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REST IN THE TREATMENT OF  
JOINT DISEASES.

BY B. E. MCKENZIE, B.A., M.D.

THE object of this paper is two-fold—to show that rest, mechanical and physiological, is the most efficient factor in the treatment of diseased joints, and to describe some of the most effective means for obtaining rest.

Since Hilton delivered his able course of lectures on "Rest and Pain," more attention has been given to the treatment of surgical diseases by affording nature an opportunity to carry out her own benign purposes. When pain indicates the existence of pleurisy, it becomes the duty of the physician to assist nature by immobilizing the thoracic walls; when the eye is inflamed or exposed to a glaring light, rest is obtained for it by nature closing the eyelids, and the resources of art may give further assistance when employed to secure, for the eye, physiological rest.

When a joint is diseased nature's first effort at rendering assistance is in the direction of securing immobilization, by thickening of the soft structures about the joint, and by the contraction of the muscles which control its movements.

Hilton has enunciated the law of nerve distribution, which affords us the explanation of the phenomena which occur sequentially upon a joint becoming inflamed. It may be

thus stated: "The nerves supplying parts functionally associated are themselves associated at their origin." He also describes the nerve supply to the shoulder in illustration of the law enunciated. The circumflex nerve supplies the deltoid, teres minor, the skin over the deltoid, over the fascia into which the deltoid is partly inserted, and sends an articular branch to the shoulder joint. Also the subscapular and suprascapular nerves send filaments to the joint, and supply the muscles which move the joint. This distribution to the parts about the joint implies physiological harmony in its various functions, and affords an explanation of the reflex muscular action by which nature strives to secure rest for the articulation. When the joint structures become inflamed, so that movement is painful and harmful, the muscles of the joint are put on guard, and all become strongly contracted to immobilize the articulation. In nearly all joints the flexors are more powerful than the extensors, and hence, as time passes, they overcome their opponents, and the flexion which results, so well shown in disease of the knee and hip, affords an illustration of the blindness of nature's unaided efforts. As disease in the joint continues, flexion slowly but surely increases.

Great diversity of opinion exists regarding the treatment of sprains. One claims good results from immobilization long continued, affording complete rest; another upholds the very opposite treatment, and sounds the praises of massage. Seeing that there is rupture of the fibrous structures about the joint, tearing

asunder of many small blood-vessels, and a tendency to effusion from the same, it would certainly seem reasonable that rest would favor the limitation of evil, and would afford an opportunity for union of the sundered structures, while the moderate pressure of bandages would favor the resorption of extravasated fluids, but massage and all early movement would favor further extravasation.

It is well known that the amount of callus thrown out at the place of fracture of a bone depends very much upon the careful reduction, co-aptation and retention of the fragments in place. When union fails, success may often be attained by rubbing together, or in other way irritating the ends of the fragments, or by allowing the part to be used in locomotion, as by this means the inflammatory action is stimulated and union is secured. If the ends of the fragments of the broken bone be kept in apposition and perfectly immobilized, the amount of callus thrown out is very small, inflammatory action is not so severe as when motion is permitted. By parity of reasoning, it must be inferred that the state most favorable for recovery without unnecessary inflammation and its consequences, in cases of injured or diseased joints, is one of perfect rest until all signs of inflammation have subsided.

The many means employed to secure immobilization give evidence of the difficulties which lie in the way of its attainment. In Britain and on the continent it is the general practice to keep the patient recumbent, and frequently he is kept months, or even years, in bed, while extension or retentive splints are applied to the diseased limb. In America, speaking somewhat generally, the object placed before the surgeon in chronic joint disease is to secure rest for the joint, while at the same time the patient is allowed to move about and reap the advantages of exercise, air and sunlight. It is not, therefore, a matter of surprise that much ingenuity has been shown here in devising forms of apparatus, because great difficulties have presented themselves in allowing free movement to the patient, while at the same time immobilization for the joint is secured.

Priority in the invention and use of the "perineal and side splint with counter exten-

sion" for the treatment of hip disease, is conceded to Dr. Davis of New York. As this splint is designed to be a perineal crutch, thus removing the weight of the body from the joint, while yet it allows free motion of the articulation, it fulfils one indication for securing rest, while in the movement permitted it signally fails in fulfilling a more important one. Sayre and Taylor followed on the same lines with modifications, but did not immobilize the joint. The inventions of Bauer, Andrews, Washburn, Barwell have all depended upon the principle of securing rest by supporting the body and extending the limb, thus relieving the joint of pressure, but as more or less movement of the joint was permitted, and in some instances sought to be maintained, rest was by no means secured for the diseased structures. There is no

doubt, however, that extension goes further toward securing rest than is at first apparent, for it acts not only to save the joint from bearing the superincumbent body-weight, but by the very act of extension a certain amount of fixation is secured. Two improvements may be noted, first, the firm attachment of the stem to the pelvic band, permitting no motion whatever at their junction; second, the extension upward of the body attachments, thus lengthening the upper arm of the lever. Any mechanical contrivance for immobilizing the hip joint may be

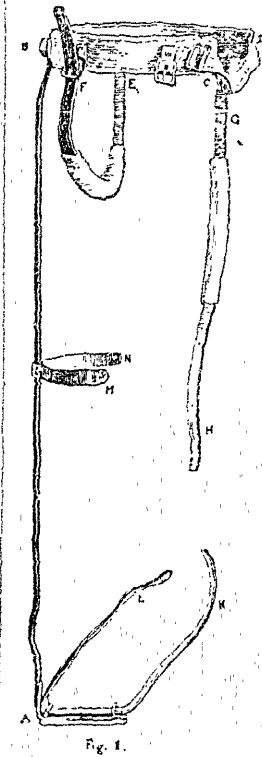


Fig. 1.

described as a lever of the first order, having its fulcrum at the joint. Though the leg and thigh may be firmly secured to the one arm of the lever, yet if the arm to which the body is secured be much shorter, great mechanical advantage is given to the limb attached to the

longer arm, and unsteadiness will result, and the limb be permitted to move about the joint as a fulcrum. I show you here two splints to illustrate the improvements referred to.

Fig. 1 shows a splint for affording support at the perineum and extension of the leg. The stem AB is made of iron sufficiently strong to bear the weight of the body. The perineal based CBD is iron, covered with leather and padded inside, and capable of motion at B, but immovably fixed to the stem at that point when in use. The straps EF and GH are attached to the pelvic band, and, passing under the perineum, afford counter extension, and support the body in locomotion. The straps K and L are attached to a piece at right angles to the stem, which is placed on the ground in walking. The upper ends of these straps are buckled into others secured to the limb by adhesive plaster; and by tightening these, extension of the limb is produced.

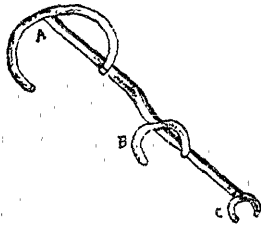


Fig. 1.

This affords a general representation of the American hip splint. It does not secure perfect immobilization for the joint, because of the greater mechanical advantage afforded the lower arm of the lever. The band MN is movable on the stem, and made of soft iron so that it can be made to fit the limb at any part. It thus serves to steady the limb.



Fig. 3.

The bands at A, B and C are also of iron, and are made to encircle, in part, the thorax, thigh and leg.

Fig. 2 represents the Thomas' posterior hip splint. It is made of wrought-iron, which must be sufficiently yielding to permit of being moulded to the shape required by the deformity. The bands at A, B and C are

also of iron, and are made to encircle, in part, the thorax, thigh and leg.

Fig. 3 shows the splint in use. A patten three or four inches high is worn on the sound side, and thus the diseased limb is kept off the ground entirely. While the iron of the splint must be such that it can be bent by the surgeon, yet it must be sufficiently unyielding to keep the hip joint immovably fixed.

Fig. 4 shows the double hip splint applied. This splint has this advantage over that shown in fig. 1, that the upper arm of the lever is prolonged and given a power equal to that of the lower arm.

Fig. 5 shows the Thomas' knee splint. The ring at the top is made to fit the thigh, is padded, and is attached to the outer bar of the splint at an angle of 55°.



Fig. 4.

