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CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Excision of the Elbow Joint, in a case of partial Anchylosis in the straight position, the result of unreduced dislocation. By George E. Fenwick, M.D., Professor of Clinical Surgery McGill University.

It is seldom that the surgeon is called upon to deal with a case of the kind about to be described. Dislocation of the elbow joint is an accident which is accompanied very frequently by rapid swelling of the parts, so much so as to render it somewhat difficult to determine the nature of the lesion. When dislocation of the elbow joint is overlooked for any length of time, it becomes a matter of great difficulty to return the bones to their proper position. This is sufficiently apparent from the irregular shape of the joint, so that whereas in other joints, such as the shoulder and hip, reduction of a dislocation has been successful after several months, surgeons of experience have failed to reduce dislocations of the elbow after the lapse of a few weeks.

Sir William Ferguson, in the last edition of his work on Practical Surgery, in speaking of dislocation of the bones of the forearm backwards, observes: "Within the last few years I have seen "a considerable number of cases of this kind which had been "overlooked or neglected, and I have attempted reduction in "many, at periods from four weeks to three months, but have "never, even under anæsthesia, succeeded in fairly reducing "them." I do not wish to assert that dislocation of the bones of the forearm have never been reduced at lengthened periods, because we have the evidence of Capelletti of Trieste, Sir Astley Cooper, Malgagine, Roux, and others, who succeeded in replacing the bones in cases of unreduced dislocation of the elbow joint at periods varying from seventy days to five months. Hamilton, in his admirable work on Fractures and Dislocations, mentions a case of dislocation of both bones backward in a boy aged seven years, which had been overlooked for nine weeks. Assisted by Dr.

Gurdon Buck, he reduced the bones, not however entirely, "as the head of the radius did not seem to occupy its original position fully;" furthermore, the epiphyseal end of the olecranon separated fully half an inch. The success of the operation in giving the boy a useful arm was not wholly satisfactory. Boyer was of opinion that dislocation of the elbow was incapable of reduction after four or six weeks. We need but refer here to the fact that the most severe constitutional disturbance has followed violent and long continued efforts at replacing the bones in this form of injury, even to the loss of the limb, and in some cases the loss of the life of the patient.

This should, in my opinion, be quite sufficient to warn the surgeon against using excessive force in attempting the reduction of the bones in cases of long standing. Of course it is his duty to make the attempt, but should he fail, he has an alternative which generally yields most favourable results. I refer to excision of the joint. In the case under consideration two attempts at reduction were made, but failure followed on each occasion. On the second attempt I flexed the arm gradually but steadily, using at the same time extension with the pulleys. The bones were rigidly fixed, and from the spastic contraction of the triceps I felt convinced of the impossibility of reducing the dislocation. I continued, however, the attempt until the olecranon separated with a snap. I then determined to abandon all further attempts, to allow a few days to elapse, so that all inflammatory action, consequent on the force used, should subside, and then to resect the joint. I am indebted to Mr. A. E. Mallory for the notes of the case.

Zoe D., aged 19, a delicate looking girl, came as an extern to the Montreal General Hospital on the 25th April, 1871, suffering from anchylosis of the left elbow joint, caused by dislocation of the bones of the forearm backwards; the arm was in the straight position; there was slight rotatory motion, but flexion and extension were impossible.

On the 1st March the patient was thrown from a carriage, lighting on the left hand. She was seen by a surgeon, who told her that her arm was broken; no attempt at reduction was attempted; it was put up in the straight position, with a splint leading from the axilla to below the fingers, and was maintained in this position for a period of forty days. When the splint was removed the arm was found fixed and useless. The house surgeon, Dr. Ross, on examining the case, discovered the nature of the accident, which was quite apparent. The condyles of the humerus lay in front, forming a large prominence; the olecranon process was backwards

and upwards, and the head of the radius could be distinctly felt rotating to the outer side, above and behind the external condyle.

There was great fixity and rigidity of the limb. She would not submit to any manipulative interference, and left the hospital. She returned again on the 28th April, when Dr. Reddy, aided by the House Surgeon, placed her under chloroform, and attempted the reduction, but failed. Considerable swelling followed this attempt, and she refused to enter the hospital, but said she would return in a day or two. She returned on the 1st May, when she was admitted under my care. At that time the joint was swollen, hot, glazed, and could not be handled without much increase of pain. I ordered an evaporating lotion, and decided for the present to abstain from all attempts at reducing the bones.

The arm was placed on a pillow and perfect rest enjoined. At the end of ten days an attempt at reducing the dislocation was made, and as much force employed as I thought prudent. Indeed, after using considerable force, the olecranon process separated with a snap, but the bones still remained unreduced. The limb, however, was semiflexed, a position in which it was retained, as being more advantageous, provided she refused to submit to further operative measures.

Considerable inflammatory action followed, but was in time subdued under perfect rest and the application of a lotion of acetate of lead. Towards the end of May the arm was found in the semiflexed condition, prcnation and supination was limited, and flexion and extension perfectly impossible. It was deemed advisable to recommend the operation of resection, as affording the only means of restoring a useful limb. This the patient consented to, and the operation was performed on the 1st June, 1871.

An insicion was made on the inner side of the arm and forearm and a cross incision cutting outwards opening the joint; the ulna nerve was carefully raised from its bed and turned aside; the ends of the bones having been carefully freed, the head of the radius and upper fragment of the ulna were first removed; the condyles of the humerus were then treated in the same manner; three small vessels were ligatured. The wound was freely washed out with carbolic acid lotion of the strength of one to forty, water being the menstruum used. Finally the edges of the wound were closed with wire sutures, and dressed with carbolic acid lotion; the arm was supported on a rectangular splint. The ligatures came away on the fourth day; the wound looked healthy; there was union by the first intention in the greater portion of its length on the eighth day, all the stitches were removed, and the discharge was trifling. The case progressed most favourably. On

the 22nd June, exactly three weeks from the operation, the arm was taken off the splint, and motion attempted. There was considerable swelling in the vicinity of where the joint had been, as though lymph in quantity had been thrown out between the sawn ends of the bones. The firmness was considerable, so that the motions of flexion and extension, pronation and supination, were limited.

In extending the arm about a teaspoonful of fluid, strongly resembling synovia, was forced out through a small opening in the transverse incision. From this date free motion was practised daily.

On the 27th the splint was entirely removed, and the patient enjoined to use the arm freely. This she continued to do. All the motions were more free, and the muscles of the forearm became developed, the arm assuming the plumpness of its fellow. She continued steadily to improve, and left the hospital on the 10th July, promising to return in a few days. On the 17th July she returned, when the motions were found to be perfect. She can grasp an object with firmness, and the limb is increasing in strength daily.

On Dislocation of the Phalanges. By G. Prout Girdwood, M.D., M.R.C.S.E., Lecturer on Practical Chemistry McGill University, late Assistant-Surgeon Grenadier Guards, Attending Physician to the Montreal Dispensary.

Luxations of the joints of fingers and toes, especially of the former, are, though not of every day, yet of frequent occurrence. They are more commonly the result of accident, accompanied by compound fracture, which often extends into a joint. These cases are of little trouble usually, as when fracture has taken place simple amputation is often necessary, and conservative surgery induces the surgeon to save all, of so important a part as the hand, that is possible. Many such cases must have been seen by every hospital student, and the modes of treatment adopted.

But a more rare form is simple dislocation of some of the phalangeal or meta carpo, or meta tarso, phalangeal joints. These joints are formed by the ends of the bones held in situ, by a capsular ligament, with a lateral ligament on either side, on the dorsal and palmar or plantar surfaces by the tendons of extensor and flexor muscles, and their aponeuroses and sheaths.

When simple dislocation of these joints takes place it does so generally either to the dorsal or plantar or palmar surface, and, indeed, it would be difficult to say which was the bone displaced. It is generally caused by force applied directly to the base or head

of the displaced bone. In the case of any dislocation of this kind it would be either a luxation of the base of one phalanx dorsally, or palmarly or plantarly upon the head of adjoining phalanx or metatarsal or metacarpal bone.

The lateral luxation without fracture is, I believe, unknown, and in such case the lateral ligament on one side must be torn. The simple dislocation of the distal phalanges backwards into the dorsum of the first phalanx, or of the first phalanx back onto the dorsum of the metacarpal bones, is the most common, and is usually the result of direct violence to the head of the displaced bone when strongly flexed. The importance of this dislocation arises from difficulty sometimes met with in reducing it, and this difficulty is greater in the case of the first phalanx of the thumb than in any other. When dislocated back on to the dorsum of the metacarpal bone, the ordinary method recommended for reducing the dislocation is extension, and extension has been made with all sorts of instruments, including pulleys and forceps. Some works on surgery recommend extension with flexion and extension of the joint repeated alternately; and, Sir W. Ferguson says, "in some it will be advantageous to bend the member forcibly backwards or forwards."

This method is recommended also by others, and this I believe to be the best method of returning the displaced bone in these cases, and I think an examination of the joints will explain the reason.

The heads of these bones, as they are called, are rounded masses of bones, held into depressions in the bases of the adjoining bones, in which they work in a ginglymoid manner, the axis of motion being the point of attachment of lateral ligament to the head of the bone forming the joint, the circumference being the arc described by the other point of attachment of this lateral ligament. Immediately behind the heads and bases of these bones is found a depression forming almost a neck at the commencement of the shaft of the bones, and into these depressions the head and base of adjoining bones become locked, and are held in this abnormal position by the extreme inelasticity of the lateral ligaments. If it be noticed there is from the two points of attachment of the lateral ligaments no difference of distance between flexion and extension when in situ, when the bones are displaced, and once the base has passed over the ridge of the head, or *vice versa*, the distance is also the same as when the bones are in their normal position. It is just in passing over this prominence that the ligaments become stretched, and those who have suffered from dislocation of this kind know the agony it gives.

Now, to reduce these dislocations, I think extension, although it may be successful sometimes, is not likely generally to succeed, because the surgeon has to extend these lateral ligaments, not by direct tension on them, but by secondary force in trying to haul the bones over these respective groves in the head and base, which the inelasticity of the lateral ligaments prevents.

This has been recognized by authors, who have advised that the lateral ligaments be divided either on one or both sides. This I do ~~not~~ think is necessary in any case; but, at any rate, should only be resorted to in the very last extrimity. The clove hitch or two half hitches of tape, as recommended to enable the surgeon to obtain hold of the distal end of the finger or thumb, is extremely useful, but to effect reduction, the plan I recommend, and which I have used with success in three cases, two of the dislocation of the distal phalanx of the thumb and one of the first phalanx on the metacarpal bone of the thumb, is to bend back, if the phalanx is dislocated onto the dorsum, the dislocated bone until it is at right angles with the dorsum of the bone on which it is dislocated. This is done with but little pain. Then a little more bending back will lift the palmer edge of the base of the bone out of the grove or the dorsal surface of the head of the phalanx or metacarpal bone, when a slight push forwards of the base of the bone, assisted by the action of the flexor muscles, which are now on the stretch, replaces the displaced bone with ease, thus making a lever of the phalanx itself, acting on the dorsum of the adjoining phalanx as a fulcrum. The first case I saw was of the dislocation of the distal phalanx of the thumb into the dorsum of the first phalanx. I tried extension with the clove hitch, and, even with the assistance of my father, could not make any impression on the dislocation. I then thought I would try the forcible bending back of the last phalanx. Grasping the displaced phalanx with my thumb behind the base of the phalanx and my forefinger round the apex of the bone on its palmar surface, I bent the bone backwards, at the same time pushing the base forwards, it slipped into its place with ease the moment the extension was sufficient, with but little pain.

The second case was in the same patient, only on the opposite hand, and occurred within a week. It was reduced also with ease in this manner. Both accidents occurred whilst rising in a hurry from bed.

The third case I saw was as house surgeon to the Liverpool Infirmary, where a patient applied with his first phalanx dislocated on to the dorsum of the metacarpal bone of the right hand from a blow during a fight.

Remembering my previous cases, I tried the same plan with this, and reduction ensued with ease.

Dislocations of these bones into the palmar surface may, I believe, be reduced by forcible bending in the reverse way, *i. e.*, forcible flexion, pushing the base of the bone out at the same time.

I have not seen any case of this kind, but I once reduced a dislocation of the head of the tibia backwards by forcibly bending the joint, at the same time pushing the head of the tibia into its place. This accident was the result of an explosion on board a steamer at Sorel, where I happened to be.

The analogous shape and motion of the joint led me to adopt this mode of reduction, and it readily succeeded, and the man made a good recovery afterwards under the care of my friend Dr. Prevost, of Sorel.

Case of Syme's Tibio-tarsal Operation for Severe Injury, under the care of JOHN REDDY, M.D., Attending Physician, Montreal General Hospital. Reported by GEORGE ROSS, A.M., M.D., House Surgeon.

John Hope, aged 20 years, was admitted into the Montreal General Hospital on the 15th June, 1871, under the care of Dr. Reddy, suffering from the results of a severe injury of the left foot. The foot looks like a large, shapeless mass, with numerous openings on its surface, which communicate with sinuses leading to diseased bone. The integument covering the heel, and for some distance forwards on the plantar surface of the foot, is sound.

It appears that on the 31st March last, whilst engaged in chopping wood in Muskoka, P. O., a tree of some size fell in the direction opposite to what had been intended, and struck him across the left foot. From his description we should suppose that he had thus sustained a compound fracture of two or more of the metatarsal bones, with very great bruising and laceration of the soft parts. The wound had subsequently healed, but the bones had become carious, and on admission this process had continued to such an extent that it involved most of the tarsal and metatarsal bones. In view of the extensive and incurable nature of the disease, together with the fact that the skin of the heel was safe, it was at once decided to perform Syme's amputation at the ankle joint. Accordingly, on the 17th June, with the patient under chloroform, this operation was performed by Dr. Reddy in the usual way, by an incision from one malleolus to the other across the plantar aspect of the heel, connecting the two extremi-

ties of this incision by a second across the front of the joint, disarticulating, and sawing off the lower end of the bone. The flap thus made fitted very accurately, and was fastened by silver sutures; three ligatures were required. It was dressed with carbolic wash (1 to 40.)

The line of junction of the flaps, healed almost entirely by first intention, leaving only two small orifices at either angle, through which the slight remaining discharge readily escaped. It was then syringed through these openings with the solution of carbolic acid. On the 30th June there was some redness seen, and pain complained of at the middle of the leg on the inner side, and there was also some slight enlargement and tenderness of the lymphatic glands of the same side; an abscess formed at the seat of redness, and was evacuated with relief. From this time very slight sero-purulent discharge exuded from the two angular openings, and it appeared to be nearly well, when, on the 1st August, another abscess formed in the posterior cul de sac of the flap, and required to be let out. After this it rapidly closed and consolidated, and he was discharged on the 7th August, with a firm, hard, uniform, useful stump, and with his general health much improved.

Correspondence.

(For the Canada Medical Journal.)

To the President and Governors of the College of Physicians and Surgeons of Lower Canada:

Gentlemen,—Seeing that the Governors of the College of Physicians and Surgeons elected at the eighth triennial meeting of the College, held at Three Rivers on the 12th inst., have elected the President from the City and District of Montreal, and the Registrar and Treasurer from the City and District of Quebec, permit me to call your attention to the by-laws, rules and regulations of the College, by which it will appear, that the President and Registrar and Treasurer for the time being *shall* belong to the same district.

I call your attention to this fact, which seems to have been ignored by the College, in order that you may *correct* the error into which the Governors have fallen, by a new election at the next meeting of the Board of Governors of a Registrar and Treasurer from the District of Montreal, or by rescinding the rule.

W. MARSDEN, M.A., M.D.,
Ex-President Col. P. & S., L. C., &c.

Quebec, 14th July, 1871.

To the Editors of the Canada Medical Journal.

