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CANADA
MEDICAL & SURGICAL JOURNAL

FEBRUARY, 1879.

Original Communications.

“LISTERISM.”

BY THOS. G. RODDICK, M.D.,

Professor of Clinical Surgery, McGill University; Attending Surgeon
Montreal General Hospital.

(Being a Paper read before the Canada Medical Association, assembled at Hamilton,
Ontario, September, 1878.)

By a somewhat singular coincidence, it was exactly twelve months yesterday since the antiseptic system of Lister, or “Listerism,” as the Germans have chosen to term it, was first introduced into the practice of the Montreal General Hospital, and if I mistake not (although in this I am open to correction,) into Canada. During the year the method has been carried out in every operation of any magnitude, and the results obtained have been on the whole most gratifying, and in some cases almost unprecedented.

As there are probably some of the members of the Association present who have never seen an operation performed antiseptically, I will, without further prelude, briefly describe the apparatus at present employed by Lister, and then read the notes of a few cases in which the method has been employed.

I will describe briefly the mode of procedure adopted in the wards under my care. A railway accident is brought in, let us say, in which amputation is demanded. The first duty of the house surgeon is to elevate the limb and apply Esmarch's band, as well with a view to arrest the hemorrhage as to dull the

sensibilities of the part, for a tight ligature undoubtedly has an anæsthetic effect in such cases. So convinced am I of this that before proceeding to open a whitlow, I am in the habit invariably of applying a tight elastic ligature to the finger or wrist, as the case may demand, first emptying the part of blood. I presume the explanation is in the interference to the nerve currents. The extremity is then enveloped as far up as the wounds extend in a towel saturated in a 1 to 20 solution of carbolic acid, the object being to imprison, and at the same time to destroy any putrefactive elements that may be lurking about the lacerated tissues. Now preparations are made for the operation. The sponges are wrung dry out of a solution of 1 to 20; the instruments are placed in a solution of 1 to 20, and the part to be operated on is thoroughly cleansed with a solution of the same strength. Carbolic acid has a remarkable penetrating property, blending with oily substances and animal matters, entering the air follicles, and altogether rendering the skin absolutely pure for surgical purposes. A carbolic solution of 1 to 40 is made ready to be used for washing sponges during the operation, for cleansing the hands of the operator and assistants, and for moistening the deeper dressings.

Next in order is the *Spray-producer*—one of the most essential, while it is at the same time the most troublesome item in the whole proceeding. The instrument I show you was recently purchased from Archibald Young, instrument maker of Edinburgh, at a cost of £8 stg. It is the largest size manufactured by him, and is of the make recommended by Mr. Lister. It acts on the principle of Siegle's steam inhaler, the boiler being filled with water, and the bottle with 1 to 20 carbolic solution, giving an antiseptic atmosphere of 1 to 40. The instrument may either be placed on a table and directed on the part, or, better still, held by an assistant, who should be seated. The spray should always if possible be projected towards the light, as it can then be directed with more exactitude.*

Carbolized Cat-gut, one of the antiseptic essentials, should be

* Dr. R. F. Weir, a New-York Surgeon, (who, by the way, has recently written a very able and exhaustive pamphlet on the "Antiseptic Method,") is the inventor of a spray-producer, which, while it can be strongly recommended for its neat and handy properties, lacks the strength of the British instrument.

at hand. This, which, by-the-way, can generally be obtained ready for use, is prepared after Lister's directions, in the following way: add one measure of water to ten parts by weight of crystalized carbolic acid, mix and add one measure of the mixture to five measures of olive oil in a suitable jar or wide-mouthed bottle; then at once introduce the cat-gut, the hanks being opened up to allow access of the liquid to them; cover and set aside in a cool place. It is found that the small quantity of water present makes all the difference possible in the quality of the ligature, causing the tissue of which the gut is composed to undergo a remarkable physical change, which has never yet been satisfactorily explained. This emulsion, so to speak, seems to deprive it of its peculiar slippery nature, and it is asserted that when properly prepared, a reef-knot tied upon it holds better than one of waxed silk. By the addition of chromic acid to the oily mixture, the "staying" power of the gut is materially increased.

The *Antiseptic Gauze* comes up next for consideration. This, which in the raw state is known as dairy or cheese-cloth, is prepared for surgical purposes as follows: Melt together in a water bath five parts of common resin, and seven parts of solid paraffin, then add one part of crystalized carbolic acid. The cotton-cloth, which is usually a yard wide, is cut into lengths of six yards, and folded to the dimensions of half a yard square. Several such pieces are placed in a dry hot chamber formed by two tin boxes placed one within the other, the interval being occupied by water, which is kept boiling by a couple of the gas stoves so commonly in use now-a-days. After two or three hours the heated gauze is removed and then rapidly replaced layer after layer, and sprinkled with the solution by means of a syringe having a number of minute perforations in its extremity, and supplied with wooden handles to protect the hands of the workman. A weight of about forty pounds in the shape of a lid, is put in the chamber to compress the charged cotton. This, also, should have been previously heated. Generally in the course of two or three hours the liquid will have become equally distributed throughout the gauze, and the material is fit for use. The

cost for manufacture in considerable quantities (say 1000 yards), is about 2½d. per yard. Soiled gauze may be recharged after a thorough washing and soaking in very hot water. That gauze which is to be applied directly to a wound, is first saturated with the 1 to 20 carbolic solution, the reason for this being, that the antiseptic is given off so slowly, and in such an extremely small amount, that dust, &c., falling on it might not be deprived of their septic qualities. The heavy dressings consist of eight layers of gauze, a sheet of impermeable material, as rubber-cloth, Mackintosh, or gutta percha tissue, being interposed between the seventh and last layer. This is to prevent the discharges from making their way too directly through the dressing, the idea being that they shall reach the external air by the longest route. The eighth layer of gauze is intended as a reserve in the event of any openings in the Mackintosh having been overlooked. The gauze, by-the-way, is always used for bandages as well.

To ensure the speedy exit from wounds of all liquid accumulations, resort is usually had to the ordinary caoutchouc *drainage tubing*. This should vary in size and proportion to the quantity of discharge anticipated, and the holes should be large. The outer end, when applied, should be cut flush with the skin, and armed with a twisted wire to prevent its being pushed in by the dressing. The cat-gut drain, so strongly recommended by my friend Mr. Chiene, of Edinburgh, consists of a skein of from eight to sixteen threads, depending on the size and importance of the wound. This form of drain has the great merit of quietly vanishing after its work is done, and is especially suitable for minor operations; although I have no doubt, in the hands of such an able advocate, it is destined to occupy a prominent place in the apparatus of the antiseptic surgeon. *Horse hair*, properly purified by soaking in 1-to-20 carbolic solution, also makes an excellent drain.

The *Protective*, so-called, is composed of thin oil silk, varnished with copal and then coated with a layer of dextrine, which latter allows the oil-silk to become uniformly wetted by the antiseptic solution. This is moistened with the 1 to 40 and applied imme-

diately to the wound in a narrow strip. As its name implies, it protects the wound from the often too irritating action of the carbolic acid contained in the deeper dressings. I never employ it, however, in the first dressings, being, I think, unnecessary at this early stage.

It is a well known fact that the ordinary carbolic solution is often too stimulating when applied to wounds, and retards the healing process in a marked degree. In that case the preparation termed by Mr. Lister, *Salicylic Cream*, can often be substituted in the later dressings. This is made simply by mixing together in a mortar salicylic acid and 1-to-40 carbolic solution until the consistence of thin cream is obtained.

Having now described briefly the more important articles necessary for an antiseptic dressing, I will, with your permission, proceed to give you short reports of a few of the more important cases treated by this method in the wards of the Montreal General Hospital, during the past twelve months.

As the three first cases of the series have been already published in THE CANADA MEDICAL AND SURGICAL JOURNAL, for the months of December, 1877, and February, 1878, it is not my intention to trouble you with extended reports thereof, but merely a brief synopsis for the benefit of those who may not take that periodical, and also, that my paper may be the more complete.

Case I.—Compound Comminuted Fracture of the Bones of Tarsus, involving the Ankle Joint.—Amputation.—The patient, a laborer, 68 years of age, was admitted into the Montreal General Hospital on the 10th September, 1877, a load of earth having fallen on the left foot and caused the injuries above enumerated. I made the attempt to save the foot by the antiseptic method, and although the most extensive death of the soft parts supervened, I succeeded in keeping them perfectly "sweet" and free from inflammatory trouble until October 4th (twenty-four days after the accident), when it was thought advisable to amputate.

The operation, amputation through the ankle, was performed under the spray, and with all the antiseptic precautions.

As the record of the case, kept by my clinical clerk, Mr. (now Dr.) Hutchinson, is here very brief, I will read it :

Oct. 5th.—The stump was dressed to-day antiseptically, and only a small quantity of sero-sanguineous fluid found to be discharged. The patient's temperature is found to be nearly normal, as may be seen by reference to the chart. Pulse weak and compressible. Appetite poor.

6th.—Dressed again to-day,—only a small amount of serum on the draw-sheet and dressing. Condition much as yesterday. The wound is healing in all parts.

7th.—The draw-sheet being slightly stained, the dressing was removed. No odour. No pus. The patient's general condition is decidedly improving. Tongue cleaning rapidly.

10th.—The stump has not been disturbed for the past three days. The edges of the flaps have united so closely that the line can barely be discovered ; drainage tubes removed. The sutures were simply wiped away to-day with a sponge. The man's general, and especially his mental condition, has wonderfully improved in the past few days.

13th.—All dressing removed, and the patient is to sit up in the invalid chair this afternoon.

The highest temperature reached after amputation was 99 4-5.

Case II.—Railway Accident demanding Amputation above the Knee-Joint, in a lad of fifteen, whose left leg had been run over by some dozen car wheels. Carden's operation, slightly modified, was performed on the 7th October, 1877, my friend, Dr. Rodger, whose case it was, assisting me. Throughout no pus was noticed, and a remarkable phenomenon occasionally seen by the antiseptic surgeon occurred here, namely, the absorption of a narrow strip of dead tissue noticed for the first three or four days to occupy the edge of the anterior flap.

To quote from my report already published :—When the dressing was removed just one week after the operation, the stump was found to be entirely healed, excepting at the angles where the drainage tubes had been retained. The latter were

removed, and the knots of the cat-gut sutures picked off with the forceps, or simply brushed away with the sponge. The dressing was re-applied as before, with this difference that salicylic cream was substituted for the 1-to-40 solution on the protective and gauze, in order to prevent too great irritation of the tender cicatrix. Dr. Rodger informs me that he removed the antiseptic dressing altogether on the 17th, and applied some red lotion to the angles of the stump, so as to hasten the healing of the two little spots which had been prevented from closing by the drainage tubes. The boy has since been sitting up every day, and appears in perfect health.