AB is a leather trough, which affords support to the limb, which is fixed by means of bandages passing outside of the bars of the splint. As in this manner spaces are left on either side of the limb not compressed by bandages, effectual fixation can be secured without interfering with the circulation. In walking, the ring C is placed on the ground, and thus concussion at the diseased joint avoided.\*

The much-praised and much-abused plaster of Paris may be efficiently employed to immobilize nearly every joint in the body. It has the advantage that a perfect fit may always be obtained, the moist plaster adapting itself to all inequalities, and, having set, it affords, if the arms of the lever extending each way from the diseased joint as a fulcrum, be long enough, a more effectual and agreeable support in many cases than the most expensive machines constructed from wood, metal or leather.

It is most gratifying to notice how soon the reflex muscular action ceases when the diseased bones have been so immobilized that the joint

\*The instruments here shown are made by Mr. Swinbourne, King Street East, Toronto.

has perfect rest. Children who cry out frequently in their sleep because of the pain arising from reflex muscular action at the hip bringing the inflamed parts forcibly together, will rest quietly when a well-fitting plaster of Paris spica has been made to secure the leg, thigh and body as high as the thorax.

Having immobilized the structures which control the joint, no half-way measures must be adopted. It has often been said that "meddlesome midwifery is bad"; there is no doubt that a vacillating mode of treatment, leading to the frequent removal of the retentive apparatus, and the occasional resort to passive motion, can result only in disaster, unless the curative power of nature be sufficient to rectify all mistakes.

Much has been said and written about the great danger of prolonged rest in joint diseases; great diversity of opinions has been expressed. Sayre says, at p. 12 in his work on "Diseases of the Joints," "a second cause of acquired deformities is perfect and long-continued rest of joints. Such rest, even of a healthy joint, will produce

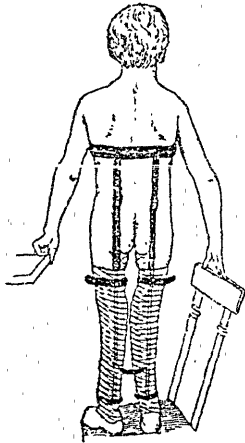


Fig. 5.

deformity by terminating in ankylosis." At p. 274 he says: "I must again warn you of permitting the patient to wear such fixed dressings too long. If employed at all, they must be frequently removed, and passive motion employed, else ankylosis more or less complete will take place, and the last state of the patient may be worse than the first."

Sir James Paget, in one of his clinical lectures, says: "Admirable as is the rule of treating injured joints with rest, such rest may be too long continued, and in every case in which it has done full good, it must in due time be left off. With rest too long maintained, a joint becomes, or remains, stiff and weak and over-sensitive, even though there be no morbid process in it." Similar words of warning might be quoted from Hilton, Little, Taylor, Barwell and others. It

may be noted that there are other factors to be accounted for, and modifying the results in the cases referred to by those who fear dire results following long-continued rest. Some of Sayre's cases which he holds up for warning were undoubtedly rheumatic, and it is especially in these cases that the opponent of immobilization finds his strongest arguments. Paget refers to cases which not only were kept at rest, but which were also tightly bandaged, and treated by the cold douche. Further, it is highly probable that the immobilization was in some of the cases imperfect, and that perfect rest would have contributed to a better result. We do not deny that joints kept at rest may become ankylosed, but we think it not proven that ankylosis ever results as the consequence of rest. When all signs of disease have subsided, and when motion may be obtained without pain, then the patient should voluntarily exercise the joint, this being much better than passive motion. In the elbow and shoulder the patient may, in six months, nearly always get rid of the plastic adhesions resulting from fractures.

Thomas has laid down rules for determining when the retentive apparatus may be safely removed and motion permitted. My observation of cases has led me to believe that his dicta, in this, are sound and based upon right principles. He says that immobilization should be maintained till all symptoms of inflammation have subsided; and then, having set the joint free, active movement is to be permitted, while the joint is kept under observation. If the arc of movement increases with use, and if the limb can be brought by voluntary effort to the position in which it had been held by the apparatus, or if the joint be ankylosed, and no motion takes place through use of the limb, then the joint may be said to be sound. But if after attempting active movement for some time, the arc through which motion is permitted is lessened, or if there is a tendency to assume a fixed position of deformity, or if on removing the apparatus no motion be obtained, but use of the limb causes it to assume a less practicable form, then the joint is unsound, and the fixation apparatus should again be employed. The limb that has any unsound joint should first be placed

in a position which would be most useful if ankylosis should result, and then immovably retained in this position till all evidence of unsoundness has disappeared. When once resolution has been obtained beyond the possibility of relapse, let the restraint be removed, and the limb will regain its utmost range of usefulness by use alone.

In a paper read at the second annual meeting of the American Orthopaedic Association, Gibney says: "The consensus of opinion as expressed by the leading surgeons of New York city within the past two or three years, is that the best possible results in elbow joint injuries are obtained by perfect immobilization after the parts have been placed in normal position." In the same paper he says: "Since 1884 I have applied plaster of Paris to nearly every joint in the body, and my experience leads me to say that the better fit I secured with my plaster-dressing, and the longer I have kept it applied uninterruptedly, the greater was my disappointment at not finding any ankylosis; in other words, the range of motion was increased by the prolonged fixation."

In a paper read before the N.Y. Surg. Society, by Henry B. Sands, in December, 1886, he reports 227 cases of fracture of the lower end of the radius treated by early reduction of the displacement and immobilization by two straight wooden splints, which extend along the forearm and hand, but not so far as to impede the movement of the fingers. With the exception of removal for examination of the parts, these splints are allowed to remain undisturbed for a period of four weeks. The results obtained are excellent, and the normal movement soon regained. Only one case terminated in permanent stiffness.

Most surgeons fear ankylosis after fracture near and complicating a joint. In many such cases the absence of limitation of motion can be traced to bony displacement that occurred at the time of injury, and which was not accurately reduced; or displacement may occur after accurate reduction. Also bony callus may interfere with the motion of the joint. In all such cases, when accurate reduction has been accomplished, uninterrupted rest will be the surest means of avoiding these unpleasant consequences.

A reference to the histology of the surfaces of the joint which come into contact when taken in conjunction with what is now pretty generally accepted as the pathology of chronic joint disease, viz., that in its inception it is always an osteitis, and probably tubercular, affords a good basis for assuming that no union could take place between the ends of the bones unless disease be far advanced.

The defect in movement of an articulation after disease has subsided will depend upon the degree of inflammation that has been present and upon its long continuance. Complete rest affords the most effectual means for combating the inflammatory action. There is no danger to be apprehended from rest long continued, except in certain constitutional states where there is a strong tendency to the development of new tissue, as in some forms of rheumatism. After removal of retentive apparatus, voluntary is better than passive motion, and in its use a valuable and unfailing sign is afforded for determining the soundness or unsoundness of the joint. It is not claimed that ankylosis never follows rest long continued and uninterrupted, but it is asserted that it has not been proven to result in consequence of such immobilization. The utility of force passively employed in certain cases to bring about unsoundness of a joint that is deformed, in order that the limb may be placed in a position that will be most useful, is granted. In such case, if the limb be fixed in this improved position, and allowed uninterrupted rest till unsoundness has all disappeared, motion more or less imperfect will often be regained when the retentive means have been discontinued and the limb is employed for its ordinary uses.

52 NORTH ST., TORONTO.

### A PLEA ON BEHALF OF EARLY EXPLORATORY INCISION IN ABDOMINAL SURGERY.

BY A. HALFORD WALKER, M.D.

AFTER three months' experience with Mr. Lawson Tait, the "great giant of the Midlands," as he is termed in England—not with reference to

his stature, as he is "very short, but very tall across," but with reference to the giant strides he has made in advancing abdominal surgery, leaving, as he has, all competitors far in his wake—one is forced to the conclusion that the day has dawned, and with Tait well advanced to the meridian, when exploratory incisions as a means of diagnosis are the rule instead of the exception, and the system of "wait and see," will be buried among the records of the past.

From the experience thus far gained here, I can recall many instances in my practice where lives would undoubtedly have been saved if an exploratory incision had been resorted to, and the cause or causes of trouble been removed, as they might easily have been at an early period before the occurrence of inflammatory complications had increased ten-fold the risk to the patient.