Sir,—As you have always taken the greatest interest in everything that pertains to the honour and advancement of our profession, will you do me the justice to give publicity to the following circumstances and correspondence:

On the 30th May last, a young man of this city was unfortunate enough to be very severely wounded at a charavari, several buckshot having penetrated the left side of the chest. He was placed under my charge, and has remained under treatment by me up to the present time. The individual who fired the shot, as worthy of sympathy as of blame, was arrested, but pending the result of the treatment he was released upon bail, principally upon my representations, but subsequently, as a favorable termination was doubtful, he was re-arrested.

Upon the evening of the 12th inst., the jail physician called at the home of the patient and demanded admission to the sick room during the absence of the parents of the patient, and persisted in entering, although informed that it was contrary to orders. On making my visit the following morning I found him very much depressed from a night of nervous excitement, the result of the forced interview of the preceding evening. His mother was naturally very much incensed, and forwarded by me the following note to the physician, which, with one from myself and his answer, I enclose, and which speak pretty forcibly for themselves.

(Copy.)

Sir,—I cannot refrain from expressing my surprise and indignation that you should have taken the liberty of entering my house, though informed of my absence, for the purpose of examining my poor son, who is lying dangerously ill, without the previous consent of myself and the doctor attending him. The discussion of law which you held with him left him in a state of great nervousness, and might have been seriously injurious to him. Requesting an immediate apology for such an intrusion,

I am, &c.,

Ottawa, Thursday, 13th July, 1871.

Ottawa, 13th July, 1871.

Sir,—Will you please favour me with some explanation for your most unwarranted conduct in visiting Mr. ——— yesterday evening in the absence of his parents, and during the time that he was under treatment by me. Surely the slight knowledge you may have of professional etiquette will render it cognizant to your

mind that such a course of procedure is entirely without precedent. If there is a single palliating circumstance, I hope you will do me the favour to allow me share the knowledge of it with you, especially as this is not the first time you have forgotton the respect due me as a member of the medical profession. I beg also to enclose a note addressed to you by Mrs. ——— previously to the time I had become acquainted with the circumstances above recorded. If you refuse to give proper satisfaction upon this point, and forward a due apology therefor, I must consider myself in duty bound to lay the matter in some tangible form before the profession.

Yours, &c.,

DR. MALLOCH.

JOHN SWEETLAND, M.D.

OTTAWA, July 14th, 1871.

MRS. ———.

MY DEAR MADAM,—This morning I received your note, and deeply regret that you should think it was my intention to be discourteous to you when I visited your son. The following are the facts:—When the door was opened I asked to see you; the servant said you were not in; I then enquired for your son, and she said he was up stairs; I at once run up, and found him on a sofa; I informed him that I had been asked by Mr. ——— (the prisoner) to call and see him, *not as a medical man*, but merely to, if possible, learn his true state. I at the same time requested him to mention the fact to the medical attendant, that I in no way wished to interfere or make any inquiries respecting the nature of his wound or the treatment pursued. As jail physician I see ——— (the prisoner) every day, and when he made the request I thought it but right and just that I should comply, as he had no other means of obtaining information on a subject that he would most naturally feel most anxious. It is to be regretted that you were not at home, but if you consider I acted imprudently accept this, my apology, and the assurance that I deeply regret having displeased *you*.

The low and impertinent note you enclose from Dr. Malloch I will not reply to. He is a person who I do not personally know, but he is evidently not possessed of the first instincts of a gentleman. He threatens a mode of obtaining satisfaction. Let him try it.

Very truly yours,

J. SWEETLAND.

But little comment need be made upon this correspondence. I am content to leave the case as it stands for the judgment of the profession, merely noting the fact that J. Sweetland's professional "instinct"—appropriate term—did not impel him to apply to the patient's medical attendant in the ordinary and regular way, but led him to commit an act of professional vagrancy which none can deplore more than myself. I may state in conclusion, and in rebuttal of J. Sweetland's assertion of his being an emissary of the person in custody, that enquiries as to the injured man, on behalf of the prisoner, have been constantly made, and have as constantly received the fullest attention.

Hoping you will pardon the length of this letter,

I have the honour to be,

Your obedient servant,

E. C. MALLOCH,

OTTAWA, 17th July, 1871. M.D., M.R.C.S.

Reviews and Notices of Books,

The Pathology and Treatment of Venereal Diseases: including the results of recent investigations upon the subject. By FREEMAN J. BUMSTEAD, M.D., Professor of Venereal Diseases at the College of Physicians and Surgeons, New York, &c., &c. Third Edition, revised and enlarged, with illustrations, 8vo: pp. 704. Philadelphia: HENRY C. LEA. 1870.

Ten years have passed since Dr. Bumstead first gave to the medical world the results of his experience in venereal diseases, and during that period this work has passed through three editions. In his first effort the author was desirous of furnishing the student with a full and comprehensive treatise on venereal affections, together with a practical guide to their treatment. How far he succeeded may be reckoned by the avidity with which the profession sought for and obtained the work. In consequence a second edition was called for in the course of three years.

This, the third edition, was rendered necessary, inasmuch as the views of surgeons on some points connected with the disease Syphilis have very materially altered.

The work has in consequence undergone a thorough revision. Some subjects have been more fully entered into, more especially the subject of stricture of the urethra, and its treatment by the operations of internal division and forcible rupture.

The chapters on chancre and chancroid have been remodelled and rewritten, and the more recent views on the subject of visceral syphilis have received due attention. Syphilitic affections of the eyes—this subject is brought up to the present level of ophthalmic knowledge, and in this department the author has received the valuable aid of Dr. E. G. Loring, Surgeon to the Manhattan Eye and Ear Infirmary. Although very considerable changes and additions have been made, yet is the size of the present volume increased only by sixty-four pages, a fact of importance to the busy practitioner, as nothing can be more wearisome than to have to wade through hundreds, or even thousands, of pages for information which in all reasonableness might have been compressed into one-fourth the space. Hence our author has wisely omitted portions of the work which were no longer needed as bearing on questions which are no longer controversial. It was the intention of the author and publisher to have issued with the present edition a series of coloured lithographs, and labour and expense was not spared to carry out this design. It was, however, found that the execution of this scheme would have very largely added to the expense of the volume. Moreover, the recent issue of "Cullerier's Atlas of Venereal Diseases," an American edition of which appeared in 1868, the text being translated, and valuable additions made by Dr. Bumstead, was a further reason for abandoning the scheme. We can heartily endorse the views held by the profession generally of the excellence of this work, and can freely admit that it deservedly retains its reputation of being the very best treatise on venereal affections in the English language.

A Practical Treatise on the Diseases of Infancy and Childhood. By Thomas Hawkes Tanner, M.D., F.L.S., revised and enlarged. By Alfred Meadows, M.D., Lond.: Third American from the last London Edition; 8vo., pp. 559. Philadelphia: Lindsay & Blakiston, 1871.

We are told in the preface to this edition that from the press of other engagements, the task of its preparation was entrusted to Dr. Meadows, who is alone responsible for the alterations and additions which will be found in the present volume. We perceive by the *Lancet* of July 15th that Dr. Tanner died at Brighton on the 7th July instant, whither he had repaired on account of failing health. "His desire was to live a useful life to the world." His career was one of constant labour both of mind and body, an error of which many professional men are guilty, and which, in his case, cut short his career at the early age of forty-six years.

The work before us is divided into four parts. In the first the

physiology and pathology of childhood is discussed in eight chapters.

Part two is devoted to general diseases, as fevers and diseases influenced by what has received the name of diathesis. Some sixty pages of the work are devoted to this part, in two chapters.

In part three we have very fully discussed the subject of special diseases of infancy, such as: 1. Diseases of the nervous system; 2. Diseases of the respiratory system; 3. Diseases of the circulatory system; 4. Diseases of the digestive system; 5. Diseases of the urinary system; 6. Diseases of the skin; 7. Diseases of the eyes; 8. Diseases of the ears.

This certainly is a practical division of the subject, and one which will be readily referred to.

In looking over the subject of croup we perceive that the author, or rather, we presume, the editor, hesitates in his own mind as to the identity between pseudo-membranous croup and diphtheria. This question has been for some time past a most serious and absorbing subject with the writer, and he is convinced that the diseases are identical in every respect. From the almost constant lack of success in cases of undoubted pseudo-membranous croup, when treated as an acute inflammatory attack, he had determined that the very next case that came under his charge he would treat on different principles. Towards the end of May of this year a case presented itself, and an opportunity of putting a different line of practice to the test was afforded. It was in the person of a fine healthy boy of eighteen months old. When first seen the child appeared to be greatly distressed; the features were livid, the stridor was considerable, and the pulse exceedingly rapid and flickering. The little fellow had been ill for several days. The bowels were freely open, inasmuch as the mother had been resorting to repeated doses of goose oil, a favourite remedy with many. The general symptoms were very alarming. The child was put on a half grain of quinine, two grains of chlorate of potash, and five minurs of muriate tincture of iron, to be repeated every two hours. Stimulants and beef tea were ordered at stated intervals. The first dose acted as an emetic, and the child expelled a long strip of pseudo membrane bearing the tubular shape of the larynx. Great relief followed the vomiting, and the child fell into a quiet sleep, which lasted some four hours. We may state that the mother, supposing that the first dose of the medicine had been rejected, gave a second dose immediately after the act of vomiting had passed off; this was retained. Gradual but steady improvement followed, and in the course of a week all symptoms of the attack had passed off

We are fully alive to the fact that this case, imperfectly recorded though it be, will carry but small weight in inducing others to follow our example. Still we give it as it occurred, and we must say that the result was most satisfactory and speedy.

Part four is devoted to the discussion of accidents and diseases connected with birth, malformations and deformities, and accidents in early childhood. In this latter are considered, foreign bodies in the air passages; burns and scalds; frostbite and chilblains; carbuncle and boils; and blows and bruises. At the end of the volume there is a useful appendix of formulæ. In this will be found various methods described for preparing aliments for the sick, a subject of much importance, and one to which the author in his life time gave much attention.

The work bears the stamp of the practical mind of the author' and will be found of great value by both student and practitioner. The publishers have done their work well, and have turned out a handsome volume on excellent paper.

Surgery.

Personal Experience of Lithotomy in India. By William Curran, L.R.C.P., Edinburgh; M.R.C.S., England, &c.; Assistant-Surgeon, Army Staff.

The subject of calculous disorder in India is a comprehensive one from whatever point we may regard it, but I have neither the time nor the materials that would enable me to deal with it in its entirety, and it is one which will easily admit of delay. Numerous ably written papers on the subject are to be found in the medical journals published in that country, but these are not now accessible to me, and even if they were, they could scarcely be turned to account in this place. I prefer discussing the question on its own merits, and from my personal point of view; and though it may, when thus divested of its native surroundings, appear somewhat stilted and individualized, it will gain in interest what it loses in importance, and have the further advantage of being supported by facts which rely on other than personal evidence for their guarantee. I will, for these reasons, confine myself to describing here, as concisely as I can, what I saw or did myself in the matter, while in India; but to enable me to do so

with more effect, I will not hesitate to avail myself of the experience and observation of those gentlemen from whom I received cases, and to whose courtesy and kindness I owe it, that I am in a position to speak on the point at all. Viewed in this light, the rehearsal at such a distance of time and place may appear to lack originality, and some even may regard it as open to the imputation of being biased by prejudice, or exaggerated by favour. It may be so, though I am not conscious of being influenced by either, and no fear of consequences will ever prevent me from doing justice to the merits of a friend. I do not pretend to or aim at being original. I merely undertake to state here, in plain unvarnished English, the results of my own experience and observation, that I purpose doing to the best of my ability, and I am content to leave the rest to the indulgent criticism of my readers.

When I first went to India, medical officers of the Queen's as distinguished from those of the native army or local establishments, were eligible for appointments under the Indian Government, which frequently placed them in some of the smaller outlying stations, in charge of dispensaries, gaols, and other civil duties, but these openings exist no longer, as the line of demarcation between the two departments has been drawn hard and fast, and, limited as my experience is, it is not likely to be equalled by any of my successors. The statistics I am permitted to produce will show that the success claimed by Indian surgeons is not exaggerated, and I am in a position to give some account of an operation which must be new to many of my readers, and which is only known by name to curious searchers of surgical bibliography. For these reasons, if for no other, the subject will justify some discussion, and its interest and importance will scarcely be questioned. I will only add, that, as I had no separate charge of my own that would enable me to secure a regular flow of cases, and as I was indebted entirely to the kindness of others for those I have received, I kept no very minute or searching record of my proceedings. My custom was to write a short account of the case and its surroundings on a scrap of paper as soon as it was completed, and to enclose the stone in that scrap. The white ants have eaten many of these, time and the vicissitudes to which I am subject through my office, have destroyed others, and I am now dependent for information on a few scattered notes of uncertain date and questionable authenticity which have survived the effects of change, and are only decipherable with difficulty by myself. My memory is, however, a good one. I have done my best to exercise it by frequent walks in the wholesome atmosphere

of facts, and if I cannot promise entire accuracy in my statements, I can at least say that I have endeavoured to escape error and avoid miscalculation.

That stone in the bladder prevails to a larger extent in the peninsula of Hindoostan, and especially so throughout its central and upper provinces, than perhaps anywhere else of equal extent in the world, is a fact which admits of little doubt. I have been or served in most of the principal stations between Calcutta and Peshawur, including the Saugor district and Bundlecund, and have found the same diathesis, and heard the same story told in all. I believe, however, that the prevalence increases as we approach the hills, but why this should be so, if it is so at all, is more than I can undertake to say, and, indeed, the causation and etiology of calculous disorder in India has never, to my knowledge, been satisfactorily accounted for or explained. Some maintain that its great prevalence is owing to the quantity of lime salts that obtains in the drinking water, and stone is particularly common in the hilly districts near Abbottabad, Almorah, and other parts of the Himalayas, in which limestone enters largely into the geological formation. But this material does not operate as a cause of calculus elsewhere, and stone prevails in equal abundance in parts of the plains, in which lime enters but feebly into the composition of the water. Again, the diathesis is almost, if not altogether, unknown in other parts of the world in which lime forms a principal ingredient in the water, as would appear from the writings of Dr. Livingstone, who, after alluding to the rarity, or rather almost entire immunity of the Bakwains and other tribes of Central Africa from syphilitic disease, says, at page 12[illegible] of his very interesting "Missionary Travels and Researches":—"Equally unknown is the stone in the bladder and gravel. I never met with a case, though the waters are often so strongly impregnated with the sulphate of lime that kettles quickly become encrusted with the salt, and some of my patients who were troubled with indigestion, believed that their stomachs had got into the same condition." He adds, "This freedom from calculus would appear to be remarkable in the Negro race, even in the United States, for seldom, indeed, have the most favoured lithotomists there ever operated on a Negro." This is another puzzling point of pathology which calls for elucidation, and it does seem strange that the dark man of Africa and America should be almost entirely free from a disease to which his darker complexioned Aryan brother of Asia is so liable. A mere difference of race can scarcely be said to account for the fact, for that fails to secure any such or similar exemption in other instances, and whatever effect lime may have

in producing or aggravating the tendency to stone that exists in India, it is clearly inoperative in that direction elsewhere.†

Others hold that it depends in great measure, at least, on the quality of the food used by the natives, and the immunity in this respect enjoyed by flesh-eating Eurasians and Europeans would seem to lend some support to this hypothesis. But stone is very prevalent in certain parts of Persia, and also, but to a lesser extent, in the interior of Cabul and along the banks of the Oxus—as I learned from traders—where the inhabitants are all Mahomedans, who eat flesh and live in some other respects like Europeans. I have heard it more than once ascribed in conversation with friends in India, to the predominance of the vegetable or coarsely powdered materials of their food, and to the absence of that regulated admixture and combination of those nitrogenous elements that are considered essential to health, and which are so little cultivated by the poorer class of natives. This view has the support of analogy in its favour, inasmuch as a similar prevalence obtains

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†Dr. Cameron informs me that lime is found in considerable quantity in the drinking water in this country, and he added that he believed stone is less frequent in Dublin than it used to be before the introduction of the soft Vartry water.

