specimen. The patient had been in the hospital for several weeks under the care of Dr. Molson. He had died with collapse, pain and other symptoms of perforation. At the autopsy there was found abdominal distension and loss of liver dulness. On opening the abdomen there was general purulent peritonitis, the cavity containing a large quantity of lymph and turbid fluid. A perforation was found in the cæcum just below the ileo-cæcal valve. The case was peculiar, in that the ulcerative process was most intense in the large bowel as far down as the rectum. The ileum showed early infiltration of the Peyer's patches. All the ulcers were cleared except two or three in the ileum.

Hypertrophic Cirrhosis of the Liver.—DR. LAFLEUR exhibited the specimen and gave the following account of the conditions found at the autopsy. The body was intensely jaundiced; there was moderate abdominal distension and emaciation. The liver projected far beyond the normal limits in all directions, the surface was roughened and covered with numerous adhesions, many being organized and traversed by large veins, which were connected with those of the abdominal wall and diaphragm. The organ was rough, uniformly enlarged, of a pale reddish-brown colour, and very firm. The cut section showed here and there prominent bright yellow spots, which were found to correspond to unaltered liver tissue. The rest of the organ was of a grayish-

yellow colour and much firmer than the light yellow patches. On microscopic examination there was seen a very general development of fibrous tissue which was not restricted to the periphery of the lobules, but penetrated between the individual liver cells to the centre of the lobule. There was marked atrophy and degeneration of the liver cells. In many places there were collections of small round cells among the strands of fully formed fibrous tissue (probably tuberculous tissue). It was extremely difficult to make out the lobular arrangement in many sections. No increase in the number of bile ducts could be made out. The case illustrates that variety of cirrhosis called "intercellular" as distinguished from the more common "lobular" cirrhosis. The jaundice was not due to the obstruction of the common duct or any of its larger divisions, as the bile could be easily pressed out. The immediate cause of death was an acute miliary tuberculosis, the lungs, the retro-peritoneal glands, which were very large, and spleen being stuffed with minute miliary tubercles. The kidneys also contained them in lesser quantities. There was no meningeal tuberculosis. No old tuberculous focus was discovered to account for the acute infection.

In connection with this case Dr. Lafleur exhibited a specimen of the atrophic form of cirrhosis. There had been no history of cirrhosis, but one of obscure lung disease. There was found a chronic bilateral pulmonary tuberculosis upon which had been grafted an acute attack. There was no ascites. The surface of the liver was roughened with small elevations and corresponding depressions. It was softer than the other specimen, and friable. The internal appearance was the same as that on the surface, the elevations corresponding to the lobules and the depressions to the portal spaces. It is an example of atrophic changes involving the portal circulation, induced probably by a calculous obstruction of the duct, for the common duct and all its branches are enormously dilated. A calculus did probably pass down at some time, as a small one is seen in the gall-bladder, but none in the common duct. The terminal feature in this case was also pulmonary tuberculosis. In the other organs there were no special changes.

Dr. James Stewart said that the man from whom the first specimen was taken was 40 years of age, and had passed the greater part of the last two years in the hospital. The case was of special interest, being the one on which the late Dr. R. L. MacDonnell had written his article on "Cirrhosis of the Liver" in the first volume of "International Clinics." The marked feature of the case was the enlargement of the liver and spleen; it was impossible to distinguish between the two, as the splenic dulness merged into the hepatic. There was constant persistent jaundice and absence of effusion into the abdomen. He had had a severe attack of erysipelas and of peripheral neuritis. Two weeks before death he had passed a large quantity of chylous urine, the source of which could not be traced at the autopsy.

Chronic Myocarditis.—Dr. Lafleur exhibited the specimen and gave the following notes on the autopsy. There was general arterial sclerosis of the larger and medium sized arteries, and was seen in all the organs. The chief changes were seen in the heart, at the base; there was hypertrophy and dilatation of both ventricles. At the apex of the left ventricle there was great thinning of the wall, and in which two well-marked zones could be distinguished—an outer one, like normal muscle, and an inner one, from which all traces of muscular structure had disappeared. In this situation there was distinct bulging of the apex of the ventricle and a large clot adhered to the endocardium. Microscopically the internal zone is necrotic, all the muscular structure being replaced by a granular amorphous substance. As to the cause, there was no thrombus or embolus of the coronary arteries discovered, but there was probably clogging of some of the minute vessels. Higher up in the ventricle there is a fibroid change, appearing as pearly glistening patches, offering great resistance to the knife and alternating with areas of normal muscle. The valves were competent and showed slight fibroid changes. Thus there was in this case a commencing cardiac aneurism, and had the man lived he would have had a distinct sacculation of the left ventricle.

Dr. Jas. Stewart related the clinical history. The patient had been only two days in the hospital, and the cardiac condition

had not been diagnosed. The main clinical features were the constant dyspnœa and the marked difference in the respiratory sounds on the two sides of the chest, being weak over the left side and exaggerated over the right. It was thought that there was a tumour pressing on the left bronchus. Shortly before death there was a systolic murmur heard at the apex as well as severe pain in the region of the gall-duct. Commenting on the case, Dr. Stewart said that some cases of myocarditis are easily diagnosed, though very often the condition is only discovered at the autopsy. Patients often die with as great suddenness as from hemorrhage into the medulla or from aortic disease.

Fibroid of the Labium.—DR. LOCKHART exhibited this specimen which he had removed last April, and which had existed since June 1890. On examination, the growth was found attached to the left labium minor by a pedicle, one and a half inches long and about two millimetres thick. It was removed by Paquelin's cautery.