The general practitioner in England is being rapidly educated to the *absolute necessity* of calling in the surgeon early, with the result that the death-rate is being steadily reduced. Mr. Tait hopes to reduce it still further, if the men will only give him the opportunity of seeing the cases still earlier, as the risk to life from a simple exploratory incision is almost *nil*, if performed after Tait's method of opening the abdomen, whereas the benefit to the patient is untold.

We all know by experience what silent, patient sufferers women, as a rule, are, the wife and mother heroically bearing up from day to day without complaint, when her life is simply one long day of suffering, in many instances through the physician not recognizing at the time the necessity for an exploratory incision, and thereby discovering a condition amenable to surgical treatment, but instead, permitting her to reach that condition where the chances of success by operative interference are only equalled by the risk to life.

The saying that the man of wisdom and experience fully appreciates his own ignorance, etc., is as truly applicable to the abdominal surgeon, "who from experience realizes the vast field for research and work, and how much yet remains to be accomplished before theories can be reduced to facts, and the mysteries of the present day become elucidated, and made clear

by the practical work of the earnest yet fearless surgeon of the morrow," as it is to any other worker in science.

The inevitable and irresistible process of segregation has been taking place of late years in the medical profession, and experience proves it to be both an advantage to the profession, and a benefit to the general public. In an address to the British Gynecological Society, Dr. J. H. Aveling says: "It is a remarkable sight to see, as we find here, obstetricians banded together, forgetful of the opposition and persecution they once received, watching with jealous eyes the wonderful development and onward march of gynecology, ignoring its triumphant progress, and joining with the crowd in aiming at it slanderous imputations, and the poor petty cry of *specialism*."

Why this cry against specialism? A specialist is one who pays special attention to a subject, and who consequently attains superior knowledge of it, and greater skill in dealing with it. I fail to see that anything opprobrious attaches itself to the word specialism, unless special attention is paid to an unworthy object. On the contrary, the noblest work that has been done in the world has been effected by men who had the power of concentrating their attention on one subject. The absurd cry seems to be confined to the members of our profession. In art and science their votaries are specialists; one poet writes plays, another songs; one painter devotes himself to portraits, another to landscapes, and so on through all the callings of life. All professions are split up into parts. Law has its divisions, and military life also. What, then, is at the bottom of this intense dislike of medical specialists? A physician or surgeon may now, it is true, practice his special branch without incurring the displeasure of the profession. But it was not always so. Oculists have only of late been tolerated. Specialists, as a rule, are looked upon with jealousy and suspicion; with jealousy, because they are successful; with suspicion, because their success is attributed to quackery instead of greater experience. Time, which rights all things, will not fail in this respect. No amount of cold-shouldering or ill-disguised persecution

can stop specialism. As long as the mind of man remains as limited as it is, no one brain can contain or master the whole art and science of medicine. To attempt to do it would be folly; to profess to have done it would be dishonest.

No satisfactory progress can be made except by devotion and special attention to one particular subject, and this method of study should not be discouraged, but promoted in every possible way for the honor of our profession and the benefit of mankind. Opposition, after all, is not always to be condemned. It is frequently a healthy stimulant. It has certainly proved so in England, as the British Gynecological Society was an outcome of the snubbings the gynecologists received at the hands of the Obstetrical Society, and the former is now one of the most flourishing and useful societies of the profession in England.

The most marked success and advance in abdominal surgery is due to men becoming specialists in the work, and being thus enabled to devote their whole time and energies to it, without being hampered by the incessant toil and worry that falls to the lot of the general practitioner.

To the gynecologist is due the credit of causing a general shaking up of the bones of the general practitioners of the present day to an earnest desire for further knowledge and information of this interesting branch.

Does not the adverse critic incur a fearful responsibility when he, by active opposition, retards the progress of our art, and robs humanity for years of the means, by which thousands might have been restored to health and friends, and relieved from months of painful existence and protracted misery. Individual workers should not be discouraged by opposition even from the highest quarters, but should work on honestly and fearlessly, indifferent to ignorant and captious criticism, caring more for their own self-respect than the blame or praise of others, and always confident that honest work must in the end benefit our fellow-creatures, whose health and happiness are the end and aim of all our labors.

It is not long since operation for ovarian tumors was deferred until the patient's life was in danger, whereas experience teaches the

earlier they are recognized and removed the better. Undoubtedly many a life has been sacrificed under the old rule of procedure.

I am far from advocating promiscuous surgical interference in all classes of abdominal disease where the diagnosis is clear without an exploratory incision, especially cancer of the uterus, or extra-peritoneal ectopic pregnancy, where the rupture is from the tube into the broad ligament, unless urgent symptoms occur in the latter, etc.; but when a doubt exists, and an abdominal incision will be the means of dispelling that doubt, I contend it amounts, "in the light of the present knowledge on the subject," to criminal neglect, if the patient is permitted to die, or suffer life-long misery, when by a simple procedure either event might have been prevented. There is undoubtedly more experience gained by operative failures and mistakes than by uninterrupted successes, and if the profession in general could be induced to record their failures and mistakes in conjunction with their brilliant successes, the advance would indeed be by giant strides.

In Parliamentary parlance, if I have some what digressed from the original motion, I can only offer the plea that the points I have alluded to have been very forcibly impressed upon me while in Birmingham. Tracing, as I can, the restraining influence that adverse and carping criticism has had on the efforts of the gynecologist in the past, I cannot withhold my protest. I can only suggest that if any one takes issue with my conclusions, let him come here for a few months to the fountain-head of gynecology, and I believe he will, if possible, become even a greater enthusiast in the work than myself, and fully agree with the conclusions I have arrived at.

But to return to the question—I have seen here many cases where an early exploratory incision, followed by a simple operation, would have saved the patient months of suffering and the grave risks of a very difficult operation.

Take, for instance, the large uterine myoma (I do not refer to the œdematous myoma) where simply removing the appendages in the early stage effects a cure in eight cases out of ten; but, if it is permitted to assume such proportions that that procedure is impossible, hysterectomy



is called for with its high mortality rate. This is an operation from which every surgeon shrinks who has once observed the terrible ordeal the patient undergoes before convalescence is established, and the evidence of the strain on the constitution as shown in the features of the face; to say nothing of the anxiety the surgeon undergoes from the day of operation until recovery is assured. In cases of pyosalpinx, how desirable is an early exploratory incision before inflammatory adhesions have complicated the condition, increased the risk to life, and unnecessarily prolonged the suffering of the patient.

Again, in that terrible catastrophe of ruptured tube in ectopic pregnancy, where rupture occurs into the peritoneal cavity, shall we stand by, appearing utterly helpless, while our patient gradually bleeds to death before our very eyes; or shall we make an exploratory incision, seize the bleeding points, and thus save a useful life?

The day has dawned when, in cases of puerperal peritonitis, instead of permitting the patient to succumb to septic poisoning, the early incision will be resorted to, the offending body will be removed, as has been done with success, and a large percentage of the hitherto hopeless cases will be saved. How desirable also is the early incision in cases of obstruction of the bowels. In fact I cannot recall an instance in abdominal cases where doubt exists as to the cause of obscure sufferings in which an early incision is not advisable and then a simple and comparatively safe operation may be performed, while procrastination may necessitate one that is serious and complicated. I like to feel that "that Canada of Ours" keeps well abreast of the times in this as in other branches of science, but this can only be accomplished by "a long pull, a strong pull, and especially a pull all together."

BIRMINGHAM, ENGLAND, DEC. 22, 1888.

### THE CURE OF PUERPERAL DISEASES BY AMPUTATION OF THE SEPTIC BODY OF THE UTERUS.

BY PROF. B. S. SCHULTZE, JENA.

Translated by James F. W. Ross, M.D.

I WILLINGLY answer your summons asking me to give you a synopsis of my paper on the above

subject, read before the gynæcological sections of the Berlin Philosophical Society, and most willingly because I owe to my colleagues an account of the further progress of a case that had then been but just operated on. First then to the case—

Fanny Schneider, 21 years old, 1 child (pre-mature 7 months), born 7th September of this year (i.e., 1886-Trans). The placenta did not come away. In the endeavour to bring it the nurse tore the naval string. The physician, who was called in subsequently, found the uterus bicornuate, and the cervix so contracted that it was impossible to reach the placenta. He also attempted to express it by pressure, but without avail. The patient was brought into the hospital. The next day and the day after the cervix was equally rigid. Warm baths, the constant current, deep narcosis, all had no effect on the size of the cervical canal. It scarcely admitted one finger. As the evening temperature rose on the 9th of September to 39.9° (c), accompanied by chills and very fetid discharge, the uterus was washed out with a disinfectant solution. Once more under an anæsthetic, an attempt was made to separate the placenta on the evening of September 10th. Only one finger passed the constricted portion beyond, which was the right horn of the uterus, the one occupied by the placenta. It was evident that the uterus was bicornuate, the left horn into which the finger readily passed was empty, and the placenta was firmly adherent in the right. Only a small fetid piece of placenta could be brought away by the finger. The question of removal of the placenta by means of abdominal section was considered, but I determined to wait, as the symptoms were not yet serious, and cases are well known where the separation of a foul placenta has taken place at a later date.