Since writing the above I have come across a communication by Dr. Crisp, on "Urinary Calculi in the Lower Animals," which appeared in the "Transactions of the Pathological Society of London," vol. xxi., p. 427-8, and which contains matter so pertinent to the question under review, and so generally confirmatory of my own impressions, as to justify me in reproducing it here. After stating that "the constant use of Norfolk and Suffolk dumplings has been assigned as one cause of the greater prevalence of this affection," and saying that he "thinks it is not an unlikely one," he adds, "Dr. Greenhow (Annals, 1866) wrote to forty different surgeons in the North-West provinces of India, for the purpose of ascertaining 'the nature of the operation, amount of division of the prostate, use of tubes, the comparative success of lithotomy and lithotrity, and the effect of chloroform!' From twenty surgeons he received answers, and these gentlemen, most of them attached to dispensaries, had operated on 1,851 patients, including 91 females. Dr. Courtney had 201 cases in twelve years, Dr. Keernander 28 cases in one year, Mr. Gorgaon 143 cases in six years, Mr. Newton 48 cases in four years, and the cases of the remainder occurred within a short period. Of these 1,851 examples, 1,160 occurred among Mussulmans, and 551 were Hindoos. Taking the population into account the numbers are about equal. The youngest patient was one and a quarter years. The largest stone weighed 11oz., the smallest 3 grains, and the largest number of stones was 12. The mortality after operation, 1—6.93. Scurvy prevailed to a great extent both among Hindoos and Mussulmans. An interesting statement is made respecting the analysis of a collection of calculi from this district of India. Only two kinds were found, bone calculus, and earthy phosphates and ammonia (p. 14.) *No lithic acid nor triple phosphate calculi were found.*"

In another communication, in 1868, by Dr. Garden, an analysis is given of 831 cases of urinary calculus—including females—which occurred at the Saharnupose Dispensary (Calcutta Presidency) during a period of 18 years. The mortality after operation was 1—7·63—two or three per cent. less than the mortality in the United Kingdom. Of these 577 were Hindoos and 254 Mussulmans, forming, as in the example already quoted, but a slight difference when the number of the two castes is taken into account. The chief causes assigned by Dr. Garden are exposure, bad grain, bad digestion, and rheumatic complaints. An analysis of 260 calculi examined forms a remarkable contrast with that already quoted:—"15 were fusible, 1 triple phosphate, 3 phosphate of lime, 81 uric acid, 55 urate of lime, 23 urate of ammonia, 72 oxalate of lime. Of these 58 were pure calculus, uric acid 26, fusible 10, oxalate of lime 10, urate of lime 5, urate of ammonia 1, triple phosphate 1." I will only say, with reference to the above, that it appears to me the relative position of the Mussulmans and Hindoos ought to be changed in the first part of this quotation, and I can scarcely help thinking it stood differently in the original.

in parts of the Highlands of Scotland, in Norfolk in England, and near Malaga in Spain, in the first and last of which places, the poor, as is well known, live largely on barley meal and the products of the vine, while the want of apples, pears, cider, and other articles of that description has been said to conduce towards its causation and development in the latter. Certain it is that the miserable mills used by the poorer class of natives are but ill adapted for grinding, and the kind of corn or rather pulse they use has a hard, horny, coriaceous rind. But it is not easy to see how particles of this could enter the bladder, and yet an impression to that effect prevails largely elsewhere. When on a visit to Malaga, in June, '58, I called on the late Dr. Sutliffe, who then practised there, and who possessed a considerable local experience and repute. He showed me several specimens of calculi he had extracted on the spot, and he assured me that the disease was comparatively common in the neighbourhood. He unhesitatingly ascribed its prevalence to the wine which is manufactured in the vicinity, and which the peasantry are so fond of, and to the use of a species of bread which is made of maize and the husks of the vine, and which is of a coarse, indigestible and gritty nature. Whether any similar effect can be ascribed to the barley meal of the Highlandars, I cannot say, but stone prevails largely, I am told, in the mountains near Aberdeen, and a friend informs me while writing this, that he heard the use of treacle and dumpling by the inhabitants assigned as a cause for its frequency near Norwich. How far such a diet is calculated to affect digestion or perpetuate the tendency towards calculous formation that clearly exists in the above-named localities, I cannot undertake to say, but the facts admit of no question, and I am not aware of any better explanation of them.

Another hypothesis exists which deserves a passing mention, and as the custom on which it is based prevails universally throughout the East, it is not so flimsy or improbable as it may at first sight appear. The natives of India, as every one who has visited that country must know, squat down on their haunches*

*Those who have read the interesting "Journey to Mecca and Medina," written by Captain Burton of the Indian army, and now English Consul in the Brazils, will remember an incident in connexion with this attitude, which is as amusing as it was nearly being tragical. It is wonderful in how many small details of habit a difference is to be observed between the European and the Asiatic. An observation of these has led me to heartily agree with Mr. Palgrave when he says that the attempts made by European travellers to personate or pass for natives by assuming the garb of Dervishes, Fakeers, Merhauts, &c., are miserable failures. Mr. Kaye—than whom there can be no better authority on such a point—says substantially the same thing in his life of Eldred Pottinger, and any one familiar with the East, and who will take the trouble of comparing Sir Alexander Burnes and Mr. Vambery in their costumes, with natives similarly dressed, will see at once the difference. I can say for myself that I never saw a European who could talk

during the act of micturition instead of standing up as we do in Europe, and there can be no doubt that such an attitude is not as favourable to the free and entire evacuation of the contents of the bladder as the one we assume is. On the contrary, it seems to favour the retention of urinary debris and salts in that viscus, and when we consider that "urinary concretions may be formed either in the kidney or in the bladder, and are almost always the result of the deposition and retention of a urinary sediment in some portion of the uropoietic tract,"† we will be able to appreciate its bearing on the question, and influence in propagating the disease. It may also, perhaps, serve to explain the great exemption from this complication which women everywhere enjoy. Dr. Day adds, "Around the nucleus thus formed, additional matter is gradually deposited, till at length the concretion may attain an enormous size." Just so, and if to the action of this custom we add the agency of the other influences mentioned above, we will be able to suggest an explanation, or, at least, lessen the difficulty that now exists regarding the wide-spread prevalence of the condition here contemplated. Neither cause will suffice of itself to produce the disease, but assuming the existence of a diathesis, one can easily see how the three may concur and conduce to the same result, and at any rate the coast is clearer in regard of a remedy. But whatever the cause, there is no doubt as to the fact, and the following table, which is taken from a statement that was prepared for circulation among the officers of his circle by the late Deputy Inspector General of Hospitals, John Wilkie, M.D.,‡ and which

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and act in all respects like a native, but the fear of consequences, the innate courtesy of the Oriental, his fatalism or *sang froid*, and perhaps also his doubt as to the sanity of those membersof our race who undertake journeys and embark in enterprises for which he can find no better explanation, constitute their claims to protection, and some are, I believe, sped on their way through feelings of charity, pity, or contempt.

†Day's Physiological Chemistry, page 377, Mr. Erichsen speaks to the same effect in his Clinical Lecture on Lithotomy in Recurrent and Multiple Calculus, in the *Lancet* for March 18th, 1871. He says, "Just as the water of a petrifying well will give rise to calcareous deposit on a twig left in it, so will the urine under certain conditions, local or constitutional, give rise to a phosphatic deposit round any body on which crystals can form, and for this purpose a clot of blood or a shred of cellular tissue will suffice."—See also Neubauer and Vogel's Guide, Sydenham Society, p. 431.

‡Dr. Wilkie sums up the above as follows in a letter to a friend, which was kindly placed at my command, and which is dated Meerut, 26th July, 1863:—"From the half-yearly returns of dispensaries it appears that at Delhi there have been 91 capital and important operations, of which 22 were for lithotomy. At Shahjehanpore, 48 with 12 lithotomy. At Budaon, 78 with 39 lithotomy. At Bareilly, 89 with 35 lithotomy. Bijnore, 25 with 6 lithotomy. There have been 189 cases of lithotomy during the past six months." In other words, if we assume that the population of the Meerut Circle equals that of Scotland, and put down both roughly at three millions, we will be able to form a pretty good estimate as to the percentage and prevalence of stone in the former. I doubt, however, if Scotland could p oduce half the number in double the time. Another friend discussing the subject with me said:—"In a population of, say, a million, forty or fifty cases of stone may occur in a twelvemonth, and one of these might, *perhaps*, be a female." It will be seen from what is said elsewhere that the import of the italicised word *perhaps* would be more clearly defined by a note of interrogation.

was kindly placed at my command for the purpose of this inquiry by a friend, will show this and show also the advantages of India as a field for the cultivation and practice of the higher branches of surgery. It will further, I think, tend to show that the prevalence increases as one approaches the hills; but be this as it may, the document is a highly suggestive one, and though shorn of much of its interest by the absence of details, its perusal is calculated to enhance the repute of our Indian brethren, and confirm the impression that prevails respecting the vital capacity, endurance, and great powers of recovery possessed by the natives. As such it is subjoined here, and I will throw in under the head of remarks such brief, explanatory notes as space may allow, or as I may find absolutely necessary for its elucidation :—

A Comparative Statement of Operations performed in the MEERUT CIRCLE, *and prepared from the Half-yearly Returns of Dispensaries in that District, for the Six Months ending 30th June,* 1863.

Districts	Stations	Operations				Remarks
		Lithotomy	Deaths	Capital & Important	Minor	
Delhi,	Delhi,	22	2	69	320	The district contains, according to Thorton, an area of 789 square miles, and its population amounted in 1853 to 435,744. Of this number, 171,694 are returned as Hindoo agriculturists, and 18,917 are Mahomedans. Upwards of one third of the entire population is concentrated in the City of Delhi, and is pretty equally divided into Hindoos and Mahomedans. The soil is sandy and barren, and remarkable for the saline efflorescence, and the wells for the blackishness of their water. A large portion of the supply is obtained from a canal which begings 70 miles away.
	Goorgaon	—	—	14	64	
Allygurh,	Allygurh,	3	—	3	390	The district embraces an area of 2,149 square miles, and contains a population of 1,134,565. The soil is alluviable, and the principal productions are wheat, barley, millet, and pulse. It is freely irrigated from the Ganges canal, and though there is a prolonged elevation of surface in the centre, there are no high hills anywhere.
	Hattrass,	—	—	—	—	
	Khyr,	—	—	—	—	
	Secundra-Rao,	—	—	—	—	

Districts	Stations	Operations: Lithotomy	Deaths	Capital & Important	Minor	Remarks
Meerut,	Boolunshuhur,	8	—	7	136	The Meerut district is about 57 miles in length from east to west, and 48 in breath; its area, 2,332 square miles; and its population upwards of 1,135,072, the majority of whom are Hindoo in creed and non-agricultural in occupation. The soil is sandy, with a subsoil of kunkar or calcareous conglomerate, and "the vicinity of the mountains, the comparatively high lattitude, and considerable elevation, render the district one of the healthiest parts of the plain of India."
	Meerut,	11	—	15	525	
	Haupper, [gur	—	—	—	167	
	Moozuffurnug-	2	—	16	185	
	Rourkee,	4	—	8	48	
Deyrah,	Saharunpore,	16	3	2	273	The Dehra Doon is a fertile valley at the south-western base of the lowest ridge of the Hymalayas, "the soil is in general a deep rich mould, though in some places composed of shingle or gravel swept down by the torrents from the mountains," and it produces rice, grain, and maize in large quantities. The ridge on which its famous sanitarium Mussorie is situated consists of beds of compact limestone, alternating with others of soft slate, which resembles the mountain limestone of England. In some places trap rock makes its appearance, and the district is everywhere traversed by or irrigated from the Ganges and Jumna.
	Deyrah,	4	—	12	309	
	Khalsee,	—	—	—	—	
	Mussooree,	—	—	8	103	
Shahjehanpore	Shahjehanpore,	12	2	36	338	A large Mahomedan city and district in which, however, the Hindoos predominate. These live for the most part by agriculture, and their children are very subject to stone.
	Goolurrea,	—	—	—	123	
	Kutra,	—	—	—	116	
Budaon,	Budaon,	39	3	39	750	An almost purely agricultural district, in which the rice-eating Hindoos constitute nearly six-sevenths of the population. The prevalence of stone in this and the following places which are near the hills, would seem to lend support to the impression formed above, and which implies that the tendency thereto increases as we approach to the Himalayas.
	Bilsie,	—	—	5	255	
	Bisowlee,	—	—	16	211	
	Datagury,	—	—	12	319	
	Gonour,	—	—	4	207	
	Saheswaw,	—	—	12	207	

Districts	Stations	Operations				Remarks
		Lithotomy	Deaths	Capital & Important	Minor	
Bareilly.	Bareilly,	35	4		736	An important military station, and the capital of a large agricultural district, which numbers a population of 1,378,268, whose alluvial soil is very fertile, and which is watered by rivers that rise in and bring down large quantities of gravel, sand, and other similar material from the neighbouring hills.
	Amlah,	—	—		215	
	Bessulpore,	—	—		305	
	Baharee,	—	—		295	
	Philibeet,	—	—	54	305	
	Rampore,	—	—	—	60	
Moradabad	Moradabad,	18	1	19	1,411	A densely populated and very fertile district, in which, though the quality of the water is good, and that fruit and vegetables grow in abundance, yet stone is very prevalent, but I have heard no adequate reason assigned for this.
	Kaseepore.	—	—	—	—	
Bijnore,	Bijnore,	6	2	19	394	Near the hills, and therefore, as I think, the subject and seat of a large predominance of calculous disorder.
	Nugeenah,	—	—	—	49	
	Nujeebabad,	—	—	—	91	
Nynee Tal,	Nynee Tal,	1	1	1	54	
	Huldwalee.	—	—	—	—	
	Kaladungee.	—	—	—	—	
Almorah,	Almorah,	8	—	15	251	
	Petoragurh,	—	—	—	—	In the hills, and limestone enters largely into the local geological formation.
Gurwhal.	Bhe Kya,	—	—	—	—	In the hills, and limestone enters largely into the local geological formation, but there is no European officer at either of these stations, and the returns are consequently worthless.
	Chamolie,	—	—	—	—	
	Josee Malh,	—	—	—	—	
	Kurumparag,	—	—	—	—	
	Melchourie,	—	—	—	—	
	O'Keemath,	—	—	—	—	
	Sreenuggur,	4	—	5	49	
	Grand Total.	193	18	391	9,225	

This shows a percentage of 9·3 of deaths to recoveries, or about one death to every eleven and a half persons subjected to operation, a result which, though not altogether as favourable as might be expected, is yet considerably in advance of that obtained in England and Europe generally, where, according to the authorities quoted by Erichsen, it varies between one in six and one in eight, the latter being, according to him, the latest and perhaps most favourable average hitherto obtained. And that this result holds good on a larger scale, and when tested, by larger numbers will appear further from the table subjoined, which was drawn up by the same gentleman from similar or equally authentic sources, and which extends over a period of time and includes a variety of cases that are amply sufficient for purposes of comparison. They

both, however, labour under the grave drawback of being wanting in particulars, and of saying nothing about the age, caste, condition, or sex of the sufferers, but stone is so rare among women in India, that we may safely exclude them from the calculation; and as to caste, that did not appear to me to affect the result, or aggravate a tendency to the disease in any of the cases with which I had to deal. The rich Brahmin who was clothed in purple and fine linen, and who fared sumptuously every day, on rice, milk, butter, and other equally digestible articles, was as subject, in proportion to the numbers of his highly-flavoured order, as the poor pariah sweeper or chumar, who went about in rags that barely sufficed to cover his nakedness, and fed on such offal as his miserable daily pittance could procure, or as the cold and casaul charity of his neighbours would allow. The same may be said, with perhaps some modification, of the flesh-eating Mahomedan, whose drink, like that of his Hindoo brother, was the same "pure element" from the brook, and whose religion is equally exacting in respect of bodily purification and cleanliness. The children of both seemed to me to suffer in equal proportion, and I never met a woman of either sect who laboured under the complaint. Not that women are altogether exempt, for such is not the case, but the number of them that suffers bears no proportion to that of the men, and such is the innate bashfulness or mistaken modesty of the Hindoo female, that many, I am sure, would rather suffer in silence than submit to an examination. A friend of mine of many years standing in India, and a very successful lithotomist too, assured me that he had only met two cases in women during his time, and I never knew a surgeon there who had seen more.