DR. LAPTHORN SMITH then read a paper on a

CASE OF PUERPERAL PERITONITIS TREATED BY ABDOMINAL HYSTERECTOMY, WITH REPORTS OF TWO OTHER CASES TREATED BY OTHER METHODS.

The following very brief and imperfect reports of these cases of puerperal peritonitis, although of very little interest in themselves, may serve as a basis for some practical deductions, and may also, I hope, lead to some healthy discussions and criticisms.

Mrs. C., aged 22, was attended by me six years ago for typhoid fever, which came on during the last month of her first pregancy. The fever ran a typical course and at the beginning of the third week labour came on, which, owing to her weak condition was tedious, and required the aid of the forceps. There was no change in the temperature however, it continuing at 103° until the end of the third week when it began to fall, and in two or three days reached normal. She made a good recovery. Two years later, I was called to attend her in her second confinement, and found her in a house on Brunswick street which had enjoyed rather a bad reputation for scarlet fever and diphtheria. I was very careful to have everything about her clean, but did not use any injections.

There was no laceration of the cervix or perineum, and the placenta came away easily and entire. Her temperature was normal the next morning, and also the following one, but towards the afternoon of the third day I was hurriedly sent for and found her in a very severe rigor. The thermometer registered 105°. I immediately syringed the vagina with plain hot water, and then ran home for a uterine double current catheter which I had shortly before purchased in Berlin, known as the Fritz-Bozeman. I also brought some Liquor Potassæ Permanganatis. I then prepared a quart of hot water with one ounce of the Permanganate solution,and allowed it to flow from a high fountain into the uterus. The first few ounces which came away were dirty, and then there was washed out a pale, round fungous looking mass about three inches wide and half an inch thick, exactly like the colony of fungi, commonly called the vinegar plant. After that the water came away clear magenta. At ten o'clock that night the temperature had fallen to 101°, and next morning it had returned to normal. As a precautionary measure I repeated these injections for several days, but there was no return of fever, no sore throat, and no exhaustion. I should mention I had her ears ringing from cinchonism within five hours of the chill. The injections were repeated night and morning for three days. She made an uneventful recovery. I mention this case because it was the worst of seven similar cases occurring during fourteen years, and among over five hundred confinements, all of which were treated in the same simple way and ended in recovery. The decomposing mass was probably a blood clot, as she had had many afterpains the first day which required two or three 10-grain Dover's powders to relieve. I suppose every practitioner has a case like this occasionally, and saves the patient's life by the same treatment, although such cases, if not treated, would probably go on to puerperal peritonitis and die. But there are cases in which, in spite of the same treatment, the temperature does not go down, the chills are repeated, the belly becomes tympanitic, and in a word, the case proceeds from one of uterine septicæmia to infection of the great peritoneal lymph sac, or general peritonitis. Of such a kind is the following case:

Mrs. J., æt 34, mother of two children, was attended by me

three years ago for a miscarriage, at the third month, from which she made a good recovery without any rise of temperature. About two years later I was called to see her in her confinement. She was nursed by an elderly maiden sister who was opposed to doctors in general, and to me in particular. She spent four weary hours chiding me for the length of the labour, until at midnight, the os being open, I carefully washed my hands and instruments and proceeded to apply the forceps. This also met with a good deal of obstruction, and the patient herself objected to take any anæsthetic. I tried to apply the forceps without any anæsthetic, but the patient set up such an outcry, in which all the family joined, that I insisted upon having some one to help me. Dr. Reddy kindly responded to my call and administered the A. C. E. mixture, while I easily applied the forceps and delivered. The placenta was expelled by Crede's method. I gave her a drachm of ext. of ergot to prevent hemorrhage, and after cleaning her and the bed up I left her comfortable. Next morning (Monday), her temperature was normal and she felt remarkably well. I gave strict orders about changing soiled bedding and to have the bowels moved on the third day. On Tuesday, Wednesday and Thursday mornings the temperature was still normal, but on Friday it had risen half a degree. As there was a slight odor to the discharge, I ordered the patient to be syringed night and morning with plain hot water, and the clothes and bedding to be changed again on Saturday morning. To my great annoyance, the patient and nurse informed me that they did not think there was any need of syringing, as they had never done so before and the patient felt well. The thermometer, however, registered a rise of one degree. I gave them all a lecture on the importance of obeying the doctor's orders, and the husband promised to get the syringe. The nurse did not try to use it until Sunday at noon. On Tuesday afternoon the patient was feeling very well, but the temperature was still a degree high. On Monday, the eighth day, I was unable to go to see her in the morning, but, about noon, on my return home, I received an urgent call to go there, and on my arrival, found that she had had a very severe and prolonged chill which was still going on. Failing to find me at once, they had called on Dr. Devlin who kindly paid his one

visit and did what he could to stop the chill. I found the temperature nearly 105°, ordered two grains of quinine every two hours until cinchonism was attained. I at once took the douching in hand myself, and then it appeared the nurse had been afraid, when syringing the day before, to put the nozzle inside the vulva and had merely squirted it on the outside. As there was by this time a decidedly bad odor, I employed sublimate solution 1–2000 which was greatly in vogue at that time. Although I followed it by two or three syringes full of pure water the first injection was followed by complete anuria, and an obstinate diarrhœa set in which lasted two days. I after that reduced the strength of the injections to 1–4000 and followed them with a more copious flow of plain water. All the injections were intra uterine and repeated twice a day. On Monday night Dr. Reddy met me in consultation and confirmed the diagnosis of peritonitis, and suggested that I should open the abdomen, but I was so disheartened by the constant obstructions of the nurse, and the apathy of the others, that I had not the courage to do so. On Tuesday night they requested me to call Dr. A. A. Brown in consultation, and he suggested that I should curette and wash out with hot water, and this he kindly helped me to do under a little anæsthetic. Nothing came away however, with the curette, although I scraped hard enough to start a little bright oozing. We thoroughly washed out and put an iodoform suppository into the uterus. Before putting the patient back in bed I made a clean sweep of the bedding, and to my mortification discovered under the clean sheets a piece of bad smelling canvas, which had been placed on the mattress some time before the confinement. This was removed and fresh clothing was placed on the patient and bed. There was not only no improvement from this, but the patient was much worse the next day, the temperature and pulse rising to 105° and 150 respectively. As the pulse was very weak, I gave her ten minims of digitalis every four hours with very slight benefit. In spite of everything I could do she gradually sank, and died on the 19th day after her confinement. No post mortem was allowed. This was my second death in nearly five hundred cases, the first one being due to peritonitis occurring in the 226th one. I might say, that the temperature generally oscillated between 101 and 103°, except