September 11th—temperature 36°. M., 40. 1° (c), E. September 12th—temperature rose to 40. Chills recurred and increasing evidences of peritonitis. I determined to open the abdomen the following morning. While turning the matter over in my mind, I did not lose sight of a possibility of completing the operation as a "*conservative*," so to speak, "*placentæ cæsarian section*," or perhaps by amputating the right horn of the uterus, but it appeared to be more probable that amputation

of the whole body of the uterus after the method of "Porro" would be necessary.

Operation—September 13th. Incision in linea alba from navel to symphysis. The uterus was drawn forwards by the hand. The rubber tube laid round it, it was cut into and the putrid, foetid placenta removed. The uterine wall was rotten, the decayed portion reaching to within 2 m.m. of the peritoneal covering; the left horn was also of such a bad color that amputation of the whole body of the uterus was imperative. The parts of intestine lying near the uterus were much reddened, and looked almost granular in appearance. No effusion of serum in the abdominal cavity. The infundibula pelvic ligaments were already, on the sixth day after confinement, so short that a simple Porro's operation could not be done. The ligaments were tied and cut through, the uterus together with the ovaries drawn out, the broad ligaments were tied with a continuous suture, as well as that portion between the ligature and the rubber tubing, and the uterus was then amputated. I had partly determined to stitch the edges and drop the stump after the method adopted by Schröder, but the cut surface looked too suspicious. Upon a section through the lymph spaces a semi-treacly, semi-purulent fluid oozed out. The stump was therefore sewn in the abdominal wound after Hegar's method; the parietal peritoneum was carefully closed by means of sutures placed just beneath the elastic ligature, and the wound was cleansed, the pedicle cauterized with the actual cautery and treated subsequently with chloride of zinc.

The temperature remained on the day of the operation under 37°; it rose during the next three days to 40.2°, then sank to 39°, 38°, and since October 1st has not risen higher than 37.5°.

Superficial gangrene developed in the stump outside the wound, and the slough soon separated so that I removed it on the ninth day after the operation with the scissors, and on the eleventh day the elastic ligature came away, on the thirteenth day the last suture was removed. The wound healed by first intention, and the few remaining gangrenous shreds left at the bottom of the excavation over the stumps began to granulate and soon filled it up. At no time were there any signs of peritonitis as a secondary

complication. In the second week the patient suffered from severe pains in the shoulder joints. She has now perfectly recovered.

In this case the septic condition was caused by the retention of putrid placenta in the uterus, and this retention was partly owing to the malformation of the uterus. But such retention can also occur in a properly formed organ, and identical symptoms may be produced by septic infection of a puerperal uterus not arising from retained placenta.

I lay before you the following:

1st. "It must be conceded that there is a continuous source of septic poison in the uterus itself, a source that cannot be successfully dealt with through the genital canal."

2nd. "It must also be conceded that in the uterus we have the single source of the death-dealing septic poison."

3rd. "That it is necessary before operating to exclude those cases in which septic foci have probably been carried to distant organs to produce thrombi and emboli. The knowledge that parts and that even the whole of the placenta can remain in the uterus for months without causing septic trouble, the knowledge that many women recover after very severe puerperal septicæmia, modifies very materially the indications for operation, and will guard us against performing abdominal section without due consideration. The more we look at the indications from all sides, the better we will see that they will hold good for a perhaps not inconsiderable number of cases.

I firmly believe that from the 11,000 women who die annually from puerperal diseases in Germany, the lives of one here and there may be saved by carrying into effect the ideas put before you by performing the conservative placental cæsarian section, or by amputation of the septic uterus itself.—*From Deutscher Med. Wochenschrift, No. 44.*

I may say that Mr. Lawson Tait has been for a long time contemplating this procedure, having come to the conclusion that abdominal section alone will not save cases of puerperal peritonitis following labor. The transition of the lymph products and the fat cells during involution of the uterus into pus cells, is readily accomplished

by the action of a septic poison. Any one who has examined the uterus of a woman dead of puerperal fever, will have found the whole substance infiltrated with pus cells, an abundant store to feed the septic fires.

J. F. W. R.

### ANTISEPTIC SURGERY.

BY A. PRIMROSE, M.B., Edin., M.R.C.S., Eng.

Assistant Demonstrator of Anatomy, Toronto University.

"ANTISEPTIC Surgery in Country Practice" is the title of a paper written by Dr. J. M. Taylor, of Corinth, Miss., in *The Medical and Surgical Reporter*, of Philadelphia. The writer warns us that great harm has been done to the profession by the crude philosophy and hasty conclusions of pseudo-scientists, which constitute the great bulk of our literature on the subject of antiseptic surgery. He further tells us that conclusions are not reliable unless based on original research and premises well established, and that no amount of study and speculation on other men's labors can settle any question until all the basic facts have been clearly evolved and established.

The danger of making "hasty and imperfect conclusions" undoubtedly exists, and there is much written on the subject which is plainly unscientific; further, Listerian methods are frequently attempted in a manner which shows that the convert to the germ theory is utterly ignorant of first principles; the results obtained by such practice must necessarily be misleading.

One cannot expect the busy practitioner to reproduce for himself the elaborate experiments which led Lister to formulate his theories, nor is it possible for him to undertake the practical investigations which have led to such important results in the laboratories of Koch and Pasteur. This would be out of the question, especially in the case of those to whom Dr. Taylor addresses his paper, namely, country practitioners. I contend, however, that it is absolutely essential for the surgeon to study critically the more important experiments, and the methods by which reliable scientific investigators have

arrived at their conclusions. It is in this way only that he can expect to form an intelligent opinion. He must thus investigate the system to its very foundations if he wishes to practice antiseptic surgery intelligently.

It is a lamentable fact that many surgeons, who profess to treat their surgical cases in the Listerian fashion, lack thoroughness in detail, and very frequently commit gross errors during an operation which would be deemed unpardonable by any one who has studied the subject, and who is conversant with the principles upon which the system is based. The inevitable result of such imperfect practice is failure, and in this way, more than any other, the whole system is thrown into disrepute. I may give one or two instances. Carbolic or alembroth gauze is not unfrequently sold over the counter, and is measured out by the yard, being allowed to collect dust in the process. The gauze is often allowed to trail on the floor, or spread out on the bedclothes, without any care being taken to prevent its accumulating impurities. Thus the dressing may be rendered a vehicle by means of which the very organisms which we wish to exclude are carried into our wounds. Occasionally the danger is averted by the use of some strong germicide used as a lotion, but even with this precaution the danger of infecting the wound by the careless handling of the gauze is very great.

The use of imperfectly purified instruments is also a very frequent cause of failure. The instruments may be soaked for a regulation period in carbolic lotion, but if during the course of an operation any of them be dropped on the floor or laid about the patient, then there is great danger of them becoming impure, and they should not be used again. The proper place for instruments when not actually in use is undoubtedly under the lotion, or laid on a towel wrung out of the lotion. This precaution is often neglected, and not unfrequently an instrument is picked off the floor and plunged into the wound, with perhaps a dip into the lotion on the way.

Another most common source of infection is by the use of improperly-prepared and carelessly-kept sponges. It is very difficult to render them pure, and still more difficult to keep them so.

The following method of preparing and keeping sponges has been recommended by Mr. Barker, of University College Hospital, London:—The finest "Turkey" varieties are undoubtedly the best, ranging from the size of the fist downwards, but other coarser sorts may also be used. They are soaked for a few days in dilute hydrochloric acid until all the minute shells and the calcareous sand which they contain are dissolved out, when they will be found to be much softened. They are then rinsed in hot water, and stored in a five per cent. solution of pure carbolic acid (absolute phenol). During the operation they should go straight from the wound into water, in order that the blood should be rinsed out of them before they are washed in the carbolic solution and used again.