On the other hand, very old men are often found affected with stone, which may have caused them no inconvenience till displaced by accident, or otherwise interfered with; and very advanced age is not necessarily a bar to operative interference, provided that the bladder has not lost its contractility or the kidneys been its first seat; and in any case the simpler the expedients and appliances employed the more speedily is the operation performed, and the more satisfactory and enduring are the after-treatment and results. So selfish is the nigger *pur sang*, so impatient of restraint, and so anxious to make the most of his time and opportunities, that he is willing to incur the gravest risks, nay, even to expose his life to the hazard of a throw, rather than wait patiently for improvement, or accept with equanimity an alternative which offers him a better chance of recovery. Hence lithotomy is, and ever must remain, the operation for India; and so reckless are

some of the natives of consequences that they do not give even that a fair chance. It is no uncommon thing for patients there to "bolt" before their cure is half complete; and such is the impatience of mothers, or so great their love for their children, that they often try to steal them away as soon as the stone is extracted. Expectant measures will never find favour with a people who prefer remedies that appeal at once to their senses; and lithotrity, with its more complicated details and numerous sittings, will never commend itself to their untutored understandings, longing for personal freedom, and unreasoning dislike of whatever imposes a restraint or entails an obligation.

The following general statement includes the number of cases and their results, that were subjected to operation in the Meerut circle of Supervision during the years '61-'62, and first half of 1863:—

Period	Lithotomy	Deaths	Capital and Important	Minor	Remarks
1st half of 1861, -	180	19	369	3,842	By capital and important are meant, I presume, amputations, excisions, the ligature of arteries, removal of tumours, &c.; such operations, in a word, as involve danger to life, and call for extra watchfulness and skill on the part of the surgeon, or entail greater expenditure by the medical department on behalf on the public.
2nd half of do., -	118	9	256	4,834	
1st half of 1862, -	160	12	432	5,532	
2nd half of do., -	145	15	284	8,357	
1st half of 1863, -	193	18	391	9,225	
Total, 2½ years,	796	73	1,732	31,790	

The results differ so little in this instance from those given above as to save me the trouble of adding anything by way of explanation; they are, in fact, substantially the same in both cases, and being doubtless based on or derived from similar premises, may be set down as, in round numbers, deaths 9·1 per cent., or about one death to every eleven persons; in other words, nine men died, according to the above-quoted return, out of every hundred who were treated by lithotomy; or, better still, for every sufferer who succumbed to shock, exhaustion, peritonitis, hæmorrhage, or other cause incidental to this operation, among a hundred cases, 90·9 recovered. This is a percentage which, as far as I can determine, has never been exceeded on an equally large scale

elsewhere. If we could only know the numbers operated on by European surgeons, and base our estimate on them alone, I am quite certain the result would appear more favourable. Many, perhaps the greater part, of these were treated by Bengalee sub-assistant surgeons from Calcutta, and some were doubtless left to the native doctor of the North-West. This is an item and an element which should not be lost sight of in the calculation; and even with this, the result is such as European surgery in India need not be ashamed of.*

And with regard to this distinction, I have often regretted the absence of reliable statistical information on the subject of lithotomy in India, and have endeavoured from time to time, as opportunity offered, to collect such myself. But it is not easy to procure any, as the disease is, comparatively speaking, so common as to attract but little notice; the genius loci is not favourable to exertion, and familiarity in this, as in other matters, begets contempt. I am, however, satisfied, from the conversation I held with my brethren, that the case stands pretty much as I have stated it; and I have now before me a note from an old friend, dated August 3rd, 1863, in which he says:—"I have operated on about eighty cases of stone since I came here, and of these I have only lost three, and one of these was *in articulo* on admission." He added that the operation was almost always successful in his hands in children.

This confirms what I said above that caste does not materially affect the result or influence the diathesis, as Brahmins and Mosulmen are here as numerous as their neighbours, being seven in each case, and so far in about the proportion they bear to the general community. It also supports the view I have taken of the statis-

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*The following is Sir Henry Thompson's summary of the results obtained by him from an investigation into the causes of death after lithotomy, which is, as far as I can determine, the completest and most comprehensive in our language. I will leave it to speak for itself:—"A table in another part of this work shows that, from the first to the fifth year the deaths are about one in fourteen; they then decrease, so that between six and ten years inclusive they are only one in twenty-three or twenty-four cases. Between eleven and sixteen the mortality gradually rises to one in nine and a-half cases, and from the sixteenth to the twentieth year to one in seven cases."—*Practical Lithotomy and Lithotrity*, pages 93-4. Again, he adds elsewhere: "As we pass from twelve to sixteen years the death-rate rises; for during the period when puberty is declaring itself, as sexual activity becomes developed, we find the increased susceptibilities thus aroused, raising the mortality to one in nine and a-half, and from thence to the twentieth year, to one in seven cases. It improves but slightly up to the thirtieth year, being until then about one in eight cases. As manhood advances and the strength increases, the death-rate diminishes to one in ten and a-half between the thirtieth and thirty-eighth year. But during the succeeding ten years, organic morbid changes beginning to set in, and the influence of continued depraved habits to tell on the constitution, the rate rises to one in six. These causes become more active, and, at the same time, the powers of life diminish as age progresses from fifty to seventy years, the rate rising to one in four and three-quarters between forty-eight and fifty-eight, and gradually to one in three and three-quarters between fifty-eight and seventy; and finally to one in little more than three between seventy and eighty."—*Ibid.*, pages 142-3.

tics formerly submitted, and more than sustains the high repute of our Indian brethren, of whose performance the statement of my friend might be taken as a fair echo and illustration. Dr. Grant is not a dashing or brilliant operator; on the contrary, he is slow, cautious, and methodical. But his caution has nothing of timidity in it, his slowness indicates care and a conscientious regard for the responsibilities of his office, and the steady hand, the collected manner, and the concentrated look bespeak an amount of self-possession that can only be acquired by long practice, and that clearly shows his mastery of the situation. I am proud that it has fallen to my lot to testify thus publicly to the capacity of a friend whose own retiring habits and native modesty would shrink from such a disclosure, whose skill as a physician has been proved in many a rough encounter with tropical disease, and who has achieved a success in a difficult department of his art, in what a great authority would call the "master handywork of surgery," which has not, to my knowledge, been ever exceeded before.

As to the manner of operating, stone is almost invariably extracted in India by the common process of lateral lithotomy, and has not that been sufficiently described elsewhere? I think so certainly, and though I have looked into some books on the subject while preparing this paper, I have no intention of quoting from them. Indeed it was with difficulty I waded through some of them, so finickly minute and circumstantial are they, and so full of details which any man with a diploma ought to be able to supply for himself, and which no man who looks to the success of his treatment could hope to imitate with safety in the hour of trial. Had some of the writers here referred to, witnessed as I have, the facility and readiness with which this process is performed by natives of India who never opened a book on anatomy, and know as much about the Veru Montanum as they do about the man in the moon, they would be less exacting in their requirements, and more disposed to trust to the common-places of surgery and the dictates of common sense. As it is they clearly overdo their parts and invest a simple proceeding with an air of importance and a degree of danger which it does not deserve or entail, and I can scarcely help thinking that the object of such writings is to deter less experienced responsible men from undertaking an operation which is, in my humble opinion, quite within the compass of all. The same remarks will apply to the apparatus employed, and I believe with an old and eminent lithotomist that "with a knife, we have it in our power to make our incisions adequate to the extraction of a stone of any size, and such as will

readily admit the forceps, and allow of an easy extraction without laceration. The incision with the knife is at once easy and sure in the hands of one acquainted with the anatomy of the parts; in the hands of one unacquainted with such anatomy, no instrument founded on any principles of mechanism is safe." This ignorance, or inexperience, or whatever else we may elect to call it—and I have no wish to use stronger language than the occasion will require—is at the bottom of all the strange machinery and complicated apparatus we see figured in books in connexion with this subject, and I believe that a good deal of the mortality that prevails after lithotomy is due to the variegated manœuvring, protracted manipulation, and other rough usage to which unfortunate patients are subjected during its performance. Be this, however, as it may, my experience is entirely in favour of simplicity, and I will now describe a procedure which is practised by simple, uneducated, mountaineer surgeons in the hills, and which. if the information placed at my command respecting it be reliable—and I have no right or reason to think otherwise—can boast of a success that admits of no approach elsewhere. This is nothing else than the old plan that was practised upwards of two thousand years ago by Ammonius of Alexandria, in the time of Herophilus and Erasistratus, and by Meges, at Rome, in the reign of Augustus, and which is so well described by Allan, Bell, Burns, and Cooper, as to dispense me from the necessity of describing it again. The author of an interesting work, entitled, "A Summer Tour in the Himalayas and Sporting Adventures in the Valley of Cashmere," alluding to the professional performances of the native hakeems or surgeons of the hills, says, at page 212:—"The only surgical operation they perform well is extracting the stone, in which they are very successful." So successful, indeed, that, as I was credibly informed by a gentleman who has resided many years among them, and who knows them better, perhaps, than any living European, they lose no more than four per cent. of their cases. Their mode of proceeding may be roughly described as follows:—They begin by thrusting the two first fingers of the left hand as far up the rectum as they can, and placing them behind the stone. As soon as they have found this they drag or push it down till it can be felt in the perineum, and then, but not before, cut upon it with the stump of an old razor, or with a blunt and primitive-looking weapon not unlike a cartilage knife.

They will not operate on particularly obese subjects, or on persons whose redundancy in this respect they cannot easily reduce; but the meagre fare of the hillmen does not often produce embonpoint or require a resort to Banting, and they dispense

altogether with the old-fashioned clyster and other preparatory treatment. Should it so happen, however, that a fat patient, who is otherwise fit, presents himself for relief, he is forthwith placed on "short commons," something like the bread and water diet of our prisons, and thereby soon brought into a condition that will admit of interference. The uncouth instrument represented on the opposite page has been the means of relieving a great many, twenty-seven in all, I believe, and its rude owner was very loath to part with it. It constituted his principal means of support; rough as it was it could not be easily replaced, and it was only by the exercise of a little gentle pressure that he could be brought to terms. At last, yielding to the earnestness of my friend, or "moved by the rhetoric of a silver fee," he consented to part with it, and I now retain it by me as a curiosity. Should the stone refuse to start forward under the *vis a tergo* brought to bear on it from behind, the iron hook or lever shown in the woodcut is brought into play, and by means of this, aided by the fingers in the rectum, the offending calculus is dragged *nolens volens* to the front.

But the size or friability of the stone, the depth of the perineum, the restlessness of the patient—for they know nothing of anæsthetics—the escape of fæces from the rectum, or other troublesome occurrence, may prevent or delay the usual happy consummation. In either case the Puharee doctor is equal to the occasion. He is not, as one without resource; on the contrary, he shows himself master of the situation, by thrusting his hand into the recesses of his wallet, and extracting therefrom an implement which is specially kept in reserve for such a contingency. This is nothing else than a pair of pincers, not unlike those used by cobblers for stretching leather, and with this he never fails. The one here figured was used successfully twenty-three times, and was so prized by its owner that I could only obtain permission to sketch it. That was, however, accurately done, and figure No. 3 is a faithful delineation of it.

Such is the apparatus and such the plan of operating practised in the hills, and the outcome of both is a saving of ninety-six per cent., a saving which no other apparatus or operation has ever been able to secure.* It is, in fact, unparalleled in the history of

* I never saw or heard of the high operation or of that through the rectum, in India. I assisted the late Dr. Brinton once during my incumbency as house surgeon at the Royal Free Hospital, Gray's Inn Road, London, in extracting a piece of mortar from the bladder through the rectum of a corpse, but the proceeding struck us both as being little less than barbarous. For instance in which calculi passed or were extracted through the umbilicus and through a fistulous opening in the abdominal walls, see "London Medical Repository," Vol. i., pages 43 and 291.

lithotomy anywhere, and such a result is calculated to put our boasted superiority to the blush, and proved that nature, however rude and unaided she may be, is a better guide to the complications of her own causing and to the relief of the sufferings she inflicts, than art, with all the resources which a too fastidious and exacting competition may have placed at her command. It also gives additional weight to the old saying, that "there is nothing new under the sun," for the proceeding here referred to is nothing more or less than a modification of the old method of "cutting on the gripe," which was first described by Celsus. and more recently by Allan,† Bell, Burns, and Cooper, and which was successfully practised by such surgeons as Hildanus, Heister, Raoux, and others. But to the curious on the subject the authors here quoted are as accessible, perhaps more so, than they are to me, and this part of my paper would be scarcely complete without a reference to the position and practice of the native doctors of the plains. Of these, however, I need not say much, as several of them are already well known by their writings or otherwise in Europe, and they are, as a rule, the very antipodes of their rude brethren of the hills. Some of these are doctors of the Calcutta University; some drive large and lucrative practices in the great cities of India; some are professors in provincial schools or personal attendants on native princes; and many are expert and successful lithotomists. But as this paper is likely to assume proportions which I did not contemplate, and as I agree with Horace when he says—

"Segnius irritant animos demissa per aures,
Quam quæ sunt oculis subjecta fidelibus."

I will content myself with giving here a representation of an operation by a native surgeon—for which I am indebted to the courtesy of Dr. Playfair, of Agra—and leaving the rest to the indulgent criticism or conjecture of my readers.

From this it will be easy to see who is the master and who is the man. The spectators in the foreground are students, who will in time become dispensers and dressers in Her Majesty's Military

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† As Allan's "Treatise on the Operation of Lithotomy" is out of print, and likely to remain so, and as his description of "this antique operation" is the best I am acquainted with, I make no apology for reproducing it in full here. He says, "the manner of operating was this—the rectum was emptied by a glyster a few hours before the operation, the surgeon introduced the fore and middle fingers of his left hand, well oiled, into the anus, while he at the same time pressed with the palm of his right hand on the lower part of the abdomen above the pubis, to assist in bringing down the stone; he then grappled it, brought it forward to press on the neck of the bladder, and made it protrude and form a tumour on the left side of the perineum. He now took the scalpel and made a lunated incision through the skin and cellular substance, directly on the stone, near the anus, down to the neck of the bladder, with horns pointing downwards to the hip. He then made a second incision transversely through the neck of the bladder, and the stone being strongly pressed upon by the fingers, started out into his bosom, or was picked out by a hook provided for the purpose."—A Treatise on the Operations of Lithotomy by Robert Allan, surgeon, pages 10-11.

Hospitals in the North West, and the expression of all is free from flurry and excitement, and more composed than one would expect under the circumstances, or perhaps than one could find in a similarly constituted assembly at home. And having said so much of the proceedings of others it is now time I should turn to and say something of my own.