at the beginning and after the curetting. The pulse was always very rapid and wiry. There was little or no pain at any time. The distension was sometimes very great, but seemed to be easily relieved with turpentine stupes, salines, and sometimes turpentine enemas. Quinine, digitalis and brandy were given regularly, and for nourishment she took large quantities of milk and beef tea. No calomel was given. It is very mortifying to have such cases, and still more so to report them, but I believe, if this be truthfully done, valuable lessons may be learned, which, if applied in similar cases, may save many lives. I felt very much inclined at the time to retire from the case when I experienced such difficulty in having my orders carried out, and indeed one would be quite justified in doing so, and this would probably be the wisest course to follow, although on this point, I cannot even now come to a decision. Lawson Tait told us here some years ago, that he never undertakes a case without first being sure that his orders will be obeyed implicitly. On the other hand very few patients do all the doctors tell them.

The second point is, that in any case where the carrying out of your orders is of vital importance, it is better not to trust any one, but to execute them yourself. This case has impressed me so much that I now change the bedding and linen myself at my first visit after the confinement, or at least see it done while I am there.

The custom of delivering women on an operating table as is done at the Preston Retreat, Philadelphia, or on a sofa, as is the custom among the French Canadians here, and only placing the women in bed after all the flow of water and blood is over is a good one.

One of our most successful physicians has been criticised for taking upon himself the duties of the nurse, and even preparing the lying-in bed with a rubber sheet, etc. But he has probably had some severe lessons such as in this case, which have taught him to trust no one where aseptic midwifery is concerned. Another point worth noticing is the tendency of both nurses and patients to keep the lying-in room darkened and unventilated. It was so in this case, and in nearly every case I have ever had the patient can hardly be seen. As if the shutters being closed and the blinds down,

and the curtains being drawn together were not enough, a thick shawl is generally pinned over all to intercept any straggling rays of light that may be struggling to enter in. Keeping a woman in a badly ventilated and dark room for ten days, plays a considerable part in the great weakness from which many suffer for weeks after a normal confinement. As I have already said, the patient died from peritonitis, but what was the cause? I had not been attending any infectious cases for months before, and I carefully washed my hands and instruments and cleaned my nails. May this woman not have had a pyo-salpynx or a virulent ovarian cyst or abscess which burst into the peritoneal cavity while expelling the placenta? It was only since reading Dr. Col's article in the American Journal of Obstetrics that the thought occurred to me, as there was no retained placenta, no decomposing clots, no retained membrane to explain the disease. The uterus when I curetted was completely empty. If I had acted upon Dr. Reddy's suggestion to open the abdomen, I would have at least seen whether there was a ruptured abscess or pus tube, removed it and washed out the peritoneal cavity. On the other hand, if I had found nothing, I could have removed the uterus and appendages, after throwing a noose around them and transfixing them with pins. This would not have added in the least to the dangers of an exploratory incision, and although the woman would have lost some organs whose functions she abhorred, it would probably have saved her life. She might none the less have been a good wife and mother.

Now a word with regard to bichloride of mercury injections. I have used them hundreds of times in the vagina, since for three years, I myself gave one to every woman before applying electricity, and in none of these did I ever have the slightest sign of poisoning. I have only used them in the uterus a few times after confinement, and three times at least, I have had bichloride poisoning. I attribute the difference in effect to the large amount of raw surface at the placental site, and at numerous slight fissures of the cervix, vagina or perineum. I feel satisfied that, while being very dangerous, even when followed by a copious flow of water, they are very little, if at all superior to a 1–40 permanganate solution; and I for one shall never use bichloride again after labour.

I now come to a case in which, profiting by my previous experience, I adopted a much more energetic method of treatment, and, I am glad to add, with the most gratifying results.

Mrs. Z., æt 35, was attended by me in her first confinement about three years ago. She had always been delicate, and at the end of her first pregnancy was in a wretched general state of health. Her house was dark and in a dirty street, the atmosphere was damp and musty. She had a strong presentment that she was going to die. Owing to her age labour was very tedious, so after twenty-four hours she was unable to help herself any more and begged me to relieve her, which I did by applying the forceps at the superior strait, the os being fully dilated. I gave her the A. C. E. mixture and took about half an hour to deliver the head, hoping thereby to save the perinæum which was very tough. In spite of this precaution there was a slight tear, necessitating a single stitch as suggested by Dr. Alloway. I gave her vaginal douches of plain water for a few days, and she made a good recovery without any rise of temperature. On the 8th of October of this year, she sent for me on account of a severe pain in the right iliac region. Thinking it might be labour, which was then due, she sent for the midwife who was to attend her. The latter examined her and could detect nothing except marked tenderness in the right side close to the uterus. I found her temperature 102°. Suspecting appendicitis I ordered a saline, and next day the fever and tenderness were gone. I did not see her again until the night of the twelfth, when I was urgently sent for. I found her in a very low condition, being almost senseless and deathly white. She had lost very little blood, but I gave her a drachm of fl. extract of ergot, in anticipation of a flooding; I also gave her a little stimulant. She rallied somewhat, when the midwife tried during an hour to deliver the placenta by expression and traction on the cord, but without avail. At the end of that time I introduced my two fingers into the uterus with great difficulty and tried to remove the placenta, but found it firmly adherent. By this time the woman was very much exhausted, and complained bitterly of the pain, so I decided to adopt the course recommended by Winkel to wait twelve hours, and if not spontane-