After the operation they should be immediately well soaked in warm water, then for a day or so in a solution of borax soap powder, or of common rock salt. This will remove the last traces of blood from them, after which they are again well rinsed in warm water and placed in the carbolic solution as before. Wide-mouthed glass or stone jars are the most convenient vessels for their storage. They should never be put away in these except in an absolutely pure state; a sponge which is not in this condition is one of the most dangerous materials which could approach a fresh wound. Sponges are very tenacious of blood and other albuminous fluids, and nothing but the most thorough treatment of them at once will suffice to extract these; any delay renders the difficulty of cleansing them, and the probability of their becoming the soil for the growth of organisms, very great.

243 SIMCOE STREET.

A BACTERIOLOGICAL laboratory has just been added to the University of Edinburgh.

## Selections.

We are indebted to Dr. Acheson for the translations from the French.

INCOMPATIBILITY OF POTASSIUM CHLORATE AND IODIDE OF IRON.—This incompatibility has been shown by the death of a child who was the victim of it. These substances react on each other so as to give sesquioxide of iron, chloride of potassium, and the whole of the iodine is liberated, thus:— $2 \text{FeI}_2 + \text{K Cl O}_3 = 2 \text{Fe}_2 \text{O}_3 + \text{K Cl} + 4 \text{I}$ .—*Bulletin General de Therapeutique, Oct., 1888.*

ELECTRICITY IN GRAVE'S DISEASE.—Dr. H. Pelzer reports (*Therap. Monats* ii., 10) a case of Grave's Disease in which the symptoms all disappeared under the use of electricity. The patient was a widow, aged 42, who had suffered from palpitation for about a year. Exophthalmos existed to a slight degree when she came under observation in October, 1887. She grew worse under treatment by iron, digitalis, ergot and cold to the præcordia. In December all drugs were stopped, and the constant current was administered daily for ten minutes, one pole being applied above the suprasternal notch, the other over the præcordia; after six weeks this was alternated with a current passed through from the spine. Improvement began five weeks after the commencement of the electrical treatment, and in six months the patient was perfectly well.—*British Medical Journal.*

TREATMENT OF VAGINISMUS.—Lutaud recommends, before resorting to operative treatment, to attempt the cure of this condition as follows:—Introduce every night within the vulva a bougie composed of iodoform, gr. 15; extract of belladonna, gr.  $7\frac{1}{2}$ ; cacao butter, dr.  $2\frac{1}{2}$ . Inject into the vagina three times daily a quart of hot water, to which has been added a teaspoonful of carbonate of soda, afterwards swabbing the vagina and vulva with a 10% solution of hydrochlorate of cocaine. This treatment is to be continued for a month, and attempts at coitus are to be practised every two or three days after having anointed the vulva and penis with some lubricant. As parturition

generally causes vaginismus to disappear, Lutaud advises that a hypodermic injection of  $\frac{1}{6}$  of a grain of morphia should be given before coitus, as this by its sedative action may allow the act to be successfully performed, with pregnancy, and the cure of the vaginismus as the result.—*Journal de Med. de Paris, 18 Nov., 1888.*

**THE DISINFECTION AND TEMPERING OF RUBBER DRAINS.**—Tubes are usually so affected by the usual process of preparation as to be very much injured, and then fail to realise their intended purpose. To avoid softening (more especially of the red varieties), Javaro advises that for five minutes they be immersed in concentrated sulphurous acid. He urges that the red variety should always be used in preference to the white kinds, as being more suited to withstand injury during his process. In the acid the tubes assume a dark chestnut color and become hardened. Then they are to be washed in alcohol, 75 per cent., and finally to be laid away in antiseptic preserving fluid—either 5 per cent. carbolic acid solution or 1-200 bichloride solution. Tubes so prepared will not collapse under even very considerable pressure. If they have become too hard, by working them between the fingers they can be much softened. After being treated in the acid, they are unaltered in any way further by preservation in antiseptic fluids. These tubes have now for a long time in his hands replaced all other kinds, and he utilises them for every possible purpose. They maintain their lumen even when placed between the ribs, and will not readily kink or become obstructed, yet are not so resistant as to exert dangerous pressure.—*The Satellite.*

**THE NEW HYPNOTIC SULPHONAL.**—Dr. Garnier, in a short article on this substance in the *Progres Medical*, speaks highly of its use as a hypnotic, especially in insanity. He says that in the majority of cases it possesses, in doses of 1-5 grammes, a truly remarkable hypnotic action, superior to that of paraldehyde, urethane, methylal or chloral. It should be given in a single large dose, and does not seem to be accompanied by any appreciable ill effects. It is necessary, however, to be perfectly certain of

the purity of the preparation, which is principally to be determined by its having a fixed melting point. Sulphonal was discovered by Baumann of Freiburg, and is a diethyl-sulphodimethyl-methane- $C_7H_{16}S_2O_1$ . It is an oxidized product of a combination of ethylic mercaptan and methylic acetone, and exists in the form of fine crystalline tables, white, inodorous, with a slightly bitter taste, and easily powdered; it is scarcely soluble in cold water, but is perfectly soluble in a large excess of boiling water, from which it is precipitated on cooling. It behaves similarly with alcohol, so that it is administered best in the form of a fine powder in doses of 1-5 grammes. While especially useful in the insomnia of insanity, there is little doubt that it will be found valuable in numerous cases in ordinary practice. The results of numerous experiments with this drug by M. Mathes have recently been published in the *Centralblatt für Klinische Medizin*, and confirm the good opinion of it expressed by Dr. Garnier, showing especially that it exerts no prejudicial effect on the essential vital organs, and that it is contra-indicated only in insomnia due to irritating cough, or to pain evidently not neuralgic; in many true neuralgias, however, it seems to be most useful.

**DIAGNOSTIC BACTERIOLOGY.**—Weichselbaum has recently shown, in two cases at the Rudolph Hospital in Vienna, the great diagnostic importance of bacteriology. The first case was that of a workman who had suffered from articular rheumatism for fifteen days. The tibio-tarsal articulation was swollen, and the temperature of the patient was  $40.3^{\circ}C$ . After the administration of salicylate of soda the temperature fell, and the pains diminished, but soon took on their former intensity. After five days the left knee-joint became affected, and in a few days a small pustule appeared. The spleen was enlarged, and the inguinal glands engorged. Weichselbaum examined some blood taken from the finger, and found the bacilli of glanders. A few days after this it was learned that three horses of the employer of the patient were dead of glanders. The patient died twenty-two days after entering the hospital. Weichselbaum found glanders-gran-

ulations in the skin, subcutaneous and intramuscular tissue, and in the lungs. It was discovered that the patient had not come in contact with the diseased horses, but he had used the blanket of one of them. It is probable, therefore, that infection took place through the respiratory passages. The second case was somewhat different. A coachman came to the hospital with several ulcerated nodules on his face, neck, and extremities, muco-purulent discharge from the nose, dyspnoea, tumefied spleen, etc. These symptoms taken in connection with the man's occupation, lead to a suspicion of glanders. But when a bacteriological examination was made of the pus of the nodules, no bacilli were found; enormous quantities of the streptococcus pyogenes and streptococcus pyogenes aureus were found, however. The patient died in four days, and at the autopsy Weichselbaum found, besides the furuncles, œdema of the glottis and lungs, and a parenchymatous nephritis in the atrophic stage. The principal disease, therefore, was nephritis, and the furuncles and the nasal affection were secondary infections. Weichselbaum has also seen two cases in which the anatomical diagnosis at the autopsy could be made with certainty only by the aid of bacteriology.—*Journal American Medical Association.*

### Therapeutical Notes.

**NASAL CATARRH.**—A snuff for nasal catarrh, consisting of menthol 1, chloride of ammonium 3, boric acid 2, gives great relief.