The temperature throughout, taken night and morning, ranged between 98 and 99^o.1, and, in fact, I find the latter figure was only reached once (on the fourth day), but as soon as his bowels had been moved by an enema it fell to normal.

CASE III.—*Excision of the Right Elbow for Fibrous Ankylosis, the result of Fracture.**—The patient, a man 24 years of age, was admitted into my wards on the 20th November, 1877. The injured arm was painful and ankylosed in an awkward position. He gave a history of having in the month of June previous fallen from a fence, striking his elbow on a stone, the arm being flexed. Two days after admission (22nd Nov.) excision was performed antiseptically by the straight incision.—No splint was used, the arm being kept in position by the heavy dressing.

From the report of the case furnished by Mr. Mills, the present able House Surgeon of the Hamilton Hospital, I glean the following—

Nov. 22nd.—Wound dressed antiseptically; looking well. A slight sero-sanguinous discharge. Temperature 99·1^o in the morning, 101^o in the evening. Pulse 98 in the morning, 104 in the evening. Urine has to be removed by catheter.

27th.—Wound dressed again. Slight serous discharge.—Neither pus nor odour.

29th.—Wound dressed again. Looking well. Temperature

* CANADA MEDICAL AND SURGICAL JOURNAL, Feb. 1878.

ran up in the evening to 101° , without any apparent cause, except that the bowels had not been moved for four days, and he was feeling some discomfort in consequence. I may here remark that in several of our cases of antiseptic surgery, (where the temperature has been very closely watched) sudden elevations have occurred for which no cause could be assigned, except a loaded condition of the bowels, and that this was the cause seems to be established by the fact that it invariably fell to its former range as soon as the bowels were relieved by a purgative or an enema.

Dec. 2nd.—Arm dressed again. Sutures removed. Wound completely healed, except the two small openings from which the drainage tubes were removed.

Thus the wound had entirely closed in ten days after operation, and the patient was discharged with a very useful arm after thirty-nine days residence in hospital.

CASE IV.—*Amputation of the Thigh* in a child of four years for a railway injury, the wheels of a street car having passed obliquely over the foot and leg. I amputated after Carden's method. Antiseptic measures were adopted throughout. Union by first intention occurred without a drop of supuration or trace of odour. On the fifth day (third dressing), the tubes were removed, and on the ninth day, (5th July) the stump was found to be perfectly healed, and all dressings were removed. The temperature chart, I venture to say, will be found on examination to be almost unique for an amputation of the thigh, following railway injury, as you see it never rose above 99° . The child slept and ate well throughout, and as far as I could learn from the nurse, never referred to the wound as if in pain.

CASE V.—*Excision of the Elbow for bony Ankylosis.*—This was a lad of 18 years who sought advice on the 4th July, 1878, for ankylosis of the elbow, in an awkward position, viz: at an angle much greater than a right angle. He gave a history of having fallen from a height some four years previous, sustaining fracture of the bones comprising the elbow-joint. The

limb was treated in the position of full extension, the consequence being a perfectly straight arm. Partial excision was subsequently performed by Mr. Annandale of Edinburgh, resulting in ankylosis, and the condition of things found on admission.

From the notes of my clinical clerk, Mr. Thomas Gray, I glean the following :—Hand semi-prone—complete loss of motion in elbow-joint, it being in an almost semi-flexed position. Muscles of arm and forearm much wasted. On the outer side of the arm is an oblong cicatrix over the position of the external condyle, and another on the inner side just behind the internal condyle. These correspond to the incisions of Mr. Annandale. An irregular bony mass is felt corresponding to site of head of radius, and external side of humerus. The olecranon is distinct, but its anterior surface seems firmly adherent to the humerus. He complains of a tingling sensation and loss of power in the little and ring fingers, due, no doubt, to pressure of the ulnar nerve between the inner cicatrix and the bone.

As the patient was not in very good health when admitted, having recently suffered from axillary abscess, I deferred operative interference until the 24th July, on which day I proceeded to excise with antiseptic precautions. I employed the straight incision, going directly through the periosteum, which I carefully separated throughout with the blunt "elevator." The ulnar nerve was released without being exposed. About two and a half inches of the ankylosed bone were removed. (I pass the specimen round for your inspection. You will find the bones comprising the joint completely fused together).

I return to Mr. Gray's notes for the following record :

July 25th.—Temperature 98°; pulse steady; not a single bad symptom has appeared. Some difficulty in making water, which he says is always the case when obliged to keep the horizontal position. The arm was dressed to-day, and looks "beautiful." No swelling, no tension. Slight serous discharge, and the edges of the incision are already meeting. In the evening his temperature was 99°.

The report for the two succeeding days is most encouraging, as the temperature chart will itself show. The interesting fact

might be mentioned here, that the ulnar nerve is regaining its proper functions, as the fingers supplied by it are found to have both acquired a large share of their normal sensation and motion.

28th.—Temperature normal. Pulse 84. Dressings removed; discharge serous in character and perfectly “sweet.” No pus has been seen. The wound is united firmly throughout with the exception of the angles occupied by the drainage tubes, which, by the way, have been very much shortened to-day.

Aug. 1st.—The antiseptic dressings and drainage tubes were removed and the part dressed simply with boracic lint and oil silk.

9th.—The angles having now entirely healed, passive motion is begun. It will be seen that I employed no splint in this case the heavy antiseptic dressing being sufficient to keep the arm at any angle desired.

I beg to refer you to the temperature chart, which I look upon as a remarkable one, the index never having risen higher than $99^{\circ}.1$, and that for two days only following the operation.

Did time permit, I could give detailed reports of other two cases of compound fracture; of five cases of *Removal of Breast*; five cases of *Removal of Fatty Tumour*; seven cases of *Amputation of Fingers and Toes*, besides innumerable abscesses, which have been treated antiseptically during the past twelve months, in the wards of the Montreal General Hospital, and with the most gratifying results.

Some of my colleagues also have been very successful, and I have no doubt they will, at no distant date, give the profession the benefit of their experience.

So much for the successes; now for the failures, and here the story is soon told: We failed in three major operations only, in maintaining the discharges in an antiseptic condition. These were 1st. A Syme's amputation; 2nd. Removal of a large scirrhus breast; 3rd. Re-amputation of Leg.

The first operation was performed in a man about 40 years of age, on whom a Chopart had been done some months before, leaving a painful ulcer on the face of the stump. On the third day the protective was found to be blackened (a sure sign of putrescence), and the dressing had a decided odour. The temperature had also gone up during the night to 102° ; pulse

rapid and pain considerable. The cause of failure was self-evident, and indeed I had anticipated this, in some clinical remarks made after the operation. I had just completed the flaps and was about separating the foot when the spray-producer ceased to work, through some mismanagement. The "guard" was at once applied, but the instrument could not again be made to work, and the operation had to be completed without the spray. Notwithstanding that the wound was thoroughly washed out with carbolic lotion, and every antiseptic precaution taken, the result was what I have stated, some septic germs having, no doubt, crept into the crannies of the wound after the discontinuance of the spray. This case illustrates more than anything I have yet seen or read, the paramount importance of the antiseptic spray, and proves beyond a doubt that the first duty of a surgeon is to protect the delicate tissues exposed by his knife from contamination by those organic germs (call them by what name you please) which float in the air about us, and are undoubtedly the cause of putrefaction. As to the case, I succeeded after some trouble in "sweetening" the stump, and it ultimately turned out to be a very fair result, although the man was two months in hospital, whereas he should have been there only two weeks.

The second operation which proved a failure was a case of simple removal of breast. Everything went well until the fourth day, when odour was distinctly perceptible, and the protective was blackened. The temperature chart showed a rise of nearly three degrees, and the pus was marked in amount. I could not explain it, excepting that the patient, who was very fidgety, had raised the upper edges of the dressing in the endeavor to loosen it, and thus allowed of the ingress of air. I have since discovered, however, that she was in the habit secretly of stuffing a quantity of cotton wool beneath the dressing to prevent the gauze from irritating the skin. Now, I think if germs are able to appreciate the "comforts of a home," they will find them among the delicate, soft, and warm fibres of the ordinary cotton wool. I really think there is nothing for which the antiseptic surgeon should entertain a greater dread than this very material

in its raw state, and yet when properly prepared there are few forms of dressing capable of more universal application.

The third case of failure occurred only the other day in a re-amputation of the leg for painful and ulcerated stump. The case is not one of sufficient interest to call for a full report. Suffice it to say that on the fifth day (third dressing) there were evidences of putrescence. I have yet been unable to find a sufficient cause for the failure, unless it be that a splint which I applied on the second day beneath the heavy dressing, had not been thoroughly cleansed. A large patch of cicatricial tissue situated over the bone has since sloughed, although the case will ultimately do well.

Thus I have endeavoured to lay before you, though, I must confess, in a very imperfect manner, the result of one year's experience of the antiseptic method of Lister. The number of cases is certainly small, but the experience presented should be sufficient to convince the most sceptical of the practical efficacy of the method, and to induce them at least to give it a trial. Our success in the Montreal General Hospital has certainly exceeded our fondest expectations. For the year ending yesterday we can show a clean mortality sheet as far as the purely antiseptic operations are concerned, while traumatic erysipelas and pyæmia have been unknown. Indeed, we may confidently look forward to the time when these surgical plagues will be no longer dreaded, but, like scurvy in our day, will be considered in the light of curiosities.

No one, not even Lister himself, claims that the method is faultless, although he has been unable to make any material improvements in the past five years. Those, besides, who have attempted from time to time to modify his plan of procedure, have, almost without exception, failed. Thus, Thiersch, of Leipsic, the first German follower of Lister, has gone back to carbolic acid, having found salicylic acid a sad failure as a germicide. He declares that, although the technical details of the method may be modified, Lister's postulate—the total exclusion of putrefactive elements from the wound—will never be lost sight of by him.

Nussbaum, of Munich, tried, but without success, every surgical dressing known, in his endeavour to combat hospital gangrene and pyæmia, with which 80 per cent. of his wounds were attacked; "but," he says, "when we applied to all our patients the newest antiseptic method, now in many respects improved by Lister, and did all operations according to his directions, we experienced one surprise after another; everything went well; not a single case of hospital gangrene occurred, and pyæmia and erysipelas completely disappeared."