ously expelled by that time, to give her an anæstnetic and detach it with my hand. I left an ounce of ergot with directions to give her a teaspoonful every four hours, for the double purpose of preventing hemorhage and expelling the contents of the uterus. I gave her a hot injection of plain water, cleaned her up, removing all soiled linen from the bed. I told the midwife to let her sleep so as to gain a little strength for what might be necessary when I returned. As soon as I left the house the midwife began working at the placenta, and by 3 a.m. had removed a considerable portion of it, which she showed me on my arrival at 9 a.m. I did not think that it was all there, and therefore, introduced my hand into the vagina, and removed several handfulls more from the uterus, which was still tightly closed. The patient was too weak to stand an anæsthetic, and the introduction of my hand caused her intense pain, so that I could not get my fingers to the fundus. I then gave her an intra-uterine douche of permanganate solution until it returned clear, and these injections were repeated twice a day. She rallied very well for the next thirty-six hours, but about forty hours after delivery she took a chill, and the temperature went up to 104°. Forty-eight hours after delivery I was suddenly called to see her and found her with her abdomen distended, knees drawn up, face pale and anxious, pulse thready and 140, and she was screaming with pain all over the abdomen. I at once gave her a good dose of Rochelle salts and applied turpentine stupes to the abdomen, and within an hour she was quite free from pain and fell asleep. I felt sure I had a case of peritonitis on hand, but to what was it due? If to a suppurating appendix or a ruptured pus tube, it was plainly my duty to open the abdomen and remove it; if to a septic uterus, to clean it out with the curette. I inclined towards one of the former causes on account of the patient having had a high fever and intense pains in the right iliac region for five days before the confinement; while, if it were due to a septic uterus, it must have been infected some days before her delivery, puerperal peritonitis not generally coming on until six to nine days after delivery. The next question for me to decide was, should I curette the uterus or explore the abdomen first? I remembered my experience in a former case in which curetting seemed to render the patient

much worse, apparently having opened fresh avenues for the admission of germs into the system; on the other hand, what would be the use of curetting if an abscess had broken into the peritoneal cavity? If the patient could have stood the two operations it would be better to curette first, and if this was not followed by improvement, to perform an exploratory abdominal section. Next morning, the 15th, she was a great deal worse, so I placed the matter fairly before the patient and family, and gave them until 3 p.m. to decide whether I should open the abdomen and remove whatever I found to be the cause. At 3 p.m. I returned with Dr. Bruère who also considered the patient's condition critical, and received permission to do whatever I thought best to save the patient's life. I then sent for Dr. Springle who ably assisted me under great difficulties to perform the operation, while Dr. Bruère undertook the very anxious task of administering the anæsthetic. An hour was spent in finding a clergyman and administering the rites of the church, and it was not until a quarter past four that the anæsthetic was begun, and about 4.30 the incision was made. It was a very rainy, dark day, the light was very poor, the room cramped, and the last sutures had to be inserted by the feeble light of a coal oil lamp. Fortunately the distension had been somewhat relieved by the Rochelle salts administered the night before and repeated that morning, so that the intestines only gave us slight trouble. We first inspected the peritoneum and found it free from lymph or pus, but the intestines were somewhat injected. We then sought for an inflamed appendix with negative results. The uterus and its appendages were very congested, but the latter contained no abscess; neither were there any adhesions anywhere. I now felt certain that the seat of the trouble was in the uterus, and, during the next sixty seconds, I had to decide whether I would sew her up and leave her to her fate, or whether I would give her a chance for her life by removing the septic organ. I decided upon the latter course, and lifting out the fundus with a vulsellum and placing the wire of Koeberlé's serre-nœud around the uterus about the level of the internal os, taking care to exclude the bladder and intestines and to include the appendages, we tightened up the wire and placed two pins through the uterus above it. A few cuts

were made in the uterus, and as they bled I tightened the wire several times until all bleeding was controlled, when I removed the uterus, leaving the stump about the size of a small apple; we then passed about two gallons of very hot water into the peritoneal cavity, puddled it about for a few moments, and syphoned it out. The peritoneum was then dried and the stump drawn down to the lower angle of the wound, which latter was then brought together with silk-worm gut sutures placed close together, and which I passed from within outwards by the sense of touch as I could not see. I did not sew the stump peritoneum to the parietal peritoneum, believing as I do that adhesions take place within a few minutes by a simple contact. The stump was not cauterized, but simply buried in boracic acid and covered with boracic gauze; no drainage tube was used. The operation lasted less than an hour, and the patient was returned to bed no worse than before the operation.