My operations extended over a series of years, and were performed in various parts of India, but chiefly in Shahjehanpore, Furruckabad, Cawnpore, Futtehpore, the Punjab and Himalayas. They may, therefore, be fairly said to be representative specimens of their class, and to economize space, I will endeavour to crush into the following table all the facts regarding them that I can now recall, or that appear to me necessary for their clinical history and elucidation. Any that may escape my memory while recording the same, or that may not find room in the table, I will add subsequently, and so bring this already too lengthy communication to a close. And firstly, as regards the opération itself, that, as I said before, was always lateral, and the instruments used in its performance consisted of a scalpel, a staff grooved on the side, or, as I preferred it, down the centre, and the forceps that is always found in the common operating cases furnished by the Government. There was no blunt knife or cutting gorget ; no lithotome caché or canule à chemise, nothing, in fact, but the plain apparatus mentioned above, and it accords with my experience that these are quite sufficient for the purposes of lateral lithotomy in nineteen cases out of twenty. In the twentieth case there may be some complication that calls for other instrumental aid or accessory, as happened in an instance mentioned below, wherein I had to use a long bullet forceps, but the most successful lithotomists will be those who use the simplest instruments, and it will be obviously unnecessary for me, after what has been already said, to prescribe any rules or enter into any details as to the manner of sounding the bladder, holding the staff, or cutting through the perineum. Any man with a diploma ought to be able to effect these objects for himself, and I will never forget the pithy and forcible, but not the less significant and appropriate advice I received from the gentleman—himself an able lithotomist—who gave me my first case and assisted me in my first operation. While the patient was taking chloroform and I was adjusting my weapons, I asked him if he had any dodge or wrinkle he could put me up to before I began. "No," he said, "get your staff into the bladder and your knife into the groove of the staff, and you must be a greater fool than I take you for if you can't do the rest." And though this direction may not suffice in all cases, it will in most,

in proper hands, and it has at least the merit of expressing, in few words, the estimate formed of this operation by practical men in India, and of showing how irrelevant and unnecessary they consider a great deal of what has been written about it at home. The case here referred to was a man in the very prime of life, who recovered without a bad symytom, while that upon which my friend had just operated died from the effects of shock; and this brings me to the reflection that while lithotomy is a comparatively easy proceeding in the adult male, it is quite the reverse in the child, in whose pelvis the viscera are somewhat differently situated, and in whom, to use the words of Mr. Butcher, "the tissues comprising the urethra are so feeble in their cohesion that they will readily yield to violence, and the angle to the bladder is so acute that great facility is afforded to the instrument in going astray." This is strictly true, and equally applicable is his advice about introducing a couple of ounces of water into the bladder before operating, for "it facilitates the detection of the stone, and the stone should invariably be struck previous to cutting the patient—not only because the stone, if a very small one, might have escaped from the bladder, but because this evidence proclaims the presence of the stone, and also the guide to it is direct and certain, the instrument has not gone astray," though I did not always follow it. And apropos of this point and also of the question of lithotomy in children generally, I may here reproduce the substance of a conversation I had with a friend in India, about the time that Mr. now Sir Wm. Fergusson's lectures on the subject were appearing in the *Lancet*, which will better serve to show my estimate of it than any other course or statement I could employ. Having discussed some strange mistakes and malpractices we had witnessed or heard of ourselves, and among others those of tying the urethra in mistake for the perineal artery, cutting through both coats of the bladder into the rectum, and in a third instance including that structure itself, and actually scraping away at the sacrum in lieu of the stone. I asked him, "Did you read Fergusson's lecture about it in last week's *Lancet?*" "Yes," he said, "I did." "Didn't you consider it," I inquired, "very much to the point?" "Yes, yes," he replied, "very much so indeed," and holding up his hands, he added with emphasis, "'tis the very best I ever read on the subject." "It is, I subjoined; it deserves to be printed in letters of gold, and read, learnt, and inwardly digested by every one who undertakes to operate on children, and who wishes to do so successfully." And this is, perhaps, as much as I need say on the matter at present.

Bus it sometimes happened to me, and I know it has often hap-

pened to others, to have children brought us with all the symptoms of a calculus, in whom, however, none existed, and whose sufferings were induced or aggravated by uncleanly habits, or intestinal irritation. Sounding frequently failed to disprove the fact or throw light on the cause, and it is not to be wondered at that in such instances the usual thing was done. I have heard of several cases in which the operation of opening the bladder was performed, with, of course, negative results as regards the stone, and with no injurious consequences as regards the patient; indeed the proceeding seemed sometimes to have done good by diverting the sufferer's mind from the bladder, or concentrating it on other organs, and inducing his parents to look elsewhere for a remedy. Be that as it may, I never heard of a death from such manipulation, but the mistake must necessarily be an unpleasant one for a sensitive mind, and I was happily saved from resorting to it myself, by remembering an anecdote of the late Mr. Liston, whose authority on this and other similar details could admit of no question. It is told of that distinguished surgeon, that, while lecturing one day on the symptoms of stone in the child, he had exhausted the usual stock somewhat sooner than he anticipated, and was obliged to fall back on his own experience for illustration. He accordingly addressed his class as follows:—"But, gentlemen, when you happen to be in doubt about your case, I advise you to place him on a chair and desire him to jump down; if he has no stone he'll readily do so, but if he has, he'll see you d—ned first."

And this is a test which can be so readily resorted to by all, that it deserves more attention than it would appear to have received. I acted on it in a case of the kind here contemplated, and finding that my little patient readily complied with my request, I refused to operate, and I was afterwards glad I did so, for his worst symptoms yielded to time and treatment, and he ultimately regained perfect control of his water. As intimated before, I do not pretend to entire accuracy in the particulars given below; it is always difficult to obtain reliable information from the natives, and this difficulty was enhanced in my case. One daily meets very old men in India, but their ages can, in many instances, only be inferred from their appearances, and, when interrogated on the point, they either refer back to some great event, such as the siege of Bhurtpore, the battles of Lord Lake, or the reign of Runjeet Sing, which may have happened in the time of their grandfathers, or they put you off with a shake of the head and a Khuda Jane—God knows.* The same may be said, to some

* I find the same trait or peculiarity ascribed to the Indians of South America, by the great traveller, Humboldt. He says, "travellers who merely judge from

extent, of the account they give of the rise and duration of their symptoms, for with them time is of no value, they act on the Epicurean maxim of caring for nothing but their bellies; food and farthings engross all their thoughts, and I never yet heard the poorer class of natives discussing anything else than the price of grain, or the fluctuation of wages.†

This table presents few points of divergence from those already given; in all the results are pretty much the same, and it will be seen from mine and Dr. Grant's that the operation was eminently successful in children. But this is so much the case elsewhere also, that I am inclined to look to the operator for any departure from it, and I cannot too strongly impress on the minds of my younger brethren the necessity of forgetting for the time or ignoring altogether what they may have learnt of the position of the bladder in the adult, when they come to deal with the subject of calculous disorder in children. The relative positions are almost reversed, the one being low down towards or rather upon the rectum, and the other above tilted forwards under the pubis; but they'll learn these things better from Sir Wm. Fergusson's excellent lectures than they can from me, and with regard to their incisions they cannot do better than act on the advice of Mr. Butcher. That able operator, writing on this point in the "Dublin Quarterly Journal," for February, 1870, says:—"I cannot lay too much stress on the necessity of freely opening the entire of the

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the physiognomy of the Indians are tempted to believe that it is rare to see old men amongst them. In fact, without consulting parish registers, which in warm climates are devoured by the ants every twenty or thirty years, it is very difficult to form any idea of the age of Indians. They themselves are completely ignorant of it."—"Life and Travels of Alexander Von Humboldt." New York: Rudd & Carleton.

†How often have the words of Horace occurred to me when listening to or looking at a group of natives;—

"Nil admirari, prope res est una, Numici,
Solaque quæ possit facere et servare beatum."

As regards the size and composition of calculi I made the following note, which is, perhaps, worth preserving. "In the Futtegurh Dispensary, there were on the 13th of October, 1866, eighty-six calculi, all the subjects of which had recovered. They appeared to consist chiefly of uric acid and phosphate of lime. I noticed more than one of a dark brown colour. A large, egg-shaped, seemingly phosphatic stone weighed 7 drachms and 40 grains. Another of a similar description weighed 1 ounce and 15 grains, while a third brownish specimen, the neck of which appeared to have been adjusted to the prostatic portion of the urethra, weighed 7 drachms and 19 grains. There was one stone—the subject of which, who was over sixty, had died—kept apart, which appeared rough and jointed like a piece of consolidated lime from an old house, and which weighed 3 ounces 4 drachms and 5 grains. My own specimens have lost considerably in weight since they were extracted. It stated in an old number of the *Lancet*, that Mr. Paget removed a calculus at St. Bartholomew's that weighed upwards of 9 ounces. Mr. De Morgan mentions a case in the Pathological Transactions of London, vol. xxi., p. 271, in which two calculi, which weighed together 22½ ounces, were removed from the body of a man who had exhibited symptoms of stone for years, but who was supposed to be shamming for the purpose of obtaining poor-law relief. In the same volume there is a woodcut of a stone which weighs 25 ounces, and which was taken from the body of one Sir Thomas Adams, who accompanied General Monk to Buda to congratulate and bring the King—Charles—home.

membranous portion of the urethra, by the one and continuous stroke of the knife. This should be the surgeon's aim, for if the knife be introduced again and again with the intention of clearing the staff, the difficulties of completing the operation are greatly increased, the urethra is wounded and notched in several parts. Shreds of it may hang into the groove of the staff, and it may be so impaired that the remaining connecting tissues may fail to resist the efforts essential to the completion of the operation and give way, and so the surgeon may be foiled in reaching the bladder." This, however, ought not to happen as long as the staff is adhered to; *that should on no account be lost sight of*, like the poor compassless benighted mariner described by the poet, who looked to one solitary star alone for the guidance of his struggling ship, the operator should say, "if I lose thee I'm lost," and he who sticks to the staff will in all probability reach the stone and save his patient. No matter how awkward and bungling may be his manipulation, no matter how vague and imperfect his knowledge of anatomy, no matter how feeble and faulty his incisions, provided, of course, they are not carried too far, if he sticks to the staff and *that that is in the bladder and on the stone*, he ought, if he be not a fool, or something worse, to feel and remove the latter. Sir Henry Thompson says, that "the most frequent cause of death after lithotomy in children is peritonitis and constitutional exhaustion," and that is doubtless so in England; but the deaths I witnessed or heard of among children in India, appeared to me rather to be due to shock, hæmorrhage, or injury of the rectum, and I did not find that a few years one way or the other materially affected the result. Advanced age, on the contrary, does so terribly, by preventing union of the perineal wound, inducing irritative fever, diminishing the desire for food, and the capacity for sleep, and ultimately paving the way for sub-acute peritonitis or incurable exhaustion.* My two fatal cases were both old and feeble, and the last was an old man who had to be carried by his son, and who could not, in any case, long survive his sufferings. Yet he recovered well from the effects of the chloroform and the shock of the operation, but the wound in the bladder refused to

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* "Barnes, the celebrated editor of the *Times*, having suffered for years from stone, was at length persuaded to submit to an operation, which, although it was most skilfully performed by Liston, gave such a shock to his nervous system that he sank under it, and died on the 7th of May, 1841, in his fifty-sixth year."—Andrew's History of British Journalism, vol. ii., p. 84.

"Suffering for years" is a bad preparation for such an operation, and shock to the nervous system is much more likely to occur and prove fatal after the powers of life are on the wane than before. For other instances of great men in whom delay proved dangerous, see the preface, &c., to Mr. Allarton's "Median Lithotomy," and Traver's "Constitutional Irritation."

heal; he lost his appetite, and could not sleep; aphthæ appeared on the tongue; and he passed away at last, without pain.

For the analysis of the calculi given in the table I am indebted to the courtesy of Dr. Cameron, the accomplished Chemist and Analyst to the City of Dublin, who most kindly undertook the labour of determining for me the composition of the stones which I had brought home.

And thus I bring to a close my personal experience of lithotomy in India.—*Dublin Quarterly*, May, 1870.

A SIMPLE METHOD FOR REMOVING CYSTIC TUMORS FROM THE EYELIDS.

By Prof. J. J. Chisolm, M.D., Baltimore.

It is a modification in the use of the nitrate of silver that I have found so effective in the treatmeut of sebaceous cysts of the lid, and which has enabled me to discard for many years the tedious, painful and sometimes dangerous cutting out of such tumors. If the tumor be a sebaceous cyst, located between the upper portion of the tarsal cartilage and the skin, a Desmarres's ring forceps is used as a clamp upon the lid, to shield the ball of the eye from injury, to fix the tumor, and prevent annoying oozing of the blood. Under this ring-pressure a small opening is made into the cyst, through which its contents are squeezed out. The end of a small silver probe, dipped in nitric acid, is then passed into the cavity, is made to pass over the epithelial lining surface, and is withdrawn. Usually, in its passage into the cavity of the tumor, it cauterizes sufficiently the lips of the incision to prevent any oozing of blood when the clamp forceps is removed. When the cyst is formed by the closure of a Meibomian duct, the better plan is to evert the lid and make the puncture from the conjunctival surface, the caustic being applied as directed. The advantage gained by this modification is in the more certain, thorough, and yet restricted application of the caustic, confining its cauterizing influences only to those portions in which action is desired. The results are in every case satisfactory. No after-treatment is needed.—*Baltimore Med. Journal*, p. 261.

Medicine.

TREATMENT OF CHRONIC DYSENTERY, WITH LARGE DOSES OF POWDERED IPECAC.

Subjoined are brief histories of three cases of chronic dysentery, treated on the Pacific coast, by W. E. Whitehead, M. D., assistant surgeon U. S. army.

Case 1.—N. M., white, single, aged thirty-six years, sailor. Came under my observation and treatment in April, 1868; much reduced in flesh and strength; loss of appetite; frequent mucous and bloody stools, often as many as twenty-five a day. Three years previously, while in Australia in the mines, had a very severe attack of dysentery, with fever; was then sick for nearly three months; when sufficiently strong, he left the mines and went to sea, but did not fully recover his flesh and strength, and for three years had daily from five to twenty-five small, watery, bloody, and mucous discharges from the bowels. Upon examination, I found he had soreness in the left iliac region; no piles or ulceration about the anus; appetite capricious; tongue coated and slimy; skin dry; urine scanty and highly colored.

Treatment.—To take a warm, salt-water bath twice a week; to eat soups and farinaceous food, with milk and weak green tea; no spirit or fermented liquor; to wear flannel at all times; to sleep in a warm, dry, and well ventilated place. To take R. pulv. ipecac, grs. xv, three times a day.

At the end of one week his condition was much improved; his stomach now tolerated the large doses of ipecac; the discharges from the bowels were less frequent and more solid; appetite, spirits, and general condition much improved. He said that he felt more like doing his duty (general hand on board a small Government schooner) than he had done for several years. Continue the powdered ipecac in twelve grain doses three times a day; no change made in the general treatment. At the end of ten days more he was so much improved that he did not think it necessary to take any more of the powders; but I concluded to continue them in doses of ten grains twice a day; to take one as soon as he arose in the morning, and one just before retiring to bed at night. This was continued for two weeks, with advice to begin the use of solid food. At the end of this time, or about the fifth week of treatment, N. M. was much improved in strength and flesh, good appetite, digestion good, from two or three healthy alvine dis-

charges in twenty-four hours, secretions normal and healthy. Cured.

Case 2.—S. R., white, single, aged twenty-eight years, sailor in the revenue service. Was sent to me for treatment by the captain of the revenue cutter, Joe Lane, in June, 1868. Four years ago had fever and dysentery while in China; had then been unfit for duty for three weeks, when he went to sea, and his general condition improved, got rid of the fever, but has had dysentery discharges continuously since the first attack—an average of five discharges daily, frequently bloody and slimy.

Physical examination revealed decided tenderness over the course of the large intestine, and several ulcers just within the margin of the anus. Appetite fair, tongue red on the edges, thickly furred in the middle; some loss of flesh, and a general feeling of languor, with loss of strength and vigor; the skin lacked its natural elasticity; urine normal.

Treatment.—To take a hot salt water bath three nights a week, just before going to bed; to eat such nourishing food as best agreed with him; to eschew all kinds of intoxicating liquors; to wear flannel next his skin; to sleep in a well ventilated, dry, and warm room; to take fifteen grains of powdered ipecac morning and evening, on an empty stomach. At the end of eight days he was much improved; discharges from the bowels more consistent and much less frequent: general condition much better. Continue the ipecac in ten grain doses twice a day for a week. Reported at the end of the week so much improved that he desired to be returned to duty, as his ship was short-handed. To take every night, at bed time for two weeks, eight grains of powdered pecac. Was seen again in three weeks entirely well, and about going to sea on a cruise. Cured.