The pioneer of "Listerism" on the continent of Europe, Saxtorph, of Copenhagen, says, "he is sure that if he does not carry out the antiseptic treatment to its full extent, it is of no use whatever to apply carbolic acid to a wound, at least as regards the dangers that always accompany putrefaction."

Callender, of St. Bartholomew's, who operates without the spray, has certainly had admirable results, showing a mortality in a series of amputations of only 2.27 per cent.; but Volkmann, of Halle, one of Lister's most faithful followers, is not far behind with a percentage of 2.87, and a large majority of his cases were frightful machinery accidents.

Mr. Bradley, of Manchester, has recently published statistics of a series of operations performed by him after a "modified method," showing a mortality per cent. of 11.42; but one of the followers of Lister in the Royal Infirmary, of Glasgow, has since shown his hand, giving statistics of thirty of the most serious operations in surgery with only one death, or a mortality of 3.33 per cent.

But antiseptic surgeons will not be satisfied hereafter with the bare mortality statistics. They will demand, and with justice too, the range of temperature in the various cases, the average number of days under treatment, and the cost of the dressings. In hospital practice, especially, the length of time required for the cure is a matter of the utmost importance. If, as our reports prove we could have done, cases of amputation of the limbs can be discharged with safety in less than fifteen days, what a saving is made, even though the cost of the dressing far exceed in value any other that might be employed for the same length of time.

A NEW SOUND FOR EXAMINING THE BLADDER IN CASES OF SUSPECTED STONE.

By G. CUTHBERTSON DUNCAN, M.D., L.R.C.S., Edin.

The following description of a new sound was sent to us last October by Dr. Duncan, just before he left Canada for England: it was mislaid and overlooked, but we now publish it with pleasure. We may remark that, with Dr. Duncan, we tried the sound on the dead subject, and the presence of a minute fragment of stone which had been placed in the bladder was readily made out. The trial was quite satisfactory, and we are inclined to believe that the instrument given us by Dr. Duncan is a valuable aid to diagnosis of stone in the bladder, more especially in those cases where the fragments are small, or where symptoms of stone are persistent and failure to ascertain its presence from some cause attends the search.—(ED.)

Description of Sound.—The sound is made of solid steel, similar, in most respects, to the short-beak sound in ordinary use, with the exception of a modification in the handle, which is round, and a little larger than the rest of the sound. Situated at about two inches from the end of this is a circular disc at right angles to the curve of the beak, to indicate in what direction it is pointing and to facilitate its rotary movement both in its introduction through the urethra and while in the bladder. The whole nickel-plated, being smooth, bright, and not liable to become discoloured. The beak is blackened by being held in the smoke of an ordinary oil-lamp, and when *perfectly cool* is dipped into a solution of collodion, thinned to a proper consistency with ether and alcohol, which, when dry, forms a black film on the sound capable of being introduced into the bladder without being injured, but if brought in contact with any hard substance it is immediately scratched, and the bright metallic surface *appears*, thus *indicating* the presence of the foreign body.

Advantages Claimed.—This method of preparation does not impair the conducting power of the sound or its sensitiveness in any way, as is the case with Mr. Napier's leaden-pointed instru-

ment ; also, the film is much more easily scratched than the lead. The handle, being small and round, is held between the index finger and thumb (the most sensitive part of the hand), thus giving greater facility in its rotary movements, and a greater chance of *detecting* the *slightest* contact with a foreign substance.

A piece of a calculus weighing about five grains was introduced into the bladder, and the sound was introduced and withdrawn several times to shew that the film was in no way injured, it was then made to sweep the floor of the bladder from side to side, and withdrawn, when it shewed evident traces of having come in contact with some hard body.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Tumour situated over the Parotid Gland.—Removal.—By G. E. FENWICK, M.D. Reported by Mr. THOS. GRAY.

A. McL., a large-framed, robust-looking Scotchman, was admitted into the Montreal General Hospital, on the 19th Oct., 1878, suffering from a large, firm, somewhat nodular growth, situated in the left parotid region. The patient states that he is 73 years of age, but he bears his age well. The history he gives is as follows: Ten years ago he had a severe cold, and the glands of his neck swelled. There remained a small, hardly perceptible growth on the side where the tumour is situated, but it never gave him any concern, nor any pain. For the last three months it has grown rapidly, and for several weeks past it has given him great pain, more especially at night.

The tumour is situated on the left side, over the parotid region, the lobule of the left ear being pushed upwards, and somewhat stretched over the growth. It is about the size of a hen's egg ; is hard, firm, but quite movable, apparently unattached, and has projecting from its surface several nodules. Although to all appearance free, it has implicated the branches of the *portio dura* ; some of the muscles of the left side of the face are paralyzed ; he is unable to close the left eye-lid ; the

angle of the mouth is slightly drawn down ; he can, however, close his mouth, bringing the lips firmly together, but he states that the growth has interfered with mastication. His speech is a little thick, but sensation in the face is perfect throughout. From the fact of the rapid growth of the tumour, from its implicating the facial nerve, and from the tumour being nodular, having a tendency, apparently, to push through its fibrous envelope and infiltrate the parts in the immediate vicinity, it was regarded as of very doubtful character. It was, however, perfectly free and movable, and was distinctly encapsulated. The tumour interfered with the man's rest, as he suffered nightly from neuralgic pains shooting up the side of the face and scalp, and as he insisted on the removal of the growth at all risks, the operation was determined on, the patient being made fully aware of the possible return of the tumour before the end of many weeks.

The patient having been placed under the influence of sulphuric ether, the operation was commenced by a straight incision, made from above downwards, the entire length of the growth, commencing at the anterior part of the lobule, and extending vertically downwards for about $3\frac{1}{2}$ inches. The capsule of the tumour was reached and the soft parts readily reflected. The growth was then carefully dissected from its bed, one portion passing behind the ascending ramus of the jaw. In this dissection the sheath of the vessels was laid bare, but was not implicated. Several vessels were tied, and the main vessel at a little above where the internal maxillary is given off was ligatured. There was not much blood lost, as the vessels were secured and ligatured as the operation proceeded. Every particle of the growth was removed, and after removal the parts did not look as if there were any infiltrating nodules in the tissues. After all clots were removed, the edges of the wound were brought together with fine cat-gut sutures, a piece of drainage tube being allowed to hang out at the lower edge and the wound was dressed with dry boracic lint. The upper edge of the wound united by first intention, but the lower part, which was kept open by the drainage tube, filled up by granula-

tion tissue. There was a continuous discharge of fluid, like saliva from the lower edge of the wound. This, however, diminished, and in the course of ten days the man was able to leave the Hospital. There still continued inability to close the upper lid of the left eye, but the patient stated that he felt more movement in the part than before the operation, and, moreover, that he was better able to chew his food on the left side. Moreover, his speech was not so thick. The man left the Hospital and returned to his home on the twelfth day after the operation.

Dr. A. F. Ritchie, curator of the Museum of McGill University, gives the following report of the microscopical appearance of the tumour:—

The removed gland is surrounded by a well-marked fibrous capsule. The surface is somewhat nodular, but the general shape of the organ is fairly normal. It measures 2 inches by $1\frac{1}{2}$, with a thickness of about an inch. On section it presents a mottled appearance, the lobules being separated by dark trabeculæ, which in some places are thin and sharply defined; in others, shade off into the surrounding tissue. A number of reddish patches are seen pretty uniformly distributed over the surface of the section. They vary in size from about $\frac{1}{4}$ inch in diameter to mere points, and on microscopic examination prove to be carcinomatous nodules, having well marked loculi of rather scanty fibrous tissue, filled with large cells, with well defined nuclei and nucleoli. The cancerous growth infiltrates both the secreting part of the gland and the septa, which contains in addition an excess of fibrous tissue. The dark colour mentioned above is due to a large amount of dark brown granular pigment contained pretty uniformly in the substance of the cells and in the intercellulous tissues of the affected part.

NOTE.—We have heard quite recently from this patient. He has much improved in health. No return of the growth has occurred, nor are there any enlarged glands in the neighbourhood. The result is so far satisfactory.—ED.

Case of Diphtheria.—Sudden Death on the 13th Day.—Fatty Degeneration of the Heart and Cardiac Thrombus.—
Under the care of Dr. Ross. Reported by Mr. IMRIE.

E. A., æt. 11.—Is one of several children living in a tenement above a room where a child died of diphtheria about two months ago. She was admitted into the Montreal General Hospital, under care of Dr. Ross, on the 16th January, 1879, having been sick with sore throat and severe feverish symptoms for three days. The whole entrance of the throat was seen to be dusky and much congested. Tonsils swollen and covered with a pretty thick greyish-white membrane, which also extended freely upon the pillars of the fauces and the surfaces of the uvula. Breath very offensive; neck thick-looking and glands moderately enlarged; temp., 104° ; pulse, 120; no albumen in the urine. Two days later (18th January) we find that there has been very little, if any, extension of the membrane beyond the parts already mentioned. Swelling of glands persists; also great foetor of breath, and commencing acrid discharge from the nose. Was somewhat delirious the past night, and the pulse is quick (140); urine contains a trace of albumen.

January 20th.—Temperature has not been above 101° ; no more delirium; urine moderately albuminous—25 ounces in 24 hours; membrane coming away freely from the throat; no extension; fetid discharge from nostrils considerable; glands still swollen and tender.

21st.—Patient, the note says, seems “much brighter.”

22nd.—There has been slight epistaxis; improvement continues; throat free from membrane, but raw and irritable; glands less swollen, and not tender; albumen less; temp., 99° ; pulse, 105.

24th.—Throat appears to be healing. There is a slight regurgitation of fluids through the left nostril, and the voice has a somewhat nasal character. Temperature normal.

25th.—Two p.m.—Not so well; is irritable and restless; complains of pain and soreness in the back and legs. The skin of the legs, especially the fronts of the thighs, is markedly

hyperæsthetic. Throat and glands much improved, but patient is somewhat deaf in both ears. Slight regurgitation, and the nasal voice persists. The urine has been very scanty, only two ounces having been passed in the last 24 hours; contains small amount of albumen. Temp., 98°; pulse, 68.

From this time she continued rather fretful and complaining until 5:30 p.m., when she was raised by the nurse upon the bed-pan, as she desired to have her bowels moved. She had been then sitting up but a few moments when she gave a long sigh, saying "Oh dear!" and, falling back, expired instantly.