**TREATMENT OF BILIARY LITHIASIS.**—M. Milliard reports that Dr. Feilles, of Angers, had recently succeeded in causing the expulsion of twenty biliary calculi by the administration of four ounces of olive oil over night, and following it up with a full dose of castor oil in the morning.—*St. Louis Medical and Surgical Journal.*

**INCOMPATIBLE ANTISEPTICS.**—The following incompatibilities exist between antiseptics: Corrosive sublimate and iodine, corrosive sublimate and soap, carbolic acid and iodine, carbolic acid and permanganate of potash, salicylic acid and

soap, salicylic acid and permanganate of potash, permanganate of potash and oil, soap and glycerine.—*Journal de Medecine.*

**TREATMENT OF WARTS.**—"Mina" recommends the following:

- R. Acid Salicylic . . . . . ʒ iij.
- Creasoti . . . . . ʒ vi.
- Ceræ
- Adipis . . . . . āā q. s.

Make a firm ointment which will adhere to the skin.—*The Satellite.*

FOR a man with *peripheral neuritis*, caused by working in wet sand, Professor Da Costa ordered—

- R. Ext. pilocarpī fluid., . . . . . gtt. xv.

Sig.—Three times a day, and ten grains of iodide of potassium three times a day.

FOR *internal hemorrhage* Professor Gross directs—

- R. Acidi gallici, . . . . . gr. iij.
- Pulv. digitalis,
- Pulv. opii,
- Ergotinæ, . . . . . āā . . . . . gr. j. M.
- Ft. pil. j.

Sig.—Every four hours.

FOR a girl with *anæmia*, in which the red corpuscles were found to be diminished nearly one-third in number, Professor Da Costa directed a meat diet, 3 grs. sacch. pepsin at meals, and the following:—

- R. Liquor. potassii arsen., . . . . . ℥ iij.
- Tinct. cinch. comp., . . . . . f ʒ j. M.

Sig.—Three times a day.

—*College and Clinical Recora.*

**TREATMENT OF THE DIARRHŒA OF TUBERCULOSIS BY LACTIC ACID (SESARY).**—Lactic acid has given constant success in this trouble when administered in doses of two to eight grammes in the twenty-four hours. The following is a good formula:

- R.—Lactic acid . . . . . 4 grammes.
- Chlorodyne . . . . . i "
- Mucilaginous drink . . . . . 120 "

Sig.—To be taken by the tablespoonful in the twenty-four hours.—*Journal de Medecine.*

THE  
Canadian Practitioner.

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

Contributions of various descriptions are invited.  
We shall be glad to receive from our friends every-  
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TORONTO, JANUARY 16, 1889.

DIDACTIC LECTURES.

WE notice with considerable surprise that our esteemed contemporary, *The Canada Lancet*, is quite out of touch with modern ideas on the subject of didactic lectures in medicine. The great importance of didactic lecturing is so generally conceded that this phase of the subject is scarcely worth discussing. The PRACTITIONER thoroughly endorses every word from the *Lancet* respecting the value of this branch of teaching; but the question to decide is this: shall students be compelled to listen to the same set of didactic lectures twice? If they had plenty of time we would gladly say yes, but they unfortunately have not. Under the circumstances, then, is it better to hear theoretical descriptions of how to diagnose a pneumonia and dress a fracture in two successive years; or, having listened to the descriptions, to use the stethoscope on the patient's chest, and actually dress the fracture in the following year?

The rest of the world says: Give more practical and less purely didactic teaching. The Universities of Toronto and McGill agree with the advanced ideas. How strange that the *Lancet*, one of Canada's most progressive journals, should have got on the wrong track! We feel sure, however, she will not remain there long. Her editors have too much wisdom and foresight to continue long opposed to reforms so urgently needed.

CREASOTE IN PULMONARY PHTHISIS.

AN erudite contribution on the value of creasote in the treatment of pulmonary tuberculosis, by Dr. Beverley Robinson, of New York,

in the January number of the *American Journal of the Medical Sciences*, recalls the fact that this drug was first introduced to the notice of the profession in 1830 by a Moravian physician, who claimed for it excellent qualities in relieving phthisical patients. Eichorst has found the combination of arsenic and creasote often useful if the secretion was abundant in the air passages, and expectoration difficult, while Strümpell combines it with cod-liver oil in like cases; Dr. Douglas Powell combines creasote with opium, and finds it of great service when there is local disturbance of the stomach and upper bowel. Guttmann and some others regard this agent as being curative in the initial stage of phthisis. Dr. Robinson considers whenever creasote is prescribed, it should be taken at least at the commencement of treatment in small or moderate doses. These doses should be continued a long while, or only gradually increased; if an attempt be made, especially at first, to take large doses, in the majority of cases stomachal intolerance will soon follow. The daily amount of creasote prescribed by him varies from three to six minims. It is given with whiskey and glycerine in half minim doses.

ANTISEPTIC SURGERY.

WE have much pleasure in endorsing the views expressed in the short paper on antiseptic surgery by Dr. A Primrose. We cannot too frequently be told that surgery will not be antiseptic unless we carry out without a solitary exception all the details, however minute they may be. A single flaw in the long chain destroys the certainty of antisepticism.

As a matter of course, we all, whether physicians, surgeons or accoucheurs, aim at antisepticism, or—what is still more desirable—asepticism, and most of us flatter ourselves that we carry out the system faithfully. Who can tell how many of us are woefully mistaken? As everybody now says, cleanliness is the essence of the whole business, and we might naturally suppose that, with an intelligent appreciation of the vast importance of the subject, surgeons would all be clean in a surgical sense. Too often, however, they don't happen to be clean in a surgical or any other sense.

Human nature appears to contain elements naturally antagonistic to cleanliness. Children, as a rule, appear to revel in dirt on every opportunity. Many adults appear to have a holy horror of the bath tub. Some carry enough septic dirt in their finger tips to slay thousands, if judiciously used with that end in view. It is pleasing to know that antiseptic habits assist ordinary cleanliness. After the adoption of what we call Listerism in Germany, some of the greatest enthusiasts stated, in discussing their methods, that they always washed themselves before performing any surgical operations. By some in England this was thought to be a great blessing for Germany.

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#### NOTES.

In febrile affections, and in all cases where there is heart weakness, the administration of sulphonal is to be guarded against.

A CELEBRATED Homœopath of New York announces to his patients that he can cure every disease that flesh is heir to, except the last illness.

THE Royal College of Surgeons of England has passed a resolution censuring Dr. Mackenzie for publishing his book on the case of the late Emperor Frederick.

RECTAL SALINE INJECTIONS IN POST-PARTUM HÆMORRHAGE.—Mr. R. F. Gill (*Lancet*) recommends rectal injections of saline solutions as a substitute for transfusion where the latter is impracticable. He would inject three or four ounces at a time, and repeat the injection every ten or fifteen minutes, using a tepid solution. He speaks of a case in which he thinks life would have been lost but for recourse to this measure.

Dr. Stetzner of Dresden reports in the *Journal de Médecine de Paris*, November, a case where he removed the whole larynx and the supra-sternal portion of the trachea from a young man, aged 27, for epithelioma, resulting in complete cure, the patient afterwards wearing Gussenbauer's artificial larynx. The operation

was performed on Feb. 9th, 1887, and up to the present there has been no return of the disease.

ON the recommendation of the Executive Committee of Trinity University, a by-law was passed, January 10th, to enable students of the Royal College of Physicians and Surgeons, Kingston, who are under-graduates of Trinity, under certain circumstances, to take the written part of their examination at Queen's University, Kingston. Students of the third and fourth years, on registering before the 15th of March next, are to obtain the benefit of this arrangement.

EXECUTION BY ELECTRICITY.—The committee of the New York Medico-Legal Society has made a report on the best method to be followed under the law for execution by electricity. It is to secure a stout table covered with rubber cloth, upon which the prisoner is firmly bound; one electrode is inserted in the table in such a manner as to impinge upon the spinal column between the shoulders; the other electrode is pressed to the back of the prisoner's head. A dynamo generating an electro-motive force of at least 3,000 volts is recommended to pass alternately for thirty seconds.

ENCYSTED SEROUS PERITONITIS.—At a recent meeting of the British Gynæcological Society, Dr. Oliver reported two cases of definitely cystic swellings resulting from inflammation of the pelvic peritoneum, which both disappeared gradually. The societies in Great Britain don't appear to meet simply for the purposes of mutual admiration, and some of the members present intimated pretty plainly that they doubted the correctness of the diagnosis arrived at. Dr. Bantock, according to *The British Medical Journal*, thought that Dr. Oliver had failed to produce any satisfactory evidence of the correctness of his views. Mr. Lawson Tait agreed with Dr. Bantock, and believed that, with the increased light from abdominal surgery, encysted serous peritonitis "must take a back place." He thought that one of the reported cases was really a congenital cyst such as he had previously described at length.