Case 3,—T. R., white, single, aged forty years, sailor in the merchant service. First seen in August, 1868. Two years ago he had an attack of dysentery in Chili; was then very sick for one month, when he left for the north, and had not been able to do any heavy work since; had been compelled to abandon the sea. He presented a very unhealthy appearance: skin of a bad color, lax and bloated; great tenderness on pressure over the entire abdomen; no piles or ulceration about the anus; urine highly colored and scanty; appetite capricious, strong desire to eat whatever disagreed with him; thirst considerable; tongue red and dry most of the time; strength much reduced; flesh soft and flabby.

Treatment.—To take a sea bath daily during the summer, as had been his habit; diet to be light and nourishing; to drink two glasses of grog a day; to wear flannel next the skin; to sleep in

a dry and warm bed. To take eight grains of powdered ipecac three times a day for one week ; then, twice a day for one week ; and then, once a day (at bed time) for another week. Reported at the end of the third week very much improved in general health ; ordered to stop taking the powders, and take ten drops of the muriated tincture of iron, morning and night, in a wine-glassful of water. When seen again, in three months, was well, and had shipped for a voyage to sea. Cured.—*Pacific Medical and Surgical Journal.*

Midwifery, etc.

CHOLERA INFANTUM.

By J. R. Black, M.D., Newark, Ohio.

The student of medicine, just past his collegiate honours, with head full of a confused sort of learning, anxiously awaits the calls of the public for his services. Usually, he thinks his medical teachers among the best, if not the very best in the world ; fully informed upon the latest improvements, and hence, that he, being their recipient, will make a brilliant success of his management of disease. But it does not take long for him to discern that disease is not the unit, names led him to infer, and that many cases obstinately resist, nay, seem to be made worse by the treatment laid down by the distinguished Prof. A. or B. Or, perhaps, he is very apt to reason, for example, in a case of cholera infantum, that there is great irritability of the stomach with a too profuse secretion and excretion from the intestinal canal ; indications to lessen this irritability by opium, and diminish the excessive secretion by astringents. But, alas, the pathology and treatment so clearly defined in the mind, too often do not answer the fond expectations in practice ; the disease running on for an indefinite period—the results of treatment so uncertain that it is difficult to say whether this or that case got well in correspondence with, or in antagonism to the remedies.

Good common sense without profundity, requires in the healing art to see a near appproach to uniformity in therapeutic results, else it is proper, nay, involuntary to doubt the success of our efforts to remove disease, and so in the decline of life think and act as skeptics in medicine. Unless this uniformity in therapeutical results is attained, the practitioner should be dissatisfied with his knowledge and cease not day or night to grope his way to a

better knowledge. Perhaps, in many phases of disease, this groping is a necessity, for the assemblage of conditions and manifestations that make up any disease may in near, or in widely separated localities, differ so greatly in their underlying qualities that what may be a very successful mode of practice in one place, may be very unsuccessful in another. I am the more certain of this on account of the success and confidence with which men in every way eminent, announce their success in treating certain diseases with stimulants, when under my own eye the same diseases under a like plan have grown steadily worse, every unfavorable symptom intensified, and the patient's consciousness of distress increased, or mercifully obliterated by delirium. If such differences in results, from the same medicines for the same disease, are not imaginary—which I think they are not—not only from the above consideration, but from others not proper here to bring forward, it follows that before adopting this or that line of treatment for any given disease, we should endeavor to ascertain if the circumstances and conditions in which that disease arose, are the same, or nearly so, to those with which the reader has to do. This must have reference not only to what are known as climatic conditions, but to regimen, purity of the air, and the weak or faulty organizations derived from the parents.

The milk, both human and animal, on which babes subsist, is from pernicious surroundings and faulty habits, less pure in compact cities than in rural districts. The air in the first mentioned places is also, as a rule, very impure; and the number of procreations with constitutions weakened and vitiated by excesses, extreme artfulness in living and syphilitic disorders is far greater in the city than in the country. Hence, even in places not ten miles distant from each other, the treatment appropriate for cholera infantum may be very different, and the results, under the most skilful management, very dissimilar. In the large eastern and western cities cholera infantum is a very fatal disease, while from my experience in the second class cities of Ohio, it is one of the most manageable. In the last five years I can recall only a single fatal case under my supervision. Nor is the number of cases to be met with small: it being not uncommon to have eight or ten new cases each week. Any description of cholera infantum is to the practitioner superfluous; its symptoms are everywhere so familiar, and withal, very distinctive.

In reference to its etiology, opinions do not seem to be well settled; mine may be summed up in a few words, viz: great heat, bad air and diet. Weakly and faulty constitutions and the period of dentition undoubtedly incline to the disease, but neither are essen-

tials, children possessing them will escape when the other three are absent, and children not possessing them will suffer when the three are present; the difference lying in this, that the former will yield to the causes much more readily than the other, and the disease be more likely to terminate fatally.

The influence of great heat is shown by the prevalence of the disease only when the temperature of the year is the greatest, and by the fact that as the scene of observation shifts to the higher latitudes, it diminishes and finally disappears. The influence of bad air in the production of cholera infantum is beyond question, and by air is not meant malaria, or an unintelligible something which is supposed to develop intermittent fever, but tangibly bad air from reeking animal excreta, piles of animal and vegetable *debris*, and the foul exhalations from human skin and lungs. It was an idea of former times that children were poisoned by sleeping with adults, and it would be well if the same idea prevailed to-day. In thousands of households, father, mother, and child sleep in an eight-by-ten box, called a room, without the slightest attention to ventilation; nay, rather with attention to guard against it, from the fear that the little being committed to their care may take cold. Ignorant and fatal kindness! The lungs must have their natural food, which is pure air, far more urgently than the stomach needs its natural food. A child can live a day or two without eating, but not five minutes without breathing. Pure air, it is no figure of speech to say, *is the breath of life*, and to starve the blood of this will prove more quickly disastrous to its healthy life than to starve it through the stomach. As in medical men ignorant of these facts, they bestow the most marked attention to the sustenance of the blood through the stomach, and little or no attention to the sustenance of the blood through the lungs. It is the medical fashion of to-day to direct that patients have an abundance of concentrated nutriment, with wine, iron and quinine, and pay no heed to the needs of the poor half starved lungs. Some medical men would be indignant if a spoonful of unwholesome food were given the sick, while they carelessly allow gallons of unwholesome air to be drawn into the lungs day and night. They apparently forget what ventilation is, thinking it is secured by a single small outward opening in a house, whereas a constant renewal of air can only be secured by two or more. It should never be forgotten that a gorged stomach is no substitute for starved lungs, and that healthy life under such circumstances, is just as impossible as it is for plants with their roots imbedded in a rich soil, but deprived of light, and kept in a stagnant air.

Children suffer more from air impurity than adults, because the change in their blood is much more rapid and relatively greater in the one than in the other. Infants breath from five to seven thousand times oftener in twenty-four hours than adults, and this is because they need relatively more oxygen, and the more frequent rinsing out of the lungs of the poisonous matters which the cells of their lungs exhale. They also suffer more than adults from the out-door air, impurities of towns and cities; and every experienced physician is aware that in cholera infantum a change of air often acts like magic in reviving the drooping energies. So impressed am I with the importance of pure air for children, that when they have it constantly in doors and out, an attack or the results of cholera infantum need not be feared. It very seldom occurs under such circumstances, and when it does, the attack is seen to be mild and tractable. Improper diet, especially that which is crude, or unduly refined or concentrated, will often excite an attack. But if the constitution is not faulty, and the blood deprived by feeding the lungs with unwholesome air, the removal of the exciting cause will be followed by a speedy resumption ef healthy action. I have not seen the very unfavorable result which some attribute to feeding an infant on cows milk, provided the kine are healthy, and not too much sweetening be added to the milk with crude brown sugar.

Treatment. To arrest vomiting no remedy equals calomel in from one-fourth to one-eighth of grain doses, mixed with a little prepared chalk, and given every two or three hours, administered, if possible, just after emesis. The drink to allay intense thirst ought to be given often, ice cold, and in small quantities. Sometimes it is better to put a sprig or two of mint in it, or when there is great intestinal irritation, the bark of slippery elm. Later, when the prostration is great, I have seen very happy effects from the use of equal quantities of ale and water as a drink. The little patient will cling to the vessel containing it, and reject the one containing pure water when they have the chance of preference. I can not speak too emphatically of the soothing, toning influence of this mixture in cases of extreme debility.

The discharges from the bowels are usually, at the onset of the disease, watery, floccy or frothy, sometimes exhibiting bright green tints. The calomel in small doses will change the evacuations for the better in a day or two in nearly every case, and after vomiting is somewhat arrested, and the intestinal discharges remain copious and frequent, to combining it with two or three grains of sub. nit. bismuth answers an excellent purpose. This checks as well as thickens the evacuations.

After the stomach becomes retentive, the thirst less intense, the heat of the head lower, the eyes fully closed in sleep, and the intestinal evacuations tinctured with bile, these measures may be suspended, or be carried out less frequently, and others adopted in accordance with the exigencies of the case. If the evacuations are yet too frequent, attended with considerable pain, the chalk mixture with paregoric will restrain them in a very admirable manner. If digestion is very imperfect, which it is almost certain to be, pepsine wine immediately after partaking food as recommended by Dr. Reeve, is of great benefit. If to the same conditions there are superadded flatulence and diminished tone, the aromatic syrup of rhei, guarded by a little paregoric will be found to render efficient service in progressing the cure. In the way of nourishment nothing equals milk and lime water, and for the advanced stages, mutton broth, with tapioca, or blanc mange when the tongue is not dry.

During treatment close attention should be paid to pure air which, too often unattainable in cities, may be readily secured by removing to the suburbs or the country.

I have been led to present this mode of treating cholera infantum not from its novelty, but from its simplicity and success. No doubt others may think the same of theirs, and if so, may peruse the above mode more from curiosity than for information. But there are others, especially junior members of the profession, whose mode of treating this disease may not be all that they could desire. It was so once with myself, and I would then have been grateful for suggestions, which would have tended to make its management in this region and civic conditions more efficient. There are also those who treat this affection with castor oil and paregoric, a line of treatment often very offensive to an irritable stomach, and which I have seen superseded by that above narrated to the immediate relief, and amendment of all the symptoms. Again, the opiate and astringent plan, even during the height of the febrile movement, is in favor with others. I cannot help regarding this mode as highly mischievous. Brain complications, visceral engorgements, an increase of fever, a greater fatality or a prolongation of the struggle with disease are the almost invariable results. I speak on this from personal observation, a mode which I was years ago led to adopt from the plausible way of reasoning upon the indications of cure in cholera infantum, namely, to subdue irritability, and diminish excretion.—*Cincinnatti Lancet and Observer.*

Canada Medical Journal.

MONTREAL, JULY, 1871.

MEETING OF THE COLLEGE OF PHYSICIANS AND SURGEONS, LOWER CANADA.

In another column we publish the report of the triennial meeting of the College of Physicians and Surgeons of Lower Canada, which was held recently at Three Rivers. It will be observed that the College adopted a very important amendment to their by-laws, bearing on the licensing of chemists and druggists.

Some misconception has existed as to the power possessed by the College to grant a license to practice to chemists and druggists. We have never doubted the legality of the action of the College in this respect, as the functions of the old Medical Board, established in the reign of George the Third, were continued to the College at the time of the passing of the act incorporating the medical profession, in the year 1847.

In the year 1864 the College sought for and obtained an amendment to their charter, whereby all chemists and druggists applying for license and enregistration were obliged to produce evidence of having attended a certain curriculum. This measure was obtained in the interests of the chemists and druggists, as it was thought very desirable that these gentlemen should take rank as professional men, and not be looked upon as merchants. There was no desire on the part of the College to force their license on the chemists and druggists. The College is in point of fact the legally constituted body to regulate these matters, and give to the public an assurance of competancy on the part of dispensers.

It has been felt desirable that the chemists and druggists should possess legislative recognition, and secure for themselves an act of incorporation, with powers to regulate their curriculum and mode of examination. The action of the College in the motion, which will be found elsewhere, was suggested by the fact that several chemists and druggists applied for examination without the prescribed curriculum, and based their claim for enregistration on the statement that they were in actual practice before the year 1864.

The College decided that it had no power, under the circumstances, to remit the prescribed curriculum, and so the matter for the time dropt.

The amendment, which becomes law on the sanction of the Governor General, throws the door open to such chemists and druggists who desire to avail themselves of the privilege, but we do hope the legislature will entertain the application for a special act of incorporation, so that the chemists and druggists may manage their own affairs, and we feel certain they will adopt such measures as will elevate the standard of their profession.

TRIENNIAL MEETING OF THE COLLEGE OF PHYSICIANS AND SURGEONS, L. C.

The College of Physicians and Surgeons of Lower Canada held their triennial meeting for the election of Governors for the ensuing three years at the town of Three Rivers, on Wednesday, the 12th July instant.

The meeting was held in the Court House.

The following members were present:—Drs. Michaud, Tessier, Peltier, Russell, Rottot, H. Blanchet, A. G. Fenwick, Robillard, Gilbert, Wilbremere, Mignault, Tetu, Howard, Duchesneau, Trudel, Scott, Marmette, Craik, Hamilton, Brigham, Gibson, J. B. Blanchet, Ross, E. Landry, Hingston, Worthington, and G. E. Fenwick.

In the absence of the President, J. E. Landry, M.D., of Quebec, the Chair was taken by the Vice-President, Dr. Michaud, of Kamouraska.

The Secretary for the District of Montreal, Dr. Rottot, read the minutes of the last triennial meeting, which were confirmed.

The Secretary for the District of Quebec, then read a report of the transactions of the College during the past three years.

The following gentlemen being licentiates of over four years, were duly proposed, seconded, and elected members of the College, viz.: Drs. Dagenais, Desjardins, and Brosseau, of Montreal; Dr. Robertson, of Lennoxville; Dr. Wood, of Coaticook, and Dr. Austin, of Sherbrooke.

The above gentlemen being present, all except the two latter took their seats as members of the College.

Twenty-nine proxies were handed in, making the total number of votes represented sixty in all.

The Vice-President appointed the following gentlemen a committee to examine the proxies, viz.: Drs. Trudelle, Russell and Tessier.

It was then moved by Dr. Scott, and seconded by Dr. Peltier, "That in future the second semi-annual meeting in the year, shall be held in the City of Quebec on the last Wednesday in September, in each and every year, instead of as at present, on the second Tuesday in October, with the exception of the fall meeting of the year 1871, which shall be held on the second Tuesday in September, in place of the last Wednesday in the month, as subsequently." It was explained by the mover that in accordance with the by-law notice of this motion had been given at the meeting in October, 1870, which notice had been duly advertised.

Dr. Tessier opposed the motion. He was a conservative, and did not like the introduction of changes. The change sought might be more convenient for the gentlemen connected with the medical schools of Montreal, but they should not consult their own convenience if it interfered with that of others. This alteration would interfere with the examinations of the University of Laval, which began in September, and might be continued almost to the end of it.

Drs. Howard and Rottot supported the motion, and explained that under the present arrangement, three of the teachers from each of the Montreal schools, being members of the Board of Governors of the College, were obliged to absent themselves from their lectures to attend the meeting in October at Quebec. This would be avoided by the alteration proposed in the motion, and as the day mentioned was the last Wednesday in September, ample time would be afforded for the completion of the examinations at Laval University.

The motion was then put and carried.

Dr. Howard called the attention of the Chair to a notice of motion contained in the minutes of last October meeting just read, which motion, in the absence of Drs. Marsden and Chamberlain, the original mover and seconder, he would advocate.