At the autopsy, the following conditions were found:—The larynx and trachea were entirely free from any exudation. The heart was moderately contracted. Its valves were healthy. The muscular substance appeared of good colour, not pale or streaky-looking, but under the microscope is seen to be in a state of *advanced fatty degeneration*. The right auricle contained a large white, pretty firm clot, which nearly filled its entire chamber and extended into the corresponding ventricle. It did not pass into the pulmonary artery. Part of this, at any rate (if not the whole), was certainly formed before death. The kidneys were moderately congested.

Remarks by Dr. Ross.—Sudden death in severe cases of diphtheria is not altogether unexpected. It also occasionally occurs during the course of a diphtheritic paralysis. But it is not often that sudden death supervenes whilst the disease itself, never having been of a severe type, seems to have given way, and convalescence be about to begin. The foregoing case, however, well illustrates its possible occurrence. In all these cases, paralysis of the heart, through the pneumogastric, no doubt plays the most important part; but, doubtless, fatty degeneration of the heart muscle is a very common, if not constant, forerunner of the paralytic event. On this point Oertel says:—
"When the disease lasts long and is very intense, and especially in cases in which death is caused suddenly by paralysis of the heart, the muscle appears soft, pale, friable, broken by extravasations of blood, and on microscopical examination most

of its fibres are found in an advanced stage of fatty degeneration." Now, in this case, we found at the autopsy the advanced fatty degeneration—indeed, hardly a singular muscular fibre could be found which was not largely converted into oil globules. But it differs from most others in the following respects:—Our patient died on the thirteenth day of the disease, and therefore it could not be said to have lasted long. The attack had not been intense, although it had been moderately severe. There was no decided paralysis, although we had observed a somewhat paretic condition of the velum palati. So that, although fully aware of the occurrence of sudden death and fatty heart under the condition of an intense and prolonged attack, especially if septic symptoms have been marked, or in the debilitated systemic condition indicated by the existence of some kind of paralytic affection, yet I was not prepared to meet with instantaneous death in this little girl under the apparently favorable circumstances which I have related. We learn from the observations of this case that fatty heart may exceptionally be fully developed even after a short duration only of moderately severe diphtheria—that it will betray its presence by no symptoms, and may thus assist in causing death just when convalescence seems about to begin. I say "assist in causing," because I do not think the fatal event is to be entirely attributed to the muscular degeneration. The record of the autopsy shows that there was found in the right chambers of the heart a large white fibrinous clot. Now, we should not have expected to find any such thing in the heart of a person dying from sudden cessation of the heart's action. Dr. Robinson Beverly, writing in the *Lancet*, 2nd November, 1872, has pointed out that the formation of heart clots (cardiac thrombosis) is to be recognized as a possible source of great danger in a certain number of cases of diphtheria—even in those apparently progressing very favorably. "Death," he says, "may occur either suddenly (immediately after the formation of the coagulum) or after the lapse of a period of anxiety and anguish, more or less prolonged." In this case death must have occurred immediately after the formation of the thrombosis.

*Caseous Degeneration of a Lung with Rapid Softening.—
Death after Hæmoptysis.*—Under the care of Dr. Ross.
Reported by Mr. W. SUTHERLAND.

G. R., æt. 26, a negro, was admitted into the General Hospital, under Dr. Wilkins, on the 22nd of August, 1878, complaining of cough, weakness and feverishness.

The only account of tubercular disease in his family is the death of one sister at 26 from ordinary pulmonary consumption. His father and mother are both alive and well.

He has always been a strong and robust man until the commencement of the present year, since when he has not been feeling so strong and able to work as previously. He has also been subject to coughs, but denies having had any persistent cough until quite lately. About three weeks prior to admission he got a severe wetting, and since that time has been feeling very ill. He soon began to cough, suffered from pains in his sides, felt feverish, and lost appetite and strength. No positive symptoms indicative of an attack of acute pneumonia of ordinary type can be found. He did not lay up, but attended as an outpatient for two weeks before coming into the wards.

During the month of September he had a persistently high temperature in spite of the administration of quinine; coughed a great deal, with copious heavy perspiration; rapidly lost flesh and strength.

On the 1st of October he was transferred to the care of Dr. Ross, and the following notes were then made of the physical signs:—

Soft parts of chest much emaciated and clavicles prominent, especially the left. Expansion very deficient on the left side. Dullness over the whole of the left lung; the note is very hard and toneless behind, particularly at the lower part, and the sense of resistance is very great—in front it has also a somewhat tubular character. A good percussion sound upon the right side. On auscultation, in front of left side, amphoric breathing, gurgling, and pectoriloquy—behind, a weak, faintly-blowing breath sound and moist râles. On the right side rough breathing, with bubbling râles, is found beneath the clavicle;

elsewhere, vesicular murmur is unaltered. Vocal fremitus much increased on left side.

These physical signs persisted till the end without special change, except the development of a very distinct cracked pot percussion sound beneath the left clavicle.

The temperature chart shows continuous fluctuations of body heat, fluctuating between 100° F. and 104° F. There was a daily expectoration of sometimes as much as a pint of heavy purulent and nummular sputa. The pulse continued very rapid, and progressively smaller and weaker. Emaciation and prostration quickly advanced. Ultimately, on the 19th October, he was taken with hæmoptysis and died on the following morning, without, however, having spat any very large quantity of blood.

Autopsy.—Left Lung—Pleura thickened; covered also in places with flakes of recent lymph. Entire apex occupied by a large cavity, which contains clots and dirty reddish-yellow pus; numerous trabeculæ cross it. The lower and outer portion is in a condition of rough, shaggy-looking ulceration. No small aneurisms are seen. The rest of the lung is firm, solid, and, with the exception of a small margin at the lower part—airless. On section, the tissue presents a uniform opaque white colour, looking as if the whole organ were in state of caseous degeneration. The section is perfectly dry, and here and there a few gelatinous-looking strands of tissue are seen. Right Lung—Full in volume; crepitant, except part at the apex and posterior part of the middle lobes. Apex contains a small irregular cavity surmounted by infiltrated gelatinous-looking tissue. Lower lobe crepitant, contains a few caseous masses, and here and there are firm nodular bodies like miliary tubercles. The bronchi contain small clots of blood. Bronchial Glands.—Enlarged, tumid, moderately pigmented, not caseous, and contain no tubercles.

No tubercular disease existed elsewhere, and the other organs presented nothing worthy of note.

Correspondence.

To the Editor of the CANADA MEDICAL AND SURGICAL JOURNAL:

EDINBURGH, January 14, 1879.

SIR,—A few notes from this, the greatest seat, perhaps, in all the United Kingdom of medical teaching, will prove interesting, I have no doubt, to many of your numerous readers. During the last five or six years the changes in the teaching staff of the medical faculty of this university have been very numerous. After the loss of such men as Bennett, Christison, Lister, Laycock, &c., many false prophets arose, who would fain have placarded the walls of their Alma Mater with "Ichabod! Ichabod!" Happily, however, the state of matters has turned out quite differently, and it is universally acknowledged that the teaching was never so thorough and efficient as it is this winter. The late returns of the matriculation rolls show an attendance of 1293 medical students. Of this number 565 are from Scotland, 445 from England, 22 from Ireland, 75 from India, 149 from different British colonies, and 34 from foreign countries. The majority of the colonial students are from the Cape and Australia. There are also about 150 students who attend exclusively the extra-mural lectures. Owing to the small size of some of the class rooms, a few of the lecturers have been compelled to divide their classes and lecture twice daily. This difficulty will, however, be overcome when the buildings at present under construction for the medical department of the university will be completed. They are situated in close proximity to the new infirmary buildings, and already \$1,000,000 has been subscribed (including the government grant of £80,000) towards the building fund.

Prof. Fraser has instituted, this winter, a practical class in *Materia Medica*. It is very ably conducted, but, owing to the restrictions of the late act, experiments on animals are not carried out. That some misguided people are still clamoring for more repressive measures against experiments on animals, the following advertisement, which is copied from to-day's *Scotsman*, shows:—

"Anti-vivisection Prayer Meeting this Day, 1:30 o'clock, 5 St. Andrew's Square."

The following case of a rather rare disease of the spinal cord is worthy of mention, principally on account of the benefit to be derived from judicious treatment, and from the light it throws on allied spinal affections, which are, as yet, but little understood:—

The case, one of acute palio-myelitis, or the so-called "infantile" paralysis of adults, was made the subject of a clinical lecture by Prof. Grainger Stewart, the distinguished occupant of the chair of Practice of Medicine. The patient, who is 18 years of age, and a gardener, has been under observation since August. His social and family history are good. He never had any previous illness, nor did he ever meet with any accident. His illness began suddenly during the last week of July. The symptoms during the first week resembled those of an acute gastric catarrh. On the fifth day of his illness he noticed that all his extremities were weak; on the seventh day his right arm and leg were completely paralyzed, the left arm and leg partially so. The following was his condition during the first week of November:—

Nervous System.—Sensibility to touch; pain and heat normal. Muscular sense is unimpaired. Sight, hearing, taste and smell normal. The organic motor functions of swallowing, micturition and defæcation are not interfered with. The bowels are slightly costive, but this is owing to a loss of power in the abdominal muscles. The respiratory acts, although quickened, are normal in rhythm. There is scarcely any lateral expansion of the chest during inspiration; when he was admitted there was none whatever. Forced expiration is a very difficult task. Both the skin and tendon reflex functions are entirely abolished. The arms have recovered power to a great extent, but there is only the slightest improvement in the motion of the lower extremities. The arms respond to the faradic current, but there is no response to this form of current in the lower extremities. There is no exaggerated reaction to the continuous current, showing that the "reaction of degeneration is not present."

There has been a great and rapid wasting of the muscles in this case—more than could be accounted for by disease. There

was a considerable elevation of temperature at first. Shortly after his admission into the infirmary, he nearly succumbed to an attack of acute bronchitis—he was unable to expel the profuse secretion which collected in his tubes, owing to paralysis of his intercostals. At present (January 6th) this patient is steadily improving; the upper extremities have wholly regained their power, and the improvement in the feet and legs is very considerable, but as yet he is not able to walk unassisted.

The distinguishing features of this disease are:—The rapid occurrence of paresis, passing into palsy of either whole, or groups of muscles, and quickly followed by the rapid wasting of the muscles involved. There is loss of reflex action and faradic excitability, but no loss of sensation.

Its pathology is the same as infantile paralysis. It consists in a degeneration of the cells of the anterior horns of grey matter. It is not a settled point whether the change consists in a primary degeneration of the cells, or whether they are injured and pressed upon by the inflammatory products arising from an affection of the interstitial tissues of the anterior horns of grey matter. The latter is, however, the view that is generally adopted.