A MEETING of the medical profession was held in Hamilton, January 10th, to select two of their number to fill two vacancies on the Medical Board of the City Hospital. There were present Drs. Macdonald, Wallace, A. Wolverton, Rosebrugh, McCargow, Mullin, Shaw, Storms, Griffin, Mackelcan, White, Stark, Ryall, Miller, Dillabrough, Kittson, Crooker, J. M. Wallace, Ridley, Lafferty, Bingham, F. E. Wolverton, Smith, Lackner, Anderson, Gaviller, Baugh, Flock, Mallock, Philp, Billings, Vernon, Husband, Leslie, Wilson, Emory, McCabe, Osborne, Cockburn. Dr. Macdonald presided. Drs. Mallock and Miller were elected to the board for three years, and Dr. Mackelcan and Dr. McCargow were unanimously elected members of the consulting staff.

THE following items were sent by a correspondent in England:—

THERE are many beautiful specimens of ectopic gestation in the museum of Queen's College, Birmingham.

I HEAR that the true inwardness of the Morell Mackenzie unpleasantness is that he suppressed the truth and accepted the "mud," to oblige high personages and gain "Kudos."

THE woman's hospital, Sparkill, Birmingham, is a model institution. The records are prepared with great accuracy, and will be very valuable.

IT is amusing to meet some of the American doctors visiting England. They send in their cards without the least trepidation. I admire them for it, but confess that it must frequently be a source of very great annoyance to the busy men whose time is taken up. But like true Englishmen they put up with it. Americans *hardly* would.

PRACTITIONERS in England are poorly paid, and the struggle for existence in many districts is very keen. Many a man is to be found who has worked for years, and who is about perfect in his knowledge of his specialty, occupying some post as physician in charge of a small hospital. If this specialist were transplanted into western soil, gold would soon bud from the branches.

## Meeting of Medical Societies

### TORONTO MEDICAL SOCIETY—

STATED MEETING, JAN. 8TH.

THE paper of the evening was read by Dr. Powell. Its subject was

#### PREFERABLE METHODS OF FIXATION IN THE TREATMENT OF SIMPLE AND OF COMPOUND FRACTURES OF THE LEG.

He said that the successful treatment of a simple fracture of the leg was a mechanical problem which could be solved in numberless ways. No one plan of treatment had been adopted by even a majority of surgeons anywhere. An attempt would be made to classify a number of the methods now in use, and to contrast their relative merits and deficiencies. No claim for originality would be made, but attention would be called to certain peculiarities of treatment not commonly heard of in practice here.

IT was the unfittest appliance that sometimes survived, and the iconoclast might do as good service to the surgical world as the man whose genius was constructive. It was as much a mistake to suppose that one should have a special splint for each fracture as that he should have a special remedy for each symptom.

THE essentials for fracture treatment were few and simple. Dr. Powell would consider thin board, mill-board, batting, bandages, cheese-cloth and plaster of Paris as an ample outfit.

IT would hardly seem profitable to discuss a choice of methods for the treatment of the later stages of simple fracture of the leg. The profession was practically a unit in the belief that the complete encasement of the limb by plaster bandages was the most comfortable and safe procedure at our disposal.

THE bandages should be made absorbent by boiling in a solution of washing-soda, might be cut from the web rapidly if wound on a cylinder and placed in a lathe, after the plan of Arastus, of Boston.

FOR the first application of this dressing abundant cotton padding should be used,

but later, a single layer of blanketing, for reasons stated, was better. A number of practical points in the use of the plaster bandage next received attention, and the value of the suggestions made was demonstrated by specimens shown. With Fluhrer's strips, for instance, the best support could be got by binding a long one across the sole of the foot, and passing it on each side up to the knee and covering it in with the bandage. Dr. Powell then passed to a discussion of the treatment of the earlier stages of simple fractures of the leg, and stated that there was room here for endless differences in opinion and practice.

What an ideal dressing for such injuries should be, and do, was next defined, and by this as a standard the means in common use were tested.

Support could be given by splints which were rigid or plastic, single or multiple, applied to one, or to more than one, aspect of the limb, or completely surrounding it.

Each of these classes, represented by typical splints, next had its good and bad points referred to. The Dupuytren splint was advised only in the rare cases of persistent outward displacement of the foot, with little or no backward displacement. Lateral straight-board splints, singly or in pairs, should only be used as temporary expedients. Carved wooden splints, such as Cline's or Pratt's, were partly fitted, and if cut freely to complete the fitting, they were as good as any rigid splints could be.

Under the head of rigid posterior and lateral supports, the uses of fracture boxes, and of the iron back splints called Arnold's or Neville's in English practice, were next discussed. The common fracture box was a poor affair. If not suspended it was decidedly objectionable. While it might be conservative practice to teach its use to the average student, Dr. Powell had little use for it in his own practice. When it was decided to use it, the improved form shown was the preferable one; it could be adjusted for various lengths of limb, the foot fixed at any angle, the sides let down in sections and the whole box easily suspended.

The use of the adhesive plaster sling suggested by Schede, of Hamburg, to prevent suffering from the "burning heel," or that surgical disgrace, an ulceration from pressure upon this part of the limb, was next demonstrated.

The Neville's iron-back splint could be made by any blacksmith, and it was a good appliance to know about, since it met the indications so well in severe cases with overlapping fragments.

The most important advance ever made in the treatment of simple fracture was the introduction of plastic materials for the making of splints. Those in use at present were spoken of and their relative advantages compared. Leather sheet, gutta percha, poroplastic felt, wire gauze and mill-board represented one class, while silicate of soda and plaster of Paris were the most useful of the materials which could be applied in fluid form. Dr. Powell had treated 38 consecutive cases by the *immediate* application of certain forms of plaster splint. Starting with the Bavarian, when that plan was first advised he had soon afterwards substituted plaster-soaked layers of blanket or gauze for the plaster mud. Later still, he had followed something like the plan of Mr. John Croft, bandaging upon either side of the limb layers of flannel cut to the measure of the patient's stockings and saturated with plaster cream.

For the last four years he had been using a posterior splint made of about eight layers of cheese-cloth or five of scrim. Patterns and completed splints were shown, and the opinion was expressed that this was more nearly the ideal splint than any other yet devised. A detailed description of its manufacture followed. Covering in all but an inch-wide strip down the front, it held the fragments securely, and still allowed the point of fracture to remain under observation. There was no risk of injurious pressure, muscular startings were controlled, and the burning heel never gave trouble.

Position, suspension, extension and tenotomy as factors in fixation next received

attention, and finally compound fractures were spoken of.

After testing in the treatment of cases under his own care various methods of fixation, Dr. Powell had become strongly impressed with the advantages of the anterior and posterior plaster splints applied after the method of MacCormac. Each covered in, a little less than half the circumference of the limb, and the anterior one only was to be removed for the renewal of the antiseptic dressing over the wound.

The conclusions reached were:

1. Plaster appliances are the best for the fixation of fractures of the leg in all their forms, and at all stages of their treatment; exception, certain cases of Pott's fracture.

2. For the early fixation of simple fractures the plaster posterior splint is the best and safest appliance yet suggested.

3. Next to it should rank side splints made from plaster-soaked blanket, or open-meshed cotton, bandaged on so as to be hinged along the back.

4. In the later stages of all simple fractures of the leg the complete encasement of the limb by plaster bandages is the preferable plan of treatment.

5. In treating compound fractures of the leg, posterior and anterior splints made of plaster-soaked gauze are ordinarily the best for fixation. Exceptionally fenestrated or bracketed plaster splints may meet the indications more perfectly.

Without considerable practice in the use of plaster, the fracture box suspended may be safer, both for the patient at the time and for the surgeon subsequently.

The discussion was opened by Dr. Grasett. In view of his past experience in leg fractures, he fully agreed that plaster of Paris splints are the best in the later stages, but did not think them so good in the earlier treatment. Here he preferred mill-board or poroplastic splints. He could then undo the slip-knots and move his fingers along the line of fracture from day to day—a great advantage. As regards position, he preferred the leg and thigh flexed in most cases, but not always. For some time past he had used splints made

out of sheets of lead, an upper and a lower, the latter encircling two-thirds and the former one-third of the limb. Patients found it comfortable, and it was easily moulded into shape, but his experience was not extended enough to justify him in recommending it.