I left orders to relieve her if pain should come on by the same means as before, namely, by turpentine stupes and salines. Oozing came on soon after, but was easily arrested by a few turns of the screw, which I instructed the attendant how to use. She had only one attack of pain, occurring about daybreak next morning, which was relieved in a few minutes, and she has been free from pain since. There was a slight tendency to vomit next day, for which I ordered a grain of calomel every hour until the bowels were moved, and which they were towards night. The serre-nœud had to be tightened every six hours, until, on the third day, the end of the screw was reached, and I was obliged to put a larger instrument known as Smith's, armed with a short linen cord, which had been disinfected by boiling, around the short one. As this has happened with every case of hysterectomy, I shall in the future discard Kœberlé's and use Smith's altogether. This was tightened night and morning until the fourteenth day, when the stump came away. The bowels were moved every day with one grain doses of calomel combined with teaspoonful doses of Rochelle salts repeated every hour, for two, three, and sometimes four hours. On one occasion they had to be repeated six or eight times before they worked, the result being a mild salivation which required a mouth wash of chlorate of potash.

The first week I gave a grain of quinine and a grain of digitalis three times a day, as the pulse was so weak and fast, but after that it improved so much that I left it off. The temperature, which had been a 105° before the operation, fell to 103° next day, and 101° the day after, and on the day after reached normal, where it has remained ever since. About the end of the first week she began to have a troublesome cough, for which I gave her the compound syrup codeine of the French Pharmacopœia, prepared by Mr. Chevé. This is an elegant preparation and proved very effective. As I had read of a good many cases in which death followed laparotomy, owing to bursting open of the wound from coughing, vomiting, etc. I have not removed the stitches yet, although it is more than three weeks since the operation, and I shall leave them for another week as they are causing no trouble. The patient has a good appetite, eating steaks and chops twice a day, and she is sitting up in bed; she will be out of bed at the end of the fourth week. The hole where the stump was measures one inch in diameter and one inch in width, and is rapidly filling up. Owing to the unpleasant odor from the stump, I tried several times to cut some of it away, but it bled every time until the twelfth day, when it suddenly turned black. No narcotics were given from beginning to end of the treatment, and to this I attribute her freedom from pain. One of the most valuable lessons Mr. Tait has taught us is, that pain after abdominal section is nearly always due to wind, and the administration of morphine only increases this. The breasts were very full, but quickly dried up under inunctions of lead ointment. She was able to pass her water herself from the very first day. Her baby is thriving well on the bottle. A neighbour and a young sister who knew nothing whatever about nursing made excellent nurses, doing no more nor less, than I told them to do. They both remarked this morning that the patient was looking very much better than she did before her confinement. On examining the uterus twenty four hours after removal, it was found to contain remains of placenta which were so firmly adherent, that they would break sooner than peel off. The inside of the uterus appeared of a dark purple colour, while a semi-purulent liquid could be squeezed out of the sinuses. The walls of the uterus were soft and friable.

From the gratifying result of this case under the most unfavourable circumstances, I feel confident that this method of treating apparently hopeless cases of puerperal septicæmia has a good future before it, but on the one condition that it be not delayed until the woman is actually dying. Some may say that this was a very radical treatment, but I maintain that it was fully justified by the condition and the disease, which is one of the most fatal. In England and Wales alone there died from puerperal septicæmia, in spite of every other treatment, no less than 1,087 women last year, so that a great many thousands must have died throughout the world. Would not these women have gladly sacrificed their wombs if they could have thereby saved their lives?

Abdominal section for puerperal septicæmia has hitherto had a bad record in Montreal and elsewhere, but the reason seems very clear to me, viz.: That it is of little use to open the abdomen and wash it and then to sew up the wound, without having removed the whole cause of the trouble, namely, the septic uterus, whose walls are saturated with infection, and which no amount of curetting or washing could possibly disinfect. If, when no other cause is found, the removal of the uterus be added to the exploratory incision, I believe the operation will nearly always be followed with success.

Others may object that this woman, although alive and well, has been mutilated, but perhaps the very ones who will say this have themselves mutilated, by the removal of the appendages, many women who were in no danger of their lives, but merely suffered from menstrual pain. The operation which I performed is actually a safer one than simple removal of the normal ovaries, for I did not leave in the abdomen either the cut end of arteries, to furnish secondary or concealed hemorrhage, or ligatures to give rise to abscess. My cut end of arteries and ligatures were all outside of the peritoneal cavity where they could do no harm, being seen and under constant supervision and control. As for the prospects afterwards, I have two of my patients with fibroid who have had their uterus and appendages removed by abdominal section who are now in good health, such as they never enjoyed since puberty. As for this poor woman, she abhorred and dreaded pregnancy; she is poor, and the two children that

she has are as many as she can care for. She will now be able to perform her duties to her husband without the dread with which she has fulfilled them heretofore.

From my very limited experience I would draw the following conclusions:

1. The temperature should be taken every day after every confinement, and on the slightest rise vaginal douches of permanganate solutions should be commenced.

2. If the temperature continues to rise the douches should be made intra-uterine.

3nd. If there is no improvement at the end of twenty-four hours, scrape out the uterus with the finger or with the curette and apply strong tincture of iodine and wash out the uterus.

4. If the case proceeds from bad to worse and peritonitis sets in, perform an exploratory incision, and if no other evident cause can be found, remove the uterus.

Discussion.—DR. SHEPHERD asked what evidence there was of puerperal peritonitis, and what was found in the uterus after its removal?