This disease throws light on the following diseases of the cord: I. Paralysis of infants. II. Spinal paralysis of adults. III. Lauder's acute ascending paralysis. IV. Amyotrophic lateral spinal sclerosis.

The treatment pursued in this case was, in the early stages, large doses of ergot, followed by iodide of potassium and the continuous current.

Prof. Grainger Stewart has had lately under his care, in the infirmary, a case of what Trousseau designated as epileptiform neuralgia. The patient, a man 70 years of age, has been troubled with it for 18 years, and during that time he tried a great number of different remedies, but nothing, except very large hypodermic injections of morphia, had the least effect in mitigating the severity of the attacks, latterly even the morphia failed to relieve him. The pain, which came on in paroxysms, lasting from half a minute to one and a-half or two minutes, and

was of the most agonizing character, started in the region of distribution of the labial branches of the superior maxillary nerve. The act of chewing invariably brought on a paroxysm; on this account he was compelled to feed himself through a tube. The slightest friction over the area supplied by the superior maxillary nerve excited an attack. As soon as the pain started, the muscles of the right side of the face began to twitch. As a rule, he had several attacks daily; the longest interval during the 18 years that he was free from them was six months. After his admission into hospital various remedies were tried, but not the slightest benefit was noticeable from any or all of them.

The nerve, as it emerges from the infra-orbital foramen, was cut down upon and stretched. This procedure was attended, after 12 hours, by almost complete relief; but the pain recurring shortly afterwards, the operation was attempted to be repeated, but owing to the nerve being up in the newly-formed cicatricial tissue, it could not be stretched, but was cut through. This only gave partial relief for a short time. The labial branch of the nerve was stretched, and since this has been done (seven weeks ago) he has been completely free from pain. He is able now to chew his food, and bear his face to be roughly rubbed.

Although the relief which has followed this last method of treatment is complete, it remains to be seen whether it will be permanent or not.

The following case, although it presents nothing unusual in its pathology or treatment, is of very great interest from its frequency, and is a good example of how a patient with irretrievably damaged organs can be made to enjoy a comparatively comfortable existence, and have his life greatly prolonged. The patient, a man 60 years of age, was admitted into the hospital a year ago under Prof. McLagan's care. Last May he was transferred to Prof. Stewart's wards, and his condition then was as follows:—

He was suffering from great dyspnoea, œdema of the lower extremities, scrotum, and integument of the lower part of the back and abdomen. He had bronchitis with œdema of the

lungs, and double hydrothorax. His heart was dilated and feeble, his mitral valve was incompetent, and the orifice of his aorta was obstructed. He had a degree of cirrhosis of the kidneys, and his urinary tubules were the seat of acute catarrh.

He was drowsy from uræmic poisoning. The pulse was hard and tense. Sixty ounces of serum were withdrawn from the right pleural cavity, although the dullness did not reach up to the inferior angle of the scapula. Up to the present he has been tapped on ten different occasions—eight times from the right and twice from the left pleural cavity; 700 ounces in all having been withdrawn.

He was given a pill containing digitalis, squills and carbonate of ammonia.

At present the patient enjoys a fair degree of comfort, the dropsy of the lower extremities having almost completely disappeared. Prof. Stewart says he has learnt the three following lessons from this case:—I. A bolder use of the aspirator in cardiac dropsy. The fluid should be allowed, however, to drain away very slowly, and the cavity should not be completely emptied. II. A very large quantity of fluid may be present in the pleural cavity without giving rise to extensive dullness. This is explained by the constant and long-continued pressure of the fluid, causing exhaustion of the diaphragm. III. A more thorough appreciation of the great value of digitalis as a cardiac tonic, and of digitalis with squills as diuretics.

The anæmia, which is an important factor in the causation of the dropsy, in those cases is more certainly relieved by the use of the muriated tinct. than any of the other iron preparations, but often it disagrees. Dr. G. Stewart says that he has found that if the chloride of ammonium is combined with the iron tinct., the result is better, and the former prevents the irritant action of the iron.

Can acute lobar pneumonia be aborted? This question, which is generally answered in the negative, is one of great moment, and is one which Dr. Geo. Balfour considers can be answered affirmatively. For some years he has given chloroform in cases of pneumonia, and from a close observation of its

action he believes that it has a great influence in preventing hepatization of the lung structure, or, if this stage of the disease has set in, in preventing the spread of the consolidation. Until the pathology of pneumonia is better understood, it will not be easy to give an explanation of this supposed action of chloroform. There are good reasons for believing that the term acute lobar pneumonia may include more than one distinct disease, for recent observations tend to show that there is really a specific fever, having for its local lesion a croupal exudation into the air cells.

Balfour, however, denies the existence of a true specific pneumonia. When blood-letting was so frequent in the treatment of pneumonia, many cases were recorded where the disease was seemingly cut short. No doubt many of those so-called cures were instances of the natural resolution of an embolic pneumonia; for it is well known that the latter form of the disease runs a very short course. It seems superfluous to add that Dr. Balfour, who has a very extensive acquaintance with embolic pneumonia, would not include it in those cases treated by chloroform.

Dr. Balfour gives the chloroform internally, and in small doses, as it is given in Germany.

That chloroform possesses a wonderful influence in regulating and controlling the circulation, is well seen when it is given to patients almost moribund from heart disease or acute peritonitis. Dr. Balfour speaks highly also of its use in angina pectoris: it is preferable here to morphia, on account of the quickness of its action, and to nitrite of amyl because it is not followed by any unpleasant after effects. It is seldom that patients will take amyl a second time, on account of the unpleasant fullness of the head that it produces.

The following is a well marked case of acute miliary tuberculosis in an adult.

A female domestic servant, aged 21, was admitted into the infirmary, on the 7th January 1879, under Dr. Claud Muirhead's care. Five days before admission she was noticed to be fretful and altered in character. She complained of headache.

The family history was not obtained. Her state on admission

was as follows:—The temperature was 101° , pulse 70, bowels constipated, answers to questions are incoherent. She lay in a state of coma vigil during the first night. On the following day the pulse was fallen to 60; the temperature in the morning was 100° , in the evening 100.5° . The pain in the head, which previously was confined to one side, had now extended all over the vertex, and was of a very severe character; the pupils sluggish. On the 9th, pulse 60, temperature 100° ; passed only 20 oz. of urine during the last 24 hours. During the next few days the temperature varied from 98° to 100° , the pulse from 50 to 70. She has been either delirious or in a semi-comatose state. On the 15th a double divergent squint was noticed; passed a very delirious night. On the morning of the 16th temperature 100° , pulse 82, urine 10 oz. Died on the evening of the 16th.

Post-Mortem.—Brain—The dura mater was not adherent to the bone. The vessels of the vertex very full. The convolutions greatly flattened. The lateral ventricles only contained three pints of serum. Pons and medulla felt hard. The membranes in the neighborhood of the circle of Willis thickened and milky. The small vessels here and along both Sylvian fissures were covered with small miliary gelatinous tubercles. The liver, spleen and kidneys were also dotted both internally and externally with bodies of the same size and consistence. The same was applied to the lungs, but, in addition, there was in the apex of the left lung a caseous mass, one-quarter of an inch in diameter, which was undergoing liquefaction in its centre. The origin of the infection here was either this mass in the lungs, or an enlarged and pigmented caseous bronchial gland which was also present. The morning previous to death, one-third of a grain of pilocarpine was injected subcutaneously; this produced great salivation and sweating. The cause of the small quantity of fluid found in the ventricles was, no doubt, owing to the profuse diaphoresis induced by the pilocarpine. In proof of this statement we have the flattened condition of the ventricles, which shows that at one time there was a considerable pressure exerted on them. In the case of a child, seen by Dr. Balfour

where there was deep coma in the last stage of tuberculous meningitis, the injection of pilocarpine was quickly followed by the disappearance of the coma, but it soon returned. The most remarkable feature in connection with this case of miliary tuberculosis is its extremely rapid course. She died within three weeks (probably 17 days) of the first appearance of any symptoms.

J. S.

Reviews and Notices of Books.

A Practical Treatise on the Medical and Surgical uses of Electricity, &c., &c. By GEO. M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. — Second edition, revised and enlarged, with two hundred illustrations, 8vo. pp. 794. New York, WILLIAM WOOD & Co., 27 Great Jones Street, 1878.

The first edition of this work appeared in 1871, and was very generally approved by the profession, so much so, indeed, that it was translated into German by Dr. Väter of Prague, a gentleman who has devoted much of his time to the subject of general electrification.

Faradization is a general constitutional tonic, and is of benefit in a number of affections, as a therapeutic agent of great value, it has assumed a position of importance that can hardly be estimated. It is essential to the successful use of electricity as a therapeutic agent, that the practitioner should be familiar with its physical relations. It is in this knowledge that we notice the difference which results in the practical application of electricity in disease, by the blundering charlatan and the scientific physician; and we must regard the publication of this the second edition of this work as a matter of congratulation to the reading professional public, as its pages will be found to contain, as the author's term it, a "thoroughly sifted experience" of their own, from the time they entered on this specialty to the present period, as also a full and exhaustive *resumé* of all that has appeared from the pen of other authorities.

The explanation of the chemistry of the batteries is full in detail, and will be found in accordance with the most recent chemical knowledge of the subject. To Ohm's law is assigned a special chapter, and it is made clear in all its practical relations. Electro-physics is treated of, and the most recent facts are given in a clear and compact style.

The chapter on Electro-physiology has received large additions, which includes a report of a number of experiments made by the authors during the past three years. The relation of electro-physiology to electro-therapeutics is prominently dealt with. Since the publication of the first edition of this work the method of central galvanization has been reduced to a system, and is here fully described and illustrated, and its advantages over local galvanization fully discussed. The various methods of using electricity are also described, as local Faradization, local galvanisation, electrolysis, and the uses of electricity in surgery as well as the galvanic cautery, these are all described seriatim. There is a chapter on apparatus, and the most recent improvements are given. The superiority of the continuous over the broken, or separate coil Faradiac machines, is likewise discussed. In the application of electricity by the surgeon the method of applying the galvanic cautery, and ordinary electrolysis is described, and the results from a very large experience in this department are given, so that we may here learn what can be done, and what cannot be done by electricity in surgical disease. In the clinical descriptions, the successes and failures are fairly represented.

The work has been greatly enlarged, but in this enlargement new matter is given, material which embraces a larger practical experience of the uses of electricity in disease. The work is illustrated throughout with 198 engravings on wood, and to those who desire to employ this valuable therapeutic agent in the treatment of disease, we can alone observe that this work will be found indispensable.