To him, plaster of Paris splints in the first stage are whited sepulchres. We do not know what may be going on within. Like the reader of the paper, Dr. Grasett had learned to distrust the fracture box, because one could never be certain as to the position the leg assumed in it. In conclusion, he would recommend poroplastic, mill-board, gutta-percha and lead in the earlier stages of leg fractures.

Dr. McKenzie said he believed we are often too much afraid of the limb swelling, and too anxious to dress the fractures at once in the exact position necessary. No harm will result, as a rule, from delaying a day or two before finally placing the fragments in position. The limb should never be entirely encircled by any splint in the early stages, and therefore he had never used plaster. His only experience with the primary bandage was unfortunate, for when a boy he had fractured his leg near the ankle joint, and the surgeon put on this primary bandage, with the result that several large sloughs formed. When in Liverpool he saw a knee splint put on for fractured patella, the iron side bars of which were prolonged downwards below the malleoli and pierced to admit an axle, on which revolved two wheels of one foot diameter. Upon these the patient could move freely up and down the bed. This could be advantageously applied in leg fractures as well. The patients seem to be comfortable, and the results are good when the knee is straight, therefore he did not see the necessity of flexing the limb as a rule.

Dr. Primrose said his experience was a hospital one entirely. In the Edinburgh Infirmary nine-tenths of the cases were put up with adhesive plaster. All pressure at the ankle was obviated by a birds'-nest pad of cotton over the malleoli. The weight and pulley were largely used for the purpose of

tiring the muscles, but only a light weight was ever required. The flexed position, it seemed to him, was the only one which would overcome easily the riding of the fragments of bone. Once he saw Gould in London put up a compound fracture of the tibia in plaster on the spot, and leave it alone for six weeks. The results were excellent, but the procedure risky. Never otherwise did he see the plaster splint used in the early stages.

Dr. Powell, in reply, said that his experience was gained in the country, where instrument makers are scarce, and where he had to depend upon what could be obtained easiest. He should be sorry indeed to put up thigh fractures in plaster. In regard to compound fractures, the manner of the injury is an important element in treatment. His cases were, as a rule, the results of saw-log crushes and kicks from horses, where there was little bruising of the neighboring tissues. In hospitals the cases were due to railroad accidents frequently, where it is impossible to estimate the amount of damage done to the tissues.

D. J. G. W.

## Correspondence.

### THE SPREAD OF SYPHILIS.

To the Editors of THE CANADIAN PRACTITIONER.

DEAR SIRS,

IN the account given of the Poplar murder I find that the matron of the "Bromley Sick Asylum" immediately recognized the remains as those of Rose Millett, who had been an inmate of the asylum on several occasions suffering from a certain disease.

This woman had been allowed to go about enticing men and even perhaps boys who knew no better, to their ruin, to inoculate them with the seeds of disease to be engrafted on their future wives and handed down to a miserable posterity. This is not a single instance. In Canada there are hundreds of these women. Take the records of any General Hospital, and you will find yearly dozens of cases of syphilis that go out in a dangerous

condition—sodden with the germs of this loathsome disease. I remember seeing one who had come down from among the better customers who was now covered with syphilitic sores, and told me when asked what she did for a living, that she enticed small boys in the Queen's Park for what they could pay her. Whose boys?—yours or mine—who knows? But the hospitals at present have no power to hold such cases against their will any more than they can hold cases of diphtheria. The over-sensitive ideas and want of judgment of inexperienced matrons, the one-sided and self-glorifying views of the ministry, who have never fallen, should have no weight in the settlement of this problem. It is the sacred duty of our noble profession to deal with this matter from a sanitary standpoint. We harbor these infected ones in comfortable hospitals only as long as it suits their convenience, and allow them to go when they will into the streets to spread the plague on down to our sons and daughters. My son may fall; your son may fall. Rev. John Isaac's son may fall, and they will fall just as often when syphilis is rife as they will when it is not so rife. Our daughters marry men with syphilis. Prostitutes will still exist till the end of time, whether amenable to sanitary laws or not. In Germany the whereabouts of every prostitute is known in the large towns, and they are continually under the eyes of the guardians of the public health. If people have filthy houses we do not say to them, "You can do as you like, because you will suffer for it"; but we say, "You shall not do as you like, because if disease comes on you it may spread to your neighbor." Then the cry comes that the simile is not complete because the neighbor would be an innocent sufferer. But what about the coming bride and the babes unborn! Are they not innocent sufferers? A great noise is made by ignorant egotists and goody-goody, duty-loving police sergeants about raiding houses of prostitution but what good results? Are the prostitutes cleared off the face of the earth? No! Buffalo raids and they come to Toronto. Toronto retaliates and they go to Buffalo; or if they

do not leave their own city they hide away quietly in private lodgings and parade the streets of the better districts, doing more harm than if they were congregated together where many young men would be afraid to visit them. When small-pox or cholera threatens our medical board works admirably. Let them move the wheels of the scientific and unbiassed sanitary science of the future, taking leaves out of the German book and out of the book of the English experiences of garrison towns. Letters in the daily press from people who are ignorant of the vital or medical aspect of this question are valueless and therefore I wish to open the discussion through your columns.

A CANADIAN FATHER.

## Book Notices.

*A Practical Treatise on Headache, Neuralgia, Sleep and its Derangements and Spinal Irritation.* By J. LEONARD CORNING, M.A., M.D., Consultant in Nervous Diseases to St. Francis Hospital, Fellow of the New York Academy of Medicine, Member of the New York Neurological Society, etc. Author of "A Treatise on Hysteria and Epilepsy," "Local Anesthesia," "Brain Exhaustion, with some Preliminary Considerations on Cerebral Dynamics," "Carotid Compression," "Brain Rest, being a Disquisition on the Curative Properties of Prolonged Sleep," etc., etc.

In this volume the author has undertaken the difficult task of explaining the nature and treatment of those pains about the head which constitute such a fruitful source of misery. Dr. Corning is eminently qualified for the work, and has long been known to the profession as a brilliant and indefatigable laborer in the cause of practical neurology. His contributions to neurotherapeutics are among the most practical and suggestive additions which have been recorded during recent years. In one large oct. volume, nearly 300 pages. Price, \$2.75. Uniform in style with Medical Classics; price of the 12 volumes. E. B. Treat, publisher, 771 Broadway, New York.

## Personal.

DR. BRYCE has left for a trip to South Carolina.

DR. BURNS, of Toronto, started on a trip to Florida, January 14th.

DR. J. A. BURGESS has been elected school trustee for St. Matthew's ward.

DR. HODGETTS has returned from England and located at No. 8 St. Patrick's Street.

DR. S. M. HENRY has been appointed an associate coroner for the county of Wellington.

DR. GEORGE F. SHARDY, editor of *The New York Medical Record*, was married on December 8th to Mrs. H. E. Shultis.

At the regular meeting held on Thursday, January 3rd, Dr. J. H. Fife was elected President, and Dr. Fred. H. Brennan, Secretary-Treasurer, of the Peterboro' Medical Association, for the ensuing term.

DR. E. C. McNICHOL has been appointed a license commissioner for West Northumberland, Dr. R. H. Abbott for South Essex, Dr. R. H. Hunt, of Clarksburg, for Central Grey, and Dr. John Gunn, of Ailsa Craig, for West Middlesex.

DR. B. E. MCKENZIE, of 52 North Street, after more than a year's absence in United States and European hospitals, has decided to confine his practice entirely to Orthopædic surgery—the treatment of diseases of joints and deformities.

ONTARIO'S municipal honors distributed to physicians, January 7th, are as follows:—Dr. D. Robertson, Reeve of Milton; Dr. P. Stuart, a Councillor of Milton; Dr. Richardson, Reeve of Burlington; Dr. Freeman, Reeve of Georgetown; Dr. Vrooman, Deputy-reeve of Mariposa; Dr. Macallister, Reeve of Nottawasaga; Dr. Faulkner, a Deputy-reeve of Thurlow; Dr. McGregor, Reeve of Waterdown; Dr. McKay, Reeve of Bruce township.

*Notices of Births, Marriages and Deaths will appear in first number of each month.*