DR. ALLOWAY said that he regretted not having seen Dr. Smith's second case in consultation, considering that it was known the uterine cavity contained masses of placental tissue in a decomposed condition. He would have counselled thoroughly curetting the cavity before resorting to so extreme a measure as abdominal hysterectomy, which must of necessity have been undertaken under very unfavourable circumstances from the surroundings of the patient. Dr. Smith's description of the condition in which he found the abdominal contents proved to Dr. Alloway's mind thut there had been no peritonitis; there had been sepsis without doubt, the starting point and cause of which could have been reached through the vagina and uterine cavity. Dr. Alloway related a case of a similar nature to the one described by Dr. Smith, seen in consultation on the tenth day after confinement. He curetted the uterine cavity with Speigelberg's instrument and packed it with sterilized gauze impregnated with iodoform and boric acid. This dressing was changed every second day during the period of a week; it was then discontinued, there

being a continuance of steady normal temperature. The patient is now well. He was recently consultant in another case (the wife of a physician), which was of a much more serious nature. The uterine cavity was curetted and she made a good recovery. He had treated a number of cases of puerperal metritis following labour at full term in the same manner, and had not as yet known death to follow the operation. He thought mortality followed an imperfect operation from want of experience in this particular branch of surgery and from the injection of escharotic fluids after the operation, especially iodine and iodized-phenol. He deprecated the use of the finger in these cases except as a means of diagnosis or exploration. He believed the curette was the proper instrument, but it must be used freely and with skill. He spoke of acute diffuse puerperal peritonitis, and strongly advocated abdominal section and washing out of the cavity with sterilized water. He spoke of gauze drainage in uterine surgery as being far superior to the hollow tube, and thought it should always be used in preference. He regretted that the reader of the paper had not brought the specimen for examination by members of the Society.

Dr. Wm. Gardner, while congratulating Dr. Smith on successfully undertaking such a serious operation under such very unfavourable circumstances, agreed with the two former speakers in asking what were the contents of the uterus. In such cases he always used the hand instead of instruments, and by means of the finger explored and scraped away everything. It was the practice recommended by the late Matthews Duncan and others many years ago, and is too often neglected and instruments used instead, which may be a source of danger. In a general way he did not think that hysterectomy would be of any use in acute diffuse puerperal peritonitis, for we have a general septic condition from which recovery cannot take place. Opening the abdomen should be successful if some localized collection of pus or sero-pus, as in a sacculated ovarian abscess or pus tube, was found. He had opened the abdomen twice only; there was general peritonitis, nothing local, nothing definite in the ovaries or tubes; in such cases there might be a limited field for the

operation suggested by Dr. Smith, but it should not be done if there was anything in the uterus.

Dr. F. W. Campbell thought that Dr. Smith really should date a large amount of his trouble to leaving the placenta so long in the uterus. It was his custom never to leave the house without having the after-birth away. If he could not express it he would pass up his hand and bring it away, being careful not to leave any portion behind, and his success was invariable. Alluding to the fact that the abdomen had been opened with success in cases of tubercular peritonitis, he pointed out the possibility of a future for the operation when other measures failed. He complimented Dr. Smith on undertaking it, his patient was going to die and he performed a very major operation, and no matter what condition the uterus was in, it must have been the source of infection, as its removal clearly showed.

Dr. Armstrong thought that if he left a woman before the placenta came away he would be responsible for any future trouble. He thought the first thing that Dr. Smith should have done was to have been sure that the uterus did not contain some placenta. He greatly questioned the advisability of the operation.

Dr. McCarthy thought that the septic condition may have proceeded from some placental tissue and that the uterus should have been douched out; he also suggested the syringe that had been used as a source of infection. Speaking on the question as to how long the placenta should be left in the uterus, he said that from what he saw in the hospitals of Munich they do not seem to lay much stress upon the time of its expulsion. In other European hospitals it was found that there is often more hemorrhage when Credé's method of expulsion is used immediately after the birth of the child than if some time be allowed to elapse before resorting to it.

Dr. Smith, in reply, said that he was pleased at the criticism. He had not undertaken the operation hastily or without consideration. He had found a good handful of placenta in the uterus after the removal, but he had not been aware of its presence. He had previously examined and scraped away two or three small handfuls, so he believed that the uterus was empty, and

from his experience of case No. 2, where he knew that there was nothing in the uterus and the patient died, he thought that he had one chance to save the patient's life and he took it. He did not wait for diffuse peritonitis, when it would be too late, but operated at the first stage when the uterus was acting as a source of infection.

THE

Montreal Medical Journal.

VOL. XX. DECEMBER, 1891. No. 6.

INTESTINAL PERFORATION IN TYPHOID FEVER.

Intestinal perforation is the most alarming accident that occurs in the course of typhoid fever, as spontaneous recovery extremely seldom takes place. A few cases have been recorded where the patient has recovered, but from the well known difficulty in diagnosing such a state, it is impossible to prove absolutely that recovery does take place. Practically, it may be said that intestinal perforation in typhoid is a fatal event, unless prompt measures are taken to close the rent and wash out the abdominal cavity. In the *Medical News* (Philadelphia) for November 21st, 1891, Dr. Weller van Hook of Chicago reports a successful laparotomy for perforation occurring on the seventh day of relapse in typhoid. The patient, a female, aged 31, was suddenly seized on the seventh day of a relapse with great pain in the ileo-cæcal region, followed by the symptoms of collapse, distension of the abdomen, a very rapid pulse, and temperature of 106°F. On opening the abdomen, nine and a half hours after the perforation occurred, more than a pint of fæces and inflammatory matter escaped. The opening was quickly found. It was irregularly circular and about two millimetres in diameter. It was closed with three longitudinal rows of interrupted Lembert sutures. The abdomen was thoroughly washed out, the temperature remained at 103° for four or five days, but after this the symptoms of peritonitis gradually disappeared and the patient made a perfect recovery. Dr. Hook reports two additional cases of perforation in typhoid where he performed laparotomy, but without success. Since 1884, the date of the first

operation with this object in view, Dr. Hook was able to find an account of nineteen (inclusive of his own three) cases. There were fifteen deaths and four recoveries, but in two of the successful cases it was probable that the perforation followed an appendicitis, while in the third case the peritonitis preceding the rupture was localized by previous adhesions. Excluding these three cases, then, Dr. Hook's was the only one where recovery followed the extrusion of the intestinal contents into the general peritoneal cavity.