On Loss of Weight, Blood-spitting, and Lung Disease.—

By HORACE DOBELL, M.D., &c., &c., Consulting Physician
to the Royal Hospital for Diseases of the Chest, &c., &c.

London: J. & A. CHURCHILL, 1878. Svo. pp. 275.

Pulmonary Consumption being so frightfully common-place a disease in nearly all temperate climates, all matters connected with the elucidation of its causation and pathology are of the very highest practical importance to every zealous physician. How anxious every patient is about what is to follow when he has had an attack of hæmoptysis. The public know—it is notorious—that this often seems to be the precursor of permanent organic changes in the lungs. How eagerly, therefore, the subject of it seeks the counsel of his physician for the prevention of the threatened evil, or, better still, the consoling experience that he has it not to dread. The relationship of hæmoptysis to lung disease has long been a debated point in the pathogenesis of phthisis. Its exact position in this respect is yet by no means settled. Every attempt to assist in the solution of these problems is to be gratefully accepted by the profession. In this work Dr. Dobell has offered to us a large amount of material of much interest and instruction with reference to the relations between loss of body-weight and blood-spitting to co-existent or subsequent pulmonary disease. Much of the value of the book is derived from the large numbers of original observations—frequently accompanied by carefully-tabulated statements, brought together and compared specially with the view of throwing light upon the matters under discussion. All the more recent views of the principal writers on Consumption are also passed in review, and looked at *pro* and *con*, both from their own stand-point and also in the light of the author's own observations. We have much pleasure in bringing to the notice of our readers this further contribution of this well-known writer to the clinical study of Consumption. It will be found full of interest, and a good guide and assistant in forming opinions upon the important points set forth in its title.

Diseases of the Bladder and Urethra in Women.—By ALEX. C. SKENE, M.D., Professor of the Diseases of Women in the Long Island College Hospital, &c., &c. 8vo. pp. 374. New York, WILLIAM WOOD & Co., 27 Great Jones Street.

This is a collection of eight lectures which were prepared originally for the class of the Long Island College, and they will be found to embrace many of the diseases and functional derangements of the bladder and urethra, which are not to be found in any systematic work in the English language. This work supplies a deficiency which has been felt by the practitioner. These maladies may at first appear of no moment, but experience, however, will prove that diseases of the bladder are tedious and perplexing, full of misery to the sufferer, and demanding at the hands of the practitioner a large share of patience and perseverance. In the opening lecture the author gives a general outline of the anatomy of the bladder and urethra, functions of the bladder, its development, and malformations of the urethra and of the bladder. In this part of the lecture are discussed the probable causes of the congenital malformations which are sometimes met with. In the second lecture the author discusses functional diseases of the bladder, irritable bladder due to abnormal urine, and functional derangements due to disease in other pelvic organs; the same, from anomalies in position and form of the bladder, and extroversion through the urethra. The third lecture is upon organic disease of the bladder, the aids to diagnoses in the examination of the urine, and exploration of the bladder itself. Hyperæmia and hæmorrhage from the bladder.

Cystitis acute, sub-acute, chronic, catarrhal, croupous, diphtheritic and gonorrhœal, form the subjects discussed in the fourth lecture. The treatment of these affections is given in the next lecture, and in the sixth lecture, the author discusses tubercular and malignant affections of the bladder, foreign bodies in the bladder, also hypertrophy of the viscus.

The remaining two lectures are devoted to affections of the female urethra. There is an appendix to the first lecture, in

which is related a case of extroversion of the bladder by Dr. Daniel Ayres, which was successfully closed by two flaps taken from the abdominal parieties above. It appears to have been a characteristic case, but one greatly benefited by the operative measure adopted. This is a most useful manual, and treats of affections which are not discussed in works devoted to the consideration of diseases of females. We recommend it to our readers as a good and reliable guide in the treatment of diseases of the bladder and urethra in women. The type is large, well impressed, on the best of paper, and it is illustrated throughout with most artistic wood engravings.

A Manual of Physical Diagnosis.—By FRANCIS DELAFIELD, M.D., and CHARLES F. STILLMAN, M.D. 4to. pp. 30, interleaved. New York: WILLIAM WOOD & Co., 27 Great Jones Street, 1878.

In the preface the author states that “this manual is intended for the use of those who have to teach and to learn the art of physical diagnosis,” and it is supplied with blank leaves, so that the student or practitioner may take it into the wards of an hospital and use it as a note-book. We do not think it could with advantage be so used, but we have no doubt that the work will be found to supply a place which has until now remained unfilled. The work commences by a description of the methods of examination, showing how they should be conducted. There is first described the sounds elicited on percussion in a normal condition of the chest and abdomen. The different regions being indicated, we next have detailed the sounds elicited in conditions of disease. Auscultation in health and disease, are next given, and then there is described the differences in quality of the voice in variable conditions. The physical signs as indicative of special forms of disease of the lungs are then given. The author then passes on in the same systematic manner to the elucidation of the physical signs met with in the examination of the heart, terminating his description with those indicative of aneurism of the arch of the aorta. The author in the preparation of this work, acknowledges his indebtedness

to the works of Walshe, Flint, and Sibson. There are two original drawings by Dr. Stillman, one of the anterior regions of the chest and abdomen, the other of the posterior regions; these are specially intended to indicate the relative position of the various organs, and are of great practical value. The whole is most handsomely got up, and the plates which adorn the book, are finished in the highest style of art. One is a dissected plate and indicates the position of the thoracic and abdominal viscera with truthfulness and accuracy. We think this manual will be found of service, more so, perhaps, to a man who has already become familiar with physical exploration than to the beginner. To the teacher we should think it would be of especial use.

A Practical Manual of the Diseases of Children, with a formulary. — By EDWARD ELLIS, M.D., late Senior Physician to the Victoria Hospital for Sick Children, &c, &c. Third Edition, 8vo. pp. 213. New York: William Wood & Co., 27 Great Jones Street, 1879.

This is the second of the series published by the Messrs Wood of New York in their Library of Standard Medical Authors, and is issued from the press in the same style of excellence as the first volume formerly noticed.

This is a very excellent manual on the subject of Children's Diseases, and consists of ten chapters. The principal worth of this manual is the abundant formulary, the general therapeutic hints and a description of suitable diet, which is more important in the treatment of diseases of children than medication. The last chapter in this work is devoted to this subject. This chapter is brief but of very great importance practically. This being the third edition much fresh material will be found added in each section. The general description of diseases is quite up to the time and the work will be found of use to both practitioner and student; it is a fitting adjunct to the series being published by the enterprising house of William Wood and Company, in their Library of Standard Medical Works. We trust the worthy attempt of the publishers to give to the profession a series of useful books, at a price far below their value, will be fully appreciated and liberally supported.

Index Medicus, a monthly classified record of the current Medical Literature of the world, compiled under the supervision of Drs. JOHN S. BILLINGS, Surgeon, U.S.A., and ROBERT FLETCHER, M.R.C.S., Eng. Vol. 1. Jan. 31, 1879. Imp. Svo. pp. 72. New York : F. SEYPOLDT, 37 Park Row.

It is known to most of our readers that some years ago a library largely composed of periodical literature was started in connection with the Surgeon-General's department of the United States of America, at Washington, this was principally under the charge of Dr. John S. Billings. This collection has assumed large proportions, and contains at the present day many thousand volumes. This, of itself, is a most valuable collection as in it are to be found Medical periodicals of all nations and in all languages. With a view of rendering this collection of use to the general professional public, the authors of the *Index Medicus* have determined to publish a monthly record of the titles of all the papers that appear in the periodicals which are received during the preceding month.

We have received the first number of the *Index* published under the Editorial management of Dr. J. S. Billings of the Surgeon General's Department, U.S.A., and Dr. Robt. Fletcher. It bears evidence of a vast amount of labour and research. It is proposed to issue a monthly index to contain the titles of all papers that have appeared in periodicals or transactions of societies, new remedies and the latest information on therapeutics. This will be of especial benefit to authors, as in these pages they will be able to discover the latest views of writers and to ascertain whether the views which they themselves hold have been anticipated by others. Teachers in Medicine or Surgery will be able to keep, *au courant*, with the advance of their art, by noting what is being done in all countries ; and editors of periodicals will with facility be able to refer to the articles to be found in other periodicals, besides the incalculable benefit to be derived by a full publicity of the papers to be found in their own pages.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Chloral Hydrate.—(Note on a method of administering Chloral Hydrate, by E. L. DIXON, M.D., M.R.C.P.)—On the 27th July I was sent for some distance into the country to see a farmer, who was said to be dying. When I arrived I found that he had been suffering for the past twelve hours from a series of violent epileptic paroxysms, and that for three hours he had not been sensible. In my presence he had two attacks with an interval of twenty minutes, in which he never became quite conscious, but continued to toss about violently. He had passed urine involuntarily during a paroxysm; the pulse was quick and weak; the bowels had been well acted upon, and the temperature was high, $103^{\circ}\cdot 2$, as is the case in the status epilepticus. He had been, it was said, fairly temperate of late, but he had been thoroughly wet through two days before this attack. He was a robust man of twenty-eight years of age. Epilepsy had first shown itself about two years before, from exposure to the sun during hay-making, it was said, and the attacks had been repeated every month till January last, when I was called in to see him on account of his having had several in one day. I then found he had been indulging freely in alcoholic liquors; the urine was free from albumen and of fair sp. gr., but nothing else was made out. I recommended strict teetotalism, and that he should take the bromide potassium regularly for some time. After this he had no return until about five weeks ago, when he had two attacks, and had then remained free till I was again sent for.

On this occasion, in consequence of the increasing rapidity of the recurrence of the fits, I became alarmed as to the result, for it was evident that unless they ceased he would become comatose and die. The principal indication seemed to me to diminish if possible the excitability of the reflex nervous centres. I did not venture, nor did I think it desirable, to bleed him. I had no chloroform with me, but I had a small bottle of the

liquor chloral hydrat. (corbyn), of which each minim equals a grain of salt. I tried to make him swallow a draught containing a drachm, diluted with water, but he pushed it away forcibly. I had no syringe with which to administer it as an enema, nor even hypodermically. With the assistance of a strong man, who held his head and opened the jaws with a piece of wood, I emptied a teaspoonful of the concentrated solution into the back of his mouth. He started violently, but did not eject any of the medicine. After a time I noticed that the restlessness diminished; still he did not sleep. About half-an-hour after the first dose I administered a second of about forty minims in a similar manner, when he gradually sank into a profound sleep, which lasted five or six hours, and there was no return of the convulsions. Next day I found his temperature had fallen to $101^{\circ}3$, the pulse was quiet; the urine, however, contained a small amount of albumen, and was of sp. gr. 1.014.—*The Practitioner*.