It may not be known to all present that one of the functions of the College of Physicians and Surgeons of Lower Canada is to grant a license to druggists to carry on their business, and that without such license they are not legally qualified. The words of the act (27-28 Vic., cap. 72) section 16 are these :

16. "Except such persons as may lawfully practise physic in Lower Canada, no person whatsoever shall carry on the business of apothecary, chemist and druggist in Lower Canada, who shall not have obtained a license from the Provincial Medical Board, which license the said Board are hereby authorized to grant to any person applying for the same who shall have passed such examination in pharmacy as the Board may deem satisfactory, and such license

shall be enregistered in the books of the College of Physicians and Surgeons of Lower Canada."

This act was passed in 1864, and the object of the motion he was about to present was to permit the Governors of the College to exempt those druggists who were in practice before that date from the by-law, which requires all candidates for the apothecaries' license to submit to a literary and classical examination upon entering upon their studies, and to attend two six-months courses of lectures upon chemistry, materia medica and pharmacy, and a three-months course in botany at some incorporated school. It was but fair that men who were in active practise before the passing of the act should be required to comply with the requirements mentioned; yet such of them as had not obtained a Governor's license after examination, in accordance with the law existing before the year 1864, should be prepared to satisfy the College that they possessed sufficient knowledge of pharmacy to entitle them to a license. The motion, then, he was about to move would enable the Governors of the College to exempt such men from compliance with the above curriculum, and permit them to submit those persons to such examination as, under the circumstances, the Governors thought suitable. He begged to move, seconded by Dr. Tessier,—"That the Board of Examiners shall have power to exempt candidates for the practice of pharmacy, who were in practice as such prior to the passing of the Act 27 & 28 Vic., cap. 51, from the curriculum prescribed for candidates under the by-laws, who commenced their studies subsequent to the passing of the above act; also, that the penalties against chemists, druggists and apothecaries practising without license shall be the same as those against persons practising physic, surgery, or midwifery, and recoverable in the same manner.

After some discussion the motion was put and carried.

The members then proceeded to the election of thirty-six Governors for the ensuing three years.

The following gentlemen were named scrutineers by the Vice-President, viz.: Drs. Scott, Gilbert, Rottot, Russell, and Tetu.

A recess of two hours was taken to give the scrutineers time to examine and report on the election.

On the re-assembling of the College, the following members were declared duly elected Governors of the College for the ensuing three years:—

For the City of Quebec.—Drs. Landry, Sewell, H. Blanchet, Jackson, Tessier, R. H. Russell, Robitaille, and J. B. Blanchet.

For the District of Quebec.—Drs. Michaud, Boudreau, Marmette, Dubé, Têtu, Charest, Larue.

For the City of Montreal.—Drs. Peltier, Howard, Scott, Smallwood, Robillard, Rottot, Trudel, and G. E. Fenwick.

For the District of Montreal.—Drs. Chamberlin, Gibson, L. R. Church, Weilbrenner, Brigham, Duchesneau, and Lavallée.

For the District of St. Francis.—Drs. Worthington, Gilbert and Hamilton.

For the District of Three Rivers.—Drs. Ross, A. G. Fenwick, and Landry.

A vote of thanks was then passed to the retiring officers of the College.

It was then moved by Dr. Worthington, seconded by Dr. Robertson, and carried, that the next Triennial meeting of the College, to be held on the second Wednesday in July, 1874, should take place in the town of Sherbrooke.

The College then adjourned.

At a subsequent meeting of the Governors of the College, held on the same day and place, the following gentlemen were elected office-bearers for the ensuing three years:—President: W. E. Scott, M.D.; Vice-Presidents: Drs. Weilbrenner and Russell; Secretary for Quebec: Dr. Tessier; Secretary for Montreal: Dr. Rottot; Registrar and Treasurer: Dr. H. Blanchet.

The meeting then adjourned till the second Tuesday in September, to be held in the City of Quebec.

Medical News.

The Obstetrical Society of London have recently appointed a "Pelvis Committee," having for its object—

(1.) The collection of specimens of the pelves (male and female), of the various races, together with, if possible, fœtal heads at term.

(2.) The collection of abnormal female pelves or casts of such, especially those of which an accurate history can be procured.

(3.) The collection of histories, drawings or photographs, and descriptions of abnormal pelves, even where it is not possible to procure the pelves themselves nor casts.

We understand that Dr. Perrigo, of Montreal, has been named a member of this Committee, and he will be glad of the assistance of the profession throughout the Dominion in carrying out the objects of the Committee.

BELLADONNA AS AN APERIENT IN CONSTIPATION.

By F. B. Nunneley, M.D.

Adverting to the frequency of constipation and the abuse of purgatives, the author offers a few remarks on its *medicinal* treatment by means of belladonna, from observations made, for the most part, on the patients of the York Dispensary, where I gave it to nearly all who suffered from constipation, simply to restore the natural action of the bowels, and not to cause a flow of secretion from the intestinal mucous membrane. The method followed was, in the main, that recommended by Trousseau. Extract of belladonna was given in doses of gr. 1-6 to gr. 2-3 on rising every morning. A grain of the extract and gr. iij. of the ext. gentian were divided into six pills, and one to four prescribed for a dose.

* * * Belladonna in the usual dose of gr. 1-6 to gr. 1-2 produced no dryness of the throat, or dilatation of the pupil, but presented the following advantages over ordinary purgatives: It did not gripe, but gave usually a healthy, solid stool; increased constipation did not follow its use, and it very often restored the natural action of the bowels, so as to render a recurrence to this or other aperient unnecessary. Another and important advantage is the small bulk in which the remedy can be given.—*Practitioner.*

MODE OF ADMINISTERING CREASOTE.

As creasote is now frequently employed in the treatment of typhoid fever, and is exceedingly distasteful to some patients, it may be worth while to mention here a formula which in great measure covers its flavor, and is easily prepared:—

Creasote, 3 drops.
Essence of lemon, 2 drops.
Orange-flower water, 1 ounce.
Spring water, 3 ounces.

A spoonful to be taken at frequent intervals throughout the day.

Dr. Hughes Bennett recently reported the following sad case:—A beautiful daughter of an Edinburg barrister, in perfect health, went to a dentist's office one morning and had a tooth extracted. Five minutes afterward she was dead. He believes this is only one of many similar cases which occur, and are never published.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Tubercular disease of the Kidneys and Bladder; no turbercle in the Lungs; Ulceration and enlargement of the Supra-Renal Capsules; distinct Bronzing of the skin of Face and Neck, &c., &c. Under the care of D. C. MacCallum, M.D., Professor of Midwifery and diseases of women and children, McGill University.

(*Reported by Dr. Thos. G. Roddick*, Assistant House Surgeon, Montreal General Hospital.)

Benjamin Heritage, aged 36, was admitted on 4th October into the Montreal General Hospital, under care of Dr. Wright, suffering from a difficulty with his bladder.

His appearance denoted the presence of some exhausting disease, considerable emaciation being evident. His complexion dark, skin yellowish, and eyesight completely gone from some previous inflammation.

History.—Is a printer by trade, but has likewise worked as a painter in the Western States. Has suffered from lead colic on one or two occasions while engaged in painting.

As to his family history, his father was drowned many years ago, and his mother died of dropsy from some cardiac malady. His grandfathers and mothers lived to advanced ages. One of his sisters died a few years ago of a like disease with his mother, and two brothers have since died of consumption.

Some eight or nine years ago he had intermittent fever, and at this time or soon after experienced symptoms of inflammation of the bladder, being unable to retain his water for more than an hour at the most, and occasionally it was tinged with blood. This bladder derangement soon subsided to a great extent; but when at all unwell it would return with nearly its former vigour.

Three years or thereabouts after, while in St. Louis, the irritation returned, and he went into hospital, where he remained for two months, being discharged at the end of that time greatly improved. It was thought while there that he suffered from

vesical calculus, but repeated soundings showed nothing of the kind.

Ever after this the frequent desire to make water remained, but, with one exception some two or three years ago, when he caught a severe cold, the irritation never laid him up till about a year since, when he again had an attack of ague. At this time, also, his eyes were attacked, which resulted in the blindness before mentioned. From this period (a year ago) to the time of admission into hospital, he has seldom left his bed, except during the journey to Montreal.

He has always been a temperate man, in fact a teetotaller as to spirits. For years he was a vegetarian, and for some time never drank tea or coffee. He says he has never been married, or even had connection with a woman.

On admission the patient complained of great difficulty in holding his water and slight strangury in voiding it. On examination two strictures were found—one about an inch from the point of the penis, and the other at or in the vicinity of the neck of the bladder. The first was very tight, but the latter caused the greatest pain from the catheter. He could not retain his urine for more than ten minutes, and in fact it was all the time dribbling away, so that he was compelled to have the urinal constantly in bed. The bowels were inclined to be very costive. On percussion the spleen was found enlarged from former ague, but the liver and lungs normal.

An injection into the bladder on one occasion of Nitric Acid min. x to the pint of water, and a suppository and two doses of Black Draught at intervals, were all the treatment he received up to Nov. 2nd.

Nov. 3rd.—An examination to-day per rectum was made by Dr. MacCallum, under whose care the patient has now passed, in the endeavour to find an enlarged prostate or thickening of the coats of the bladder, or anything that would indicate cancerous or other deposit. Nothing abnormal was felt. He cannot retain his urine more than a quarter of an hour at the best, and then it is voided with great difficulty, occasioning an intensely burning sensation.

Nov. 5th.—In introducing the catheter to make an injection, most intense agony was experienced by the patient, causing him almost to faint; pain chiefly at the neck of the bladder. Two and a-half ounces only of Nitric Acid and water, of same strength as before, could be thrown into the bladder, showing its capacity to be very small. The injection itself did not seem to cause much pain, but it was forced out almost immediately, and slightly tinged with blood. A small clot or two of blood remained in the catheter.

The urinal contains the water of the past six or eight hours, which for that time is very small in quantity, with a thick sediment at the bottom, in appearance like ropy mucus, and of a strongly ammoniaco-putrid odour.

Nov. 6th.—Has experienced great relief from the injection, so much so indeed that he can now hold his water easily for at least five minutes longer than yesterday, nor are the straining and pain in voiding it so marked.

Nov. 8th.—Still continues to improve, irritation diminishing fast; urine has nearly the same appearance, though perhaps there is less deposit and the colour more natural.

Nov. 9.—Patient about the same; can retain his urine for some twenty minutes. *Examination of Urine.*—Colour reddish-brown; reaction neutral; Sp. Gr. 1018; albumen, sugar, and bile, wholly absent. Under the microscope were seen brilliant triangular prisms of the triple phosphates; sheaf-like crystals of phosphate of lime; amorphous urates; and an occasional pus globule.

Nov. 12.—Is still improving; irritation very slight; stricture gives but little trouble. Is free from pain, so much so, indeed, that he is able to leave his bed and walk across the hall without assistance. Appears, however, to be emaciating rather than gaining flesh.

Nov. 14.—To-day, seems not so strong. Tinct. of Iron min. xv three times a day is ordered as a tonic. The bladder trouble is almost gone, but he earnestly requests another injection.

Nov. 15th.—An injection similar to the others was given this morning. There was fully as much pain caused by the catheter as last, but more especially when in the bladder, no doubt from touching the mucus coat. About the same amount (two ounces and half) was thrown in, and as quickly rejected with a slight tinge of blood likewise. The urine is increasing somewhat in quantity, but the appearance and odour have not changed since last noted.

Nov. 19th.—He has been troubled for the last three or four days with a very severe hacking cough of a dry character, for which the following dose, to be given three times a day, is prescribed:

Rx Tinct. Prun. Virgin.
Tinct. Hyoscy. aa min. xx
Vin. Ipecac. min. v

He is becoming gradually more weak and emaciated, apparently deriving no benefit whatever from the iron. Considerable œdema of the eyelids and feet is noticeable, probably from the existing weakness. The urine continues about the same in look and quantity.

Nov. 33rd.—Œdema is disappearing in the feet, but still remains

especially in the right eyelid. The pulse is slow and weak. Density of urine is 1014, with no albumen, but a large deposit of mucus and pus-like matter.

Nov. 29th and 30th.—Œdema of the feet and eyelids has almost entirely disappeared, but the weakness and emaciation increase; pulse failing fast: indications evidently are to death by asthenia. Three ounces of brandy have been ordered.

Dec. 4th.—Has not changed much in any one respect for the past four days, but complains bitterly of cold, though well covered. An examination of the chest shows nothing definite, although the cough still continues to trouble him greatly. All œdema has disappeared. The amount of brandy last ordered has been increased to four ounces, and the cough mixture discontinued. As an antiseptic Sulphite of Soda is prescribed in Gr. xv dose three times a day. The urine to-day has a Sp. Gr. of 1010; urea entirely absent; no Ammonia in the breath to indicate any tendency to Ammonæmia.

Dec. 8.—The pulse to-day is scarcely distinguishable; hectic flush well marked; extremities very cold; and features pinched. The urine is being passed to some extent in bed, and the bowels are very loose. From a distinctly bronzed appearance of the neck and face Dr. MacCallum stated that the suprarenal capsules were probably involved in disease. The patient complains of a great pain and tenderness over and above the left iliac crest, obliging him to lie altogether on the right side. The abdomen is very tympanitic and largely distended. The bladder and urethra give no trouble whatever, though the urine shows a larger deposit now than it has ever done.

Dec. 12th and 13th.—The pulse at the wrist is with difficulty felt. Slight œdema in the feet is noticeable. The urine is being passed wholly in bed, and the bowels are very loose. The voice is failing, and the abdomen still retains its large size and high tympanitic note, while the extremities are icy-cold.

Dec. 15th.—At two o'clock this morning he became slightly delirious, and at five lapsed into a comatose state which terminated in death in about four hours.

Autopsy twenty-eight hours after death.—Emaciation very great.

Pleuræ—Strongly adherent to the walls of the chest and to the lungs and diaphragm.

Lungs—Non-tuberculous, though somewhat emphysematous-looking. There was carnification of the base of the left lung; and strong attachments by old adhesions in this quarter to the pleura,

and through that to the diaphragm, so that the organ was very much torn in being removed.

Heart—Normal in size; valves not thickened or deficient; substance soft, and under the microscope showed fatty degenerations with oil globules and fat granules deposited throughout the fibres.

Liver—Of normal size, but congested and dark in colour, with strong peritoneal attachments.

Spleen—Enlarged, of firm consistence, and black from pigmentary deposition.

Kidney of right side—Somewhat larger than in health, and on section showed the secreting portion considerably thickened. In the pelvis were seen three or four spots of tubercular matter, and in the medullary portion as many sacks, varying in size from a pea to a small marble, and containing a sero-purulent matter.

Left Kidney—Was seen to be half as large again as natural, with great thickening of the cortical portion and capsule, which latter was strongly adherent both to the substance of the kidney itself and to the peritoneum. On making section of the gland some nine or ten abscess-cavities, in size from a wall to a hazel nut, were opened, besides a number of smaller ones that would hold a pea. The larger cavities were filled with a greenish-yellow-muco-purulent fluid of the consistence of thin cream, and in their walls and filling the smaller cavities was noticed a yellow cheesy deposit. These cavities were directly continuous with the mucus membrane of the pelvis, which was likewise thickened and degenerated. The larger cavities were incompletely separated from each other by more or less healthy renal tissue. A few of them were lined by a smooth membrane, except at their opening into the pelvis where some tubercular matter was deposited. The canal of the ureter was occluded, so much so that the smallest probe could not be introduced.

The Suprarenal Capsule of the right side was large and ulcerated in the interior, and that of the left likewise greatly enlarged from chronic inflamation and strongly adherent to the spleen.

The Intestines were found glued to each other and to surrounding organs from old tubercular peritonitis, small granules being scattered over the membrane.