In an admirable paper read before the American Association of Physicians by Dr. Fitz of Boston (*Boston Med. and Surg. Journal*) the following conclusions are arrived at: Intestinal perforation occurs in about one per cent. of all cases of typhoid fever. It is the cause of death in a little more than six per cent. of the fatal cases. Most cases of recovery from symptoms of perforation are those in which an attack of appendicitis is closest simulated, while the great majority of the fatal cases are those in which other parts of the bowel than the appendix are perforated. It is probable that the appendix is more often inflamed and perforated in typhoid fever than has hitherto been suspected. Dr. Fitz recommends that immediate laparotomy be employed for the relief of suspected intestinal perforation in typhoid fever only in the milder cases of this disease. In all others, evidence of a circumscribed peritonitis should be awaited, and may be expected in the course of a few days. Surgical relief of this condition should then be urged as soon as the patient's strength will warrant.

Had Dr. Hook followed the recommendations of Dr. Fitz he would not have been able to have recorded a successful case. When perforation occurs, and the contents of the intestines escape into the general peritoneal cavity, as happened in Dr. Hook's case, the only hope is in the quick performance of a laparotomy. The almost necessarily fatal ending should not deter us from resorting to this procedure. Unfortunately the diagnosis is often difficult, and not infrequently impossible. The classical symptoms of perforation detailed in text-books are as frequently absent as present. Although perforation is the most

frequent cause of peritonitis, there are several others which lead to it, and, further, the symptoms may be entirely latent. All who have had an extensive experience with typhoid fever can confirm this statement.

THE BIOLOGICAL ANALYSIS OF THE URINE.

The diagnosis of certain infectious diseases by a biological analysis of the urine promises to be an important aid to the means hitherto employed in these cases. Semmola was led to adopt this procedure through the researches of Bouchard proving the toxicity of certain urines. The first case where the test was employed by Semmola was on one of acute pneumonia following influenza. During the fourth day of the disease the patient was seized with tonic and clonic convulsions, which were considered to be due to a cerebro-spinal meningitis. This supposition was subsequently disproved as the result of the injection into rabbits and guinea-pigs of a small quantity of the patient's urine. In the animals experimented on similar convulsive seizures were induced. After lasting twenty-four hours the convulsions ceased in the case of the pneumonic patient, and the injection of urine no longer induced convulsions when injected into rabbits and guinea-pigs. In a second case the patient had septicæmia as the result of a plegmon in his right arm. A septicæmia of a similar clinical form was induced in animals by the injection into them of the patient's urine. After a few days it was found that the toxicity of the urine gradually diminished, and finally when injected no longer induced the septicæmic states which readily followed its earlier administration.

Semmola recommends rabbits and guinea-pigs as being preferable for these experiments. The dose should be small at first, and gradually inreased.

THE VIRCHOW CELEBRATION.

The thirteenth day of October being Professor Virchow's 70th birthday, the occasion was made use of in Berlin and other medical centres to pay a tribute of respect to the distinguished

German pathologist. In America the only special meeting held to celebrate the event was that in the Johns Hopkins Hospital. Two admirable addresses were delivered on this occasion by Professors Welch and Osler. The former dealt in a masterly way with the leading events in Virchow's pathological career, while Dr. Osler referred to his career as a physician and politician. Both of these addresses have been published in the *Boston Medical and Surgical Journal*, and will well repay a careful perusal. It was fit and proper that the professors in Johns Hopkins Hospital should take the lead in America in celebrating the birthday of the man to whom we owe so much of our present knowledge of pathological processes. There is no other American centre that is doing so great and so good a work in this and allied fields.

ANNUAL DINNER OF McGILL UNDERGRADUATES IN MEDICINE.

The annual dinner of the McGill Undergraduates in Medicine was held in St. Lawrence Hall, on the 26th November. The chair was well and ably filled by Mr. G. H. Duncan ('92), and the vice-chairs by Messrs. W. Rogers, B.A., ('92), and A. D. Dewar ('92), respectively. Sir William Dawson sat at the right of the chair, and Dr. Johnson, Dean of the Arts Faculty, at the left. In addition to the army of undergraduates, there were present Dr. Wilkins, Dr. Blackader, Dr. Armstrong, Dr. Mills, Dr. Shepherd, Dr. McEachran, Dr. Hingston, Dr. Craik, Dr. Campbell, Dean Bovey, Dr. Girdwood, Dr. Roddick, Dr. J. Stewart, Dr. Birkett, Dr. Finley, Dr. Lafleur, Dr. Elder, Dr. Gardner, Dr. Bell, Dr. Muirhead, Dr. McCarthy, and Aldermen Cunningham and Clendinning.

Letters of regret at inability to attend were read from Lord Stanley, Premier Abbott, Dr. Geikie of Trinity, Sir. A. T. Galt, J. N. Greenshields, Q.C., Mayor McShane, Dr. Fenwick, Dr. Wright, Dr. R. W. Powell, and Harvard Medical College.

"Our Queen and Country" was proposed by the chairman in a terse and eloquent speech, replete with patriotism and pride

of country. It was duly honoured with a chorus of "God Save the Queen."

It was left to Dr. Elder to give the toast of the evening—"Our Alma Mater." In speaking of it he said that old McGill was second to none on the continent of America in the excellence of its curriculum and the attainments of its students. He felt proud to have been called upon to give the toast, and asked for a hearty response to it. And it was a hearty response; even the staid doctors joined the undergraduates in the old university cry which fairly made the walls of the old hall ring again.