Urticaria as a consequence of the administration of Sodium Salicylate.—The following case of urticaria came under the observation of Prof. Leube's *poliklinik* last winter. A man aged 45, who had been healthy till he came of age, when he suffered from a tedious attack of rheumatism, suffered a relapse and came for advice to the clinic. The left elbow and right knee were slightly swollen, and the skin was somewhat reddened, whilst great pain was experienced in the affected limbs. The heart was normal. The clinical appearance of the disease resembled the usual type, but its course was protracted. During the ten days following admission 0.50 of sodium salicylate were administered every hour, without any good effects becoming apparent, though no signs of any change in the organism were noticed. A large dose of the substance—four grams—was then given by way of experiment. The same evening the patient suffered from an intolerable itching, which came on shortly after injection of the powder, and lay rubbing himself with the woollen bedclothes, though on superficial examination nothing was seen

except that the left half of the face, the lower extremities, and a part of the chest were very red: on a closer examination both eyelids, the upper lip, and the lower extremities as far as the middle of the lower part of the thigh, were slightly œdematous. The temperature was 38.8° C. the pulse 80. The urine albuminous. A physical examination afforded no results of importance. The original rheumatism, however, was much improved, as the patient did not feel so much pain in his affected joints. On the following day the temperature in the morning was 37.8 and the pulse 80; in the evening 37.2 and 76; there was no trace of redness. Three days later the patient was free from pain; but on the fourth he suffered so much, that a second large dose of sodium salicylate was ordered. The observations were then made cautiously. Fifteen minutes after injection of four grains of the powder, a burning pain was felt in the forehead, five minutes later great itching of the skin over the right metacarpals. There was slight œdema of both eyelids, and surrounding parts were somewhat reddened. The redness spread over the left ear to the neck, whilst œdema of the upper lip became apparent. Soon afterwards great itching was felt over the epigastrium, and over the whole abdomen an eruption of pale and sparsely spread vesicles were noticed, situated upon a red ground. Half an hour afterwards the patient felt the itching over the whole of his body, and the vesicles were apparent on his legs, whilst his arms were in a well-marked œdematous condition, without any reddening of the skin. An hour later the vesicles had disappeared, though the reddening of the skin remained apparent for two or three hours. The urine was free from albumen some hours after the attack. On the following day nothing could be seen. Six days afterwards the experiment was again made with similar results. The condition of the patient was always improved, and he continued to take small doses, which were without effect in causing urticaria. After complete recovery of the patient he again took a large dose, followed once more by the appearances described. (Dr. Heintz, *Aertztliches Intelligenzblatt*, 1878, No. 15, *Med.-Chir., Rundschau*, Oct 1878. *The Practitioner*.)

Treatment of Sore Nipples.—Dr. Hausmann's plan of treating sore nipples by the application of solutions of carbolic acid has recently been tried in the lying-in wards of the Berlin Charité Hospital. Instead however of applying strips of lint saturated with the solution, Dr. Steiner directed that the acid should be brought into contact with the sores by means of a camel-hair brush. Forty cases have been thus treated with satisfactory results. A 5 per cent. solution seemed to be most efficacious; its application may be said to be painless, as it causes only a very slight burning. By means of the brush the acid can be applied to the smallest cracks, and two or three applications of this kind daily are usually sufficient. A shield of course must be used when the child is put to the breast. Dr. Stiener also tried solutions of thymol, 1 in 1,000, for a similar purpose, but found them to be far less efficacious than the carbonic acid.—(*The Medical Examiner*, August 8, 1878.) *Practitioner*.

Fuchsin in Chronic Nephritis and Dropsy.—Dr. Bouchut communicates the case of a boy six years, who had suffered ten months previously from scarlet fever, and who was now ill from severe albuminuria and dropsy. The temperature was 39° C. The child was ordered .10 fuchsin in two pills and a milk diet, and on the following day 0.15-0.20 grammes of the same drug. The albuminuria and dropsy completely disappeared after fourteen days of this treatment, whilst no bad effects were observed. The author draws no conclusions from this case, but he thinks, and no doubt correctly, that these means ought to be tried in those cases of chronic albuminuria in which other methods of treatment have been adopted ineffectually.—(*Gaz. des Hôpitaux*, 1878, No. 43; *Méd. Chir., Rundschau*, Oct. 1878.)—*The Practitioner*.

Danger of Atropin.—M. Galezowski at the Séance of the Société de Biologie of Paris, séance of November 16th, 1878, showed that in many diseases dropping of atropin into the eye was attended with danger. He quoted several cases of adults as well as children in which serious results had followed from absorption by the media of the eye, of very small doses of this substance. In short, Mr. Galezowski believes atropin to be an exceedingly useful, although at the same time very dangerous remedy, which should be used with the greatest caution. Duboisin which can replace atropin is a less dangerous drug, because its principle is less active.—(*Le Progrès Médicale*, November 31, 1878.) *The Practitioner*.

CANADA

Medical and Surgical Journal.

MONTREAL, FEBRUARY, 1879.

CORONER'S INQUESTS.

We insert, by request, a letter from Dr. O'Leary, addressed to the Editor of *The Montreal Herald*, which will be found to be a running commentary on the inquest held on the body of the late Richard Patton, suspected to have died by poison, or of having committed suicide by swallowing an over-dose of morphine. We do not think that it has been proved positively and without doubt, that the deceased actually did die of morphia poisoning, but then it was not to be expected that the mere examination of the stomach and its contents would satisfactorily prove this point.

The whole affair from beginning to end appears to have been bungled.

An inquiry touching the death of an individual, to be of any service in the administration of the law, ought to be conducted on such principles as to leave no loop-hole or assailable point where a doubt can be entertained. The law always leans to the side of mercy in criminal cases, and the prisoner is entitled to the benefit of any doubt which may arise. This is a well-known axiom, and since it is so, why should not the Government guard against any such possibility by the employment of skilled evidence where such is attainable. In the method of conducting inquests as at present followed, it does appear to be a mere matter of form, a disagreeable form which has to be gone through, but which means nothing, and practically amounts to nothing. The country is saddled with expense in conducting a meaningless inquiry, which in the end serves to fill our evening

papers with a sensational column, full of horror to the readers, full of harrowing circumstances to surviving friends, which points to no moral, but rather panders to the prurient curiosity of a debased taste of the public at large.

We do not desire to say anything of a personal nature regarding those engaged in the special inquest under discussion, but can alone remark, that whatever the suspicion as to cause in the death of this unfortunate man, we cannot admit that it has been proved that he did die of poison. The presumption may be in favor of morphia poisoning, but in the Scotch acceptance of the term it remains unproven. With respect to inquests we have something to say.

If it is necessary to hold an inquest at all we should apply the old-fashioned maxim, "if it is worth doing, it is worth doing well." An inquest of this solemn nature ought not to be done in a slovenly manner. Any case that is likely to come before the criminal or civil courts ought to be so conducted as to leave no question of doubt. To secure this end, so desirable, the persons employed should be thoroughly conversant with the law and in their several departments possess the acumen of experts. If a chemical analysis is to be conducted the Government ought to employ a person, not second-hand, but direct, who is known to be capable of carrying out such analysis. In the case of the late R. Patton, the contents of the stomach were required to be analysed, and, strange to say, to Dr. O'Leary, who we believe to be a very excellent private practitioner, was allotted the task of searching for the poison. We were somewhat surprised that the Doctor assumed the task, but in doing so he had to associate with himself, or to secure the services of a known practical chemist, so that the country is called upon to pay for the services of two men, both we presume, charging the customary fee. We think Dr. O'Leary would have been more true to himself had he refused to accept the responsibility of such an investigation, and have referred the Government to a practical chemist. This is merely our opinion, and can go for all it is worth.

But again, in conducting an enquiry, we think the Government would be better served if instructions were given to their officer

to employ the services only of those who make a special study of subjects of this description. In this city there are three schools of medicine, and in each school the subject of Medical Jurisprudence is taught; who is better able to conduct a preliminary inquiry and perform a post-mortem examination in cases of suspected foul play, than a man who makes it his special study, who is constantly teaching how a post-mortem examination ought to be conducted in any special case where suspicion of murder or suicide exists. Had any of these gentlemen conducted the examination of the body in the above case, we hardly think they would have omitted the precaution of securing the contents of the urinary bladder, or some portion of the liver or blood, to prove that the poison, if any existed in the stomach or its contents, had entered the system and was in process of elimination. Then, again, we are not all chemists. This is a department of so special a nature that it is simply absurd to expect a satisfactory and reasonable report from any but a man who makes it his special study, and who is provided with the necessary apparatus for carrying out his inquiry. There are very few all-round men in the profession, though some may flatter themselves they can adorn any position to which for the time they may be called upon to occupy.

To the Editor of the MONTREAL HERALD.

SIR,—The Government of Quebec having honored me with an appointment in connection with the inquest case of the late Mr. Patton, I think it is my duty to inform the Government and the public of the way in which inquests are held in Montreal. I have no personal interest whatsoever in this matter; but I will make a short review of it for the purpose mentioned, which will show the negligence of the Coroner in not summoning important witnesses, his want of personal dignity, and his moral inability to keep proper decorum in his own Court, thus allowing jurymen to make false accusations against absent important witnesses, just to influence their fellow-jurymen; and the indecency of his allowing political squabbles and a censure of the Government whose officer he is.

Mr. Patton, a respectable and well-known business man, whose life is insured for a considerable amount,—which is forfeited in case of suicide—fails in business. A few days after he suddenly disappears. After five days of research he is found dead, under the suspicious circumstances common in cases of suicide—that is to say, in a sleigh stored in a hay-loft of his residence. The Coroner empannels a jury, who take the following

oath, which, with our present Coroner, is generally their only guide in coming to a conclusion:—"You shall present no man for hatred, malice or ill-will, nor spare any through fear, *favor* or *affection*; but a true verdict "give according to the evidence and the best of your skill and knowledge, so "help you God." Here is, in substance, the evidence according to which only the jury was sworn to bring in a verdict. Mr. Williams merely swears to the finding of the body. Mr. Thos. Shaw knew deceased for 14 years and had noticed for some time past that his spirits were considerably depressed. Two other witnesses, Mr. A. C. Hutchison and Mr. H. T. Patton—the latter deceased's son—testified to the same effect. But Mr. Shaw, having taken breakfast with deceased on the morning of the 14th December, the date of his disappearance, found him much quieter than usual. He took very little breakfast, walked down to the lane in rear of deceased's residence, which deceased entered without further remark. This was a little uncommon, as formerly he used to say that he was going no further, or something to that effect. Apart from the medical and chemical evidence, this is all that was submitted. However, to complete that part of the evidence upon which, or rather against which, the jurymen must have founded their finding, if they found it upon evidence of any kind, I will insert that part only of the medical evidence contained in the following question and answer:—

Question by a jurymen to Dr. Reddy—If the circulation of the blood of the deceased were weak, so as to cause partial numbness of his hands, would *excessive grief* and mental prostration, combined with this weakness, not imperil his life?

Answer by Dr. Reddy—It would not!

Dr. Reddy is a physician of great experience and learning—ranks amongst the first of this city—and I may say that he has expressed on that point the opinion of the Faculty. Nevertheless, twelve jurymen, sworn to investigate the cause of the man's death according to the evidence only, return the following verdict:—"That Richard Patton had, for some time "prior to his death, been in a weak condition of body and in a desponding "state of mind: the jurors are of opinion that the death of the said R. Patton "was caused by exhaustion and grief." Now, any man may see that—1st. There was not any evidence of a *weak condition of the body*; 2nd. Nor of any *exhaustion*; 3rd. As for despondency and grief, Dr. Reddy says emphatically that a man cannot die of grief under such circumstances, of course.

I will next notice the medical and chemical part of the evidence, not so much to criticize the verdict as to suggest whether the Government would not do better to employ the expense for medical evidence, which is considerable in such cases, to a better purposes. It might be given, for instance, to educational institutions, for the purpose of instructing children in the rudiments of medical jurisprudence. Are twelve such men as are generally empannelled at an inquest, or even men chosen amongst the most intelligent classes, if they have not made a special study of physiol-

ogy, pathology and medical jurisprudence, reasonably to be expected to understand and judge of a *post-mortem* examination or a chemical analysis? If they are sensible men they will accept the opinion of experts, but ignorance is always presumptuous, and, in this Patton case, one jurymen went so far as to say that he did not care for the opinion of Dr. Girdwood or any other M.D. If that opinion were expressed by an intelligent man, it would certainly be not very complimentary to the profession; such as it is, it amounts to nothing. This very omniscient jurymen apparently does not even know the difference between a fact and an opinion, for he asked whether, from the morphia found, we were prepared to swear as a *fact* that Patton died of its effects? We might just as well have been asked whether we were prepared to swear as a *fact* that Mr. Patton was dead at all. Never having seen Mr. Patton, dead or alive, the answer must have been "No;" but we were of opinion that he was really dead, and could so swear. So with our opinion as to the cause of the death; circumstantial evidence, as everybody knows, is in many cases more reliable than direct evidence. I relate this incident as an example of how medical evidence is appreciated by incompetent jurymen, and again ask, whether Government is justified in incurring expense attended with such useless results? Reverting to the medical evidence. Dr. Reddy is entrusted with the "*post-mortem*" examination. He associates with him Dr. Osler, a clever and promising young practitioner. Dr. Reddy and Dr. Osler report the perfect healthiness of all the organs and the absence of all *natural* causes of death—with the exception of the stomach, which they do not examine, but tie up carefully, and insinuate that *there* will probably be found the cause of death. They also advise the chemical analysis of its contents, which Dr. Girdwood and myself proceeded to make. We invited Dr. Reddy and Dr. Osler to be present with us, in order to give them the opportunity to complete their "*post-mortem*." Dr. Osler being out of town, Dr. Reddy alone came; and he will not object, I am sure, to my relating what otherwise he would, doubtless, have said himself before the jury, had he been asked to attend at its subsequent meeting. After giving us, from memory, a very graphic description of the "*post-mortem*," he observed that:—"What struck him "most of all was the appearance of deceased when he first saw him. He "looked just as if he was sleeping, and, had he not known him dead, his "first impulse would have been to give him a good push in the ribs, and "would have expected him to wake up suddenly and exclaim, 'Hallo! "What's the matter?' He was just like a man that had passed from life "to death in a sound sleep."

We conclude our analysis, find morphia in undoubted quantities, and report accordingly to the jury. The only question I am asked is, whether deceased died of the quantity of morphia found in the stomach? I am surprised that the Coroner should put such a question. From his long experience as Coroner he should have known that it is not the quantity of poison found in a man's stomach that causes death, but the quantity absorbed into the system; and it is impossible to ascertain the quantity

which is thus absorbed. Answering to what [the Coroner probably meant by the question, rather than to its literal meaning, I said that he might or he might not, according to circumstances,—and then I awaited the next question to explain my opinion of the cause of death. This, however, was not asked. The question that should have been put is this :—From your analysis of the contents of the deceased's stomach, and from a careful examination of the *post-mortem* report, what is your opinion of the cause of the late R. Patton's death? Medical men are called before Coroners' Inquests to give opinions, and nothing more. If the opinion is not to be accepted, it is no use for them to be called. The question put to me is asked of Dr. Girdwood, who answers in the same sense, and goes on to explain his opinion, when a juror orders him to cease. The Doctor endeavors to proceed, when he is again interrupted, in grossly uncomplimentary style, by such expressions as "I do not care for your opinion; I care for no M.D.'s opinion," and so on. Nevertheless, after considerable difficulty, Dr. Girdwood contrives to give his evidence, to the effect, that having examined the *post-mortem* report and other circumstances, he is of opinion that deceased died from the effects of morphia. To recapitulate, shortly—there was no external evidence, except that of the ordinary anxious state of a man in business troubles, nor any *natural causes* of death. But poison was found in the stomach, and the medical opinion, strongly expressed, was that the death was caused by poison, consistently with the *post-mortem* indications. The novel theory of dying from grief was emphatically rejected by medical evidence. But verdict, "Died of Grief!" After making the poor man die of grief, this most intelligent jury add: "He did not die of morphia!" Rather evident. After this, surely, they should apply for a patent. Suppose the following identical case :—A disappointed lover is found dead with a dagger through his heart. The "Patton patented jury" would surely return the following verdict: "Died of love and grief—the dagger having nothing to do with the man's death!!" I add a few remarks as to the negligent, irregular and undecorous manner in which this inquest was conducted. 1st. The chemical analysis having been decided on, the Coroner should have submitted for analysis the stomach, the liver, the bladder, with whatever urine it contained, and a part of the brain, in air-tight vessels, sealed with wax. In this case the stomach only was submitted in an unsealed vessel. Two days before the last meeting of the jury, Coroner Jones was informed, by one of the analysts, that morphia was detected. The same day friends of Mr. Patton were apprised of the fact. Hence that disgraceful scene in the jury room before our arrival—when the correspondence with the Government was asked and submitted; when attacks against the Government, their followers and their nominees were freely made; and when false and most absurd accusations about insurance influences were uttered, in the most ungentlemanly and vulgar manner, in the presence of the Coroner, with the evident intention of influencing the jury. If the Coroner had had a proper sense of his duty, and of the importance of his office, he would have adjourned the inquest to another

day, and not allow, as he did, the jury to return a verdict while laboring under such false impressions. Jervis, on "The Office and Duty of Coroner," says:—"Where the jury suspect that undue influence has been used, the Coroner may, in the exercise of a sound discretion, adjourn the inquest to a future day." It was plainly a case to adjourn. Next, when Drs. Reddy and Osler were asked their opinion as to the cause of death, at the second meeting of the jury, they reserved their answer till the stomach should be analysed. Why did not the Coroner summon them to be present at the last meeting? They had made the *post-mortem*, and, being afterwards informed of the results of the analysis, were certainly most important witnesses. They were not present. Previous to the last meeting it was currently reported, and known to some of the jurors, that a certain druggist had sold poison to the late Mr. Patton. Why was not that druggist summoned?

I respect Mr. Jones for his great age and amiable social qualities; and what remarks I make in this letter concern only his functions as a public officer. But the only conclusion that could be arrived at, after the consideration of the present case, is, that Coroner Jones is not sufficiently qualified to fulfil the duties of a Coroner, which, besides, requires a great deal of physical activity. Coroner Jones is bordering on seventy-two years of age. He has been employed in the service of his country for over forty years. He has, no doubt, discharged his duties to the best of his abilities. He should be allowed to retire for his own good and that of the public, with a gratuity equal to his position in society. Economy is very good, but should not interfere with public interests; and a well qualified person, well versed in medical jurisprudence, should be named in his place. A fixed salary should also be attached to the situation, to render the Coroner independent, and not, as now, dependent on the number of inquests, or the time they occupy.

I have the honor to be,

P. O'LEARY, M.D., McGill.

Montreal, January 17, 1879.

POND'S IMPROVED SPHYGMOGRAPH.

We have received one of these instruments from the manufacturer, and believe it to be a decided improvement on those already in use. It is well finished, small, compact, easy of application, and does not get out of order with fair usage. It is capable of being applied to any part of the body, and a tracing may be had from any artery sufficiently superficial to give anything like an impulse. Moreover it may be applied over the heart, and a cardiographic tracing be obtained.

Various modifications of Marcy's instrument have from time

to time been introduced, but for compactness, simplicity, delicateness and accuracy, we believe that Pond's instrument is superior to them all. It is so readily applied that it gives no more trouble in its use than does the clinical thermometer.

Another advantage in this instrument is its compact size, being easily carried in the pocket, and always ready for use. A tracing can be easily obtained by holding the instrument over the seat of the vessel, although each instrument is supplied with an adjustable bed on which to lay the arm while taking a tracing.

Another invention of the Pond Sphygmograph Company is a method of reproducing the tracings on paper. This, of course, is applicable to the tracings taken by any instrument, and is of incalculable benefit, as through its various copies of tracings in each case under observation can be readily made and preserved in a case book. This process consists in preparing a solution of the ammonio-citrate of iron, and also a solution of the prussiate of potash. These solutions are mixed and kept for use in a dark bottle preserved from the action of light. When desired to obtain a print of any tracing, a slip of paper is prepared by wetting one side only in the above solution and drying it in a dark room. In printing the same method is adopted as in printing a photograph, the mica tracing being the negative from which is obtained the print. Specific directions are given of the strength of the solutions, and of the method to be followed in obtaining the copy on paper. We commend this instrument to those of our readers who are desirous of possessing a sphygmograph. It is without doubt the most compact and handy instrument of the kind in use. On reference elsewhere the advertisement of the Pond Sphygmograph Company will be found.