This display of friendship for the cradle of Quebec learning finished, a hush of silence spread over the banquet chamber in order that the words of Sir William Dawson, in answer to the toast, might be the more distinctly heard. Sir William was in one of his happiest veins. His speech was not a long one, but it was to the point. Through it all the hearers could distinguish the feeling of pride in McGill which filled the heart of the knight. There was one point which he made which particularly won the hearts of his audience. It was that he hoped to see the time when there would not be Provincial registration as at present, but Dominion registration, and all that stood in the way of the denied change was a little provincial jealousy which might be swept away. He counselled the young men of McGill who were about to go forth to the practice of their profession to aid in sweeping away this jealousy, and thus bring about the desired consummation. He spoke in ringing tones of the qualities of McGill, and when he sat down the ovation accorded him was such as to prove to even the most casual observer that Sir William Dawson held a large place in the hearts of his students.

Mr. Jamieson (final) gave "The Dean and Faculty," and in such a pleasant little speech as to thoroughly tickle the fancies of those in the secret of his delicately-touched-up address. He ran over the names of each member of the Faculty and had a humorous allusion for each.

Dr. Johnston answered for the Dean and Faculty, followed by Dr. Shepherd.

At this point the toast list was broken in upon at the desire of the chair, who called on Mr. Kinghorn (final) for a song. Mr. Kinghorn obeyed, and in a style which secured for him the plaudits of all.

"Sister Universities" brought to their feet delegates from Toronto Medical College, Trinity Medical College, Queen's, Bishop's, Victoria and Laval. They all had kind words to say of McGill.

Mr. Yates (final) proposed the toast of "The Mayor and and Corporation," which was responded to by Acting-Mayor Cunningham and Ald. Clendinneng.

The remainder of the toast list included "Hospitals," "Benefactors," "Class of 92," "Freshmen," and "The Ladies." This closed the list and the banquet, one of the most successful ever held.

The Committee of Arrangements were: hon. chairman, Dr. Shepherd; chairman, Mr. H. B. Yates, B.A., '92; hon. secretary, Dr. R. F. Ruttan; secretary, Mr. W. E. Bostwick, '95; hon. treasurer, Dr. H. A. Lafleur; treasurer, Mr. D. M. Wood, '95; Dr. Jas. Stewart, Messrs. W. Rogers, B.A., '92, H. M. Kinghorn, B.A., '92, A. T. Dewar, '93, J. J. Ross, B.A., '94, and H. T. Knapp, B.A., '95. To these gentlemen is due the credit of the excellent arrangements which attended the banquet.

Obituary.

MR THOMAS WHARTON JONES.—The death of Mr. Thomas Wharton Jones at the advanced age of 83 years is recorded. For upwards of sixty years he has been a contributor to scientific medicine. In the year 1830 he published a synopsis of a course of lectures on physiology and anatomy, and within a few months there appeared from his pen a contribution on his favourite subject, "The State of the Blood and Blood-vessels in Inflammation. It will be principally as a physiologist that he will be remembered, but, like Mr. Bowman, he was also an ophthalmologist. Unfortunately, Mr. Jones' life was embittered by the depreciation of his work by some of the nominal leaders in biological work in his own country. Although a philosopher in his scientific work, he failed, like nearly every one of us, in being one when his work was attacked or neglected. In the *British Medical Journal* for the 28th of November there is a generous tribute of his worth from his former pupil, Professor Huxley.

Personal.

—Dr. Bacelli of Rome has been nominated president of the International Medical Congress of 1893.

—Dr. Miller, of the Berlin Dental Institute, has been offered the chair of Histology in the University of Pennsylvania.

—Mr. Joseph Bell has been elected President of the Medico-Chirurgical Society of Edinburgh.

—Dr. W. H. Hingston of Montreal has been appointed to deliver the address on surgery at the next annual meeting of the British Medical Association, to be held in Nottingham.

—Dr. William Osler, who spent two or three days in this city during last month, delivered a clinical lecture on a case of Hodgkins' Disease at the General Hospital and one on the Pathology of Malaria in the College. Both of these lectures were very highly appreciated by a large number of earnest students and practitioners.

Medical Items.

—The *Hospital Gazette* has stereotyped the heading *Death from Chloroform*, and the editors say that they have had no reason to regret the outlay. It is simply amazing to think of the apathy of the profession in the matter of the fatal effects of chloroform. How certain hospital surgeons can go on, day after day, and year after year, giving a dangerous anæsthetic when a much less dangerous one is at hand is one of these things that it is difficult to understand.

LAYS OF STUDENT LIFE—"THE NERVOUS STUDENT."

AIR—"*The Village Blacksmith.*"

Before the dread examiner
The nervous student stands;
A mighty dread is in his heart,
A bone is in his hands;
Timidity o'er him doth hold
Its sway with iron bands.

His form is gay with light attire,
His boots the latest tan;
His *bravery* is all outside.
No courage has this man:
His brow is wet with fever'd sweat,
He answers what he can.

His fellows, waiting in the hall,
Are pacing to and fro—
May be with rapid, anxious tread,
Or thoughtful step, and slow—
Whilst some from note-books would increase
That little which they know.

From bone to muscle, nerve to vein,
On, on the questions go;
And, in reply, from student lips
Some sort of answers flow,
Whilst stern examiner exclaims,
Satirically, "Oh!"

At length the dreaded ordeal ends;
The student hears with pain
These words, with deadly import rife,
"Go, Sir, consult your Quain,
And, when six months have pass'd away,
Come back—and try again!"

The nervous student comes to grief,
Whilst others, less endowed
With talent, oftentimes will pass—
A fact by all allowed,
For whosoever's wanting *pluck*
Is certain to get—*ploughed.*

HAROLD W. LANE.

—*Hospital Gazette.*