Bladder.—The cavity was sufficiently large to contain an orange of medium size. The walls were thickened and indurated in some places, but chiefly about the neck. The mucus membrane was slightly congested and studded with deposits of tubercle. These were scattered and scanty except over the trigone, where the deposit was very abundant in the form of small granulations the

size of a pin-head and larger. A strange anomaly was two distinct openings into the urethra—one situated on either side of a thick fold of mucus membrane. Below the fold likewise were two symmetrical depressions about a line and a half in depth, but without connection. The ureters apparently opened into the bladder at the extremities of the fold, and their canals were thickly studded with granulations of a like size and nature with those over the trigone. Adherent to the walls of the viscus externally were two small and one greatly enlarged mesenteric gland, showing on section the same diseased state as the other glands.

Poisoning by Tincture of Iodine. By T. Mc. J. Cowley, M.D. Smith's Falls, Ont.

August 1st.—I was called upon to visit a child, aged fourteen months, whom the parents reported to me to be choking from the effects of something swallowed. On my arrival at the place (it being only a short distance from the Office), I found the child suffering from Iodic poisoning, as a phial containing about half an ounce of the tincture had been placed on a stand a few minutes previous to the accident, and to which the child had easy access. As far as I could judge, the child must have swallowed all that was contained in the phial, for as no traces of it could be discovered on the clothing or in the apartment where the drug was swallowed, but the usual discoloration produced by the drug was quite visible on the lips and chin, showing that the full amount must have been taken, which was four drachms, a quantity quite sufficient to produce fatal poisoning. On examination, I found the child pale and restless, the eyes suffused, respiration hurried, obstinate vomiting, great tenderness over the epigastrium, a sense of constriction in the throat accompanied with other symptoms such as would indicate a fatal termination. To alleviate these distressing symptoms, I at once had recourse to the antidote, viz. :—Starch in solution ; which I administered in large quantities, the child seeming to swallow with great difficulty ; in fifteen minutes the vomiting ceased and the child appeared to rally. I then deemed it necessary to administer an emetic in order to relieve the stomach of the new compound formed with the starch. Of the emetic, a teaspoonful was given every five minutes, but on the administration of the second dose, the child vomited freely a dark bluish substance streaked with blood, which was due to the corrosive action of the poison on the mucous passage. In this case, it may be mentioned, the bowels remain unmoved, which is quite unusual according to authors on poisoning by this drug. Having relieved the stomach of

its contents, I endeavoured to produce an operation on the bowels by an enema of starch; this had the desired effect, after which the child seemed quite relieved and showed symptoms of recovery. The bowels being freely moved, I ordered demulcent drinks together with opiates to obviate irritation. By this, it was apparent that the child was much relieved. I then left, but visited him several times during the remainder of the day.

August 2nd.—Visited and found child much easier, he had rested well during the night, breathing not so oppressed,—bowels moved once in night—but urine scanty and high-coloured, for which I placed him on a diuretic mixture containing Potas Acet 2 drs., Spts Ether Nit. 4 drs., Infus Buchu 1 oz., Aqua ad 4 ozs., a Teaspoonful every two hours until the kidneys were freely acted on, after which I ordered beef, tea and gruel in small quantities to keep up his apparently much impaired strength.

August 3rd.—Croupal symptoms began to show themselves and seemed to be increasing, for which I used the simple form of treatment but without success.—Symptoms began to demand a more active course, I therefore used pounded ice, applying it over the throat and chest; this at first seemed to give great relief, but after a time ceased to be a virtue. My only alternative now was to use remedies of a depleting nature; I applied three leeches over the trachea, the result of which seemed to be instantaneous relief, the breathing after the lapse of an hour becoming more tranquil, the child dozing over asleep and awaking greatly relieved. Since then the child has so far recovered that on the second day after I called to see him, he was running around and is now quite convalescent.

Proceedings of Societies.

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Meeting held August 12th, 1871.

The Vice-President Robert Godfrey, Esq., M.D., in the Chair. After routine business, John Bell, A.M., Ex., M.D., read the following paper on—

Disease Germs.

All the organic structures in nature in the course of time change and die. The same power which impresses upon each organism its peculiar form, structure, and habits, also fixes the period of

time during which it is produced, progresses to maturity, and declines to dissolution.

Numbers of individuals of the various species, species *in toto*, and even genera, may be destroyed, or become extinct by physical lesions which may be appreciable by the senses, and the manner in which they have been brought about, easily understood. But when individuals of the various species of animals, with all their organs for the maintenance of life apparently in vigorous action, and with an adequate supply of food, die from the action of agents visible and invisible whose *modus operandi* is not at first apparent, our attention is most powerfully drawn to this subject, which presents such an inviting field for scientific enquiry, a subject upon the more thorough knowledge of which depends the happiness and life of millions of beings, and the greater wealth and prosperity of nations.

These noxious substances or agents which thus mysteriously still the busy economy of vital organisms and bring about their premature decay may be of either a gaseous liquid or solid nature, and may produce death either by changing in some way the tissues of the body or by modifying their functions. "It has been supposed by some that the infecting matter may consist of some subtle entity, which was not cognizable by the senses or to be made evident in any way." But such baseless fabrics as this untenable theory will receive but little support in this exact age, when actual demonstration is required, and while there are so many avenues to the truth still unknown or but little explored.

It is well known that many of the simple gases and gaseous compounds directly exercise a deleterious and fatal effect upon the tissues of the body, while others impair the functions of tissues and organs essential to the health of the system, and thus indirectly bring about the fatal end. The same may be affirmed in a higher degree of the solid poisons.

In addition, however, to these classes of poisons whose existence is undoubted, whose chemical composition and physical form are known, and whose action can be more or less clearly ascertained, there is another class which is more particularly the subject of this paper, whose outlines, like those of some dark, hideous spectre but slightly defined, at the present time fill the popular mind with horror and despair. I refer to Disease Germs.

That the air everywhere contains minute particles of organic and inorganic matter in suspension, must be patent to all who have seen a pencil of rays of the sun shining into a darkened space through a crevice in its walls. These particles are so light on account of their comparatively small size that the slightest motion

of the air buoys them up in its midst, and by reflecting the rays of light they become apparent to our sight when any portion of the atmosphere is examined in the way described. It is these harmless particles that many of the imperfectly enlightened public believe to be the death-dealing disease germs. When ordinary dust of the air, particularly that of a house or city, is examined under the microscope it is found to be chiefly composed of comminuted particles of mineral matter and the detritus of organic structures—a small part being the sporules and individual cells of fungi and the smaller algæ, with the pollen of flowering plants.

The spores of the lower vegetable organisms being proved by the microscope to be everywhere present in the atmosphere from the bottom of the deepest mine to the top of the highest mountain, and from various circumstances connected with their presence many investigators were impressed with the idea that these vegetable cells were the active agents in the various malarious and contagious fevers. Carried on beyond the limits of reason and facts by exciting speculation on the subject, many scientific men have in this matter misled the mass of the lecture-hearing and journal-reading public curious to hear something new and intoxicated with wonder at this strange and brilliant doctrine.

I shall endeavour to show, however, that the disease germs or active agents in the production of the contagious fevers are neither of the nature of vegetable genus nor the comminuted detritus of the mineral and organic world, but are living particles of animal origin present in the fluid or solid in which the contagious properties are known to reside.

Of all the poisons which cause the death of man the most subtle and the most difficult to isolate and investigate are those which give rise to certain forms of disease which spread from person to person. Many poisons of this class, as compared with non-living poisonous agents, "act very slowly, and when they destroy life, do so not by their immediate action upon tissue or living matter, but by their indirect influence upon the physiological changes going on the various tissues and organs. Many of these poisons are indeed uncertain in their action and are for the most part fatal to a very small percentage of those attacked. They not unfrequently cause serious structural damage in consequence of which the organism becomes predisposed to certain forms of disease; and oftentimes, it may be not until sometime has elapsed that although the individual has escaped with his life, some delicate organ is irreparably injured by the changes produced by the action of the poisonous material, and death follows after a varying interval of time."

In order to form a better idea of the true nature of disease germs it may be well to observe under a high power of the microscope some of the lower forms of animal and vegetable organisms and to trace rapidly the cell-growth of the higher and more complex organisms belonging to both kingdoms. As an instance from the vegetable world if we examine a specimen of rapidly growing yeast on a warm summer day, it will be found to be composed of numerous globular and elongated bodies, semifluid, transparent, and colourless, surrounded with fluid. If the examination be continued these bodies will be found not to retain the form they at first had but will increase in size and send out diverticula, the connecting isthmus between which and the parent mass will become narrower and the protrusions will be finally separated and form independent individuals with all the powers of the original from which they sprang. If the process of rapid formation be checked from any cause, the individual spores will not shew the same vital activity and tendency to subdivide but in the course of time a well defined outer or cell wall will be formed around each, which Lionel Beal calls formed material in contradistinction to the internal vital matter or formative material, the latter only having the power of increasing in size and producing individuals like itself, when placed under favourable circumstances, by the protrusion of small masses through pores in the coat of formed material, which is now dead so far as its capability of further growth or multiplication is concerned. Among the uni-cellular fungi and algvæ this process of multiplication proceeds so rapidly that many millions may be formed under favourable circumstances, in the course of a few hours from a single individual. The force with which this division takes place, and which may be used by the cell organism in providing a suitable *nidus* for itself, is well illustrated by the fact which Dr. Carpenter mentions in his "Elements of Physiology" that in the neighbourhood of Basingstoke, a paving stone measuring twenty-one inches square, and weighing eighty-three pounds, was completely raised an inch and a half out of its bed by a mass of toadstools. Considerable heat is often generated by the union of the elements during the rapid growth of these low organisms, as is also observed during the multiplication of disease germs in an infected organism both before, and for some time after death. If an amœba be examined in water in the same way in which the yeast spore was, it will present all the physical characters of the rapidly growing yeast cell and it will exhibit a capability of motion and of protruding portions of its homogeneous bioplasm or vital mass. Many if not all of these amœboid animals possess the power of secreting from their surface various substances like

shell and coral analogous to the cell wall of the diatome and older yeast plant. The germinal living matter of fungi resembles that of animals in containing albuminous proximate principles and in the capability of evolving phosphorescent light from their structure, as that so far as their physical and chemical properties are concerned, they cannot be separated. The only distinguishing difference being in the vital power impressed on each.

Every multicellular plant from the minute bread-mould of a few days growth, to the gigantic *Wellingtonia* towering like a huge church steeple nearly three hundred feet heaven-ward and lasting for ages, at first sprang from the one homogeneous transparent germinal mass of the spore or ovule. All their various tissues from the mycelium and spores of the one and the cells, fibres, vessels, bark and leaves are but parallel lines of growth originally beginning in the one parent cell. So too, have all the varied tissues of the most complete animal sprung from one and the same mass of bioplasm in the germinal area of the ovum. As this original mass grew and divided some divisions went to form bone, others muscles, nerves and so on, each, at the proper time, exhibiting its peculiar function of secruting one of the various kinds of formed material or tissue of the body. As the mass grew and blood-vessels formed, some parts of each of these divisions of the original bioplasm began to circulate in the enclosed fluid, and formed the masses of germinal matter known as white blood corpuscles. From these it is probable that in the lower animals, parts which have been lost, may be restored in their original perfection, and hence we see the identity of the white blood corpuscles and the germinal matter (the nuclei of Virchow) of the various distinctive tissues.

In the lower or more simple organisms the characteristics of rapid multiplication, and of capability of existing for a long time, and even of growth under adverse circumstances, are more strongly marked than in the higher or more complex beings. It is well known that the living cells of the lower vegetables, and numerous species of animalcules, may be dried and blown about by the wind for weeks and months and on finding a suitable *nidus* may at last begin to show their characteristic symptoms of life. While some of them naturally live in very high or low temperatures, many accustomed to a medium degree of heat will live and grow amongst the frozen snows of the north, and vegetate in the almost boiling springs of volcanic regions, while others will flourish in the acid solutions of the chemists laboratory. It has been found by microscopic investigation that simple masses of bioplasm as the white blood corpuscles, and, more particularly, degenerated forms as pus globules will live, change their form, and even divide or multiply for some

time after their removal from the body. So, in a manner like these lower animalcules, may the degenerate and morbific, but living particles of the contagious fevers rest, in articles of clothing, or float about in the atmosphere until they alight on a surface in which they find the conditions necessary to active life, and through which by their power of vital movement they make their way to the tissues and circulating fluids beneath.

This tenacity of life does not pertain in the same degree among the more elaborately developed tissues of the higher organisms although the fact that it does exist is proved by the results of many plastic operations, the transfusion of blood, and as was well shown at a late meeting of this society by the success of skin grafting.

Since these microscopic fungi are found every where, and many of these vegetables are known to have a powerful influence on the human system, since they float in multitudes in the air we breath, are found in all the tissues and even in the interior of cells, and grow and destroy the organism when once life has become extinct; since they seem to prevail in unusual quantities in certain localities and in seasons when some contagious and malarious fevers are peculiarly rife, may it not be that these little organisms are the cause of the disorders in question?

"Above us, about us, and in us they roam like vigilant spirits, seing that all is right within our physical constitution; but gladly availing themselves of the slightest flaw to work our destruction." And to quote from Foot Notes from the Page of Nature." The Revd. Hugh McWilliam says of these microscopic fungi. "If they were poisonous as many of the fungi are, it admits of being suggested at least that those living in places when dense clouds of them were present, being devitalized by other noxious influences, such as vitiated air, defective sewage, bad water or an inadequate supply of food and consequently in a state of body unable to resist the deleterious action of these cryptogamic germs, died from a form of poisoning."

But on examining the bodies of those who die from the diseases supposed to have been caused by these germs the vegetable spores are not found in unusual members, nor are the changes such as could be explained on the supposition of such a cause. "The diseases of man and the higher animals known to depend upon the growth and development of vegetable organisms, are local affections confined to a part of the body, not involving the blood, while for the most part, the different forms of contagious fevers are general affections, in which the whole mass of the blood and in some cases every part of the body is affected and is capable of communicating the disease. In diseases caused by fungi, the struct-

ture of the vegetable organism can be made out without difficulty, and the vegetable examined in every stage of its development." If the spores of innumerable species of fungi be disease germs and float about in the atmosphere, are suspended in all beverages and exist in every morsel of food swollowed by men in all conditions of health, it is miraculous that so many escape. Instead of so few suffering from any contagious disease each individual might reasonably be expected to suffer from one after another, until the power of endurance of his system was exhausted or until he had gone through the catalogue of diseases due to the vegetable germs with which he was surrounded.

The facts of every day life show that vegetable germs in themselves are not the cause of disease since in every individual they are constantly surrounding him, passing through his digestive and other canals and resting in his tissues without producing the slightest derangement. In fact the animal lives upon and destroys the fungi with the utmost impurity in the majority of instances, instead of the fungi living upon, deranging and destroying the animal tissues. Amongst those cases when the tissues are actually invaded and desorganized by vegetable growths, there are few in which it cannot be shown that the tissue, had first become enfeebled or disordered so as to become a suitable *nidus* for the developement and multiplication of the vegetable parasites. Were it otherwise the prospects of the animal world would be truly deplorable, more especially if it be as many hold, that fungi may be generated at any time from inorganic material—for then fungi might rise from the ground around us at any moment and in any quantity, and fungi being disease germs, the source of untimely death would be as illimitable as the earth and all effort to eradicate it unavailing.

If the advocates of the vegetable germ theory of disease contend that in order to produce disease there must first be a peculiar condition of the system in which the vegetable organisms can produce their characteristic effects, they prove their theory to be defective, for there are contagious poisons which produce their specific effect on the system under all conditions. They have morover yet to prove that there is any unvarying connection between the presence of fungi and epidemics of contagious disease and between any particular variety of fever and species of vegetable organism.

On the other hand the contagious power of vaccine and other virus is strongest when it is past and contains few ar no vegetable germs, and it retains its peculiar virulence only for a definite and comparatively short time, while vegetable organisms increase in number as the matter grows older and looses its specific power

and continue in vigorous growth after all capability of producing the contagious disease is past.

We have already pointed out that all the parts of every organism are the direct descendants of one original cell. A great part of the tissue of the body is formed material such as the harder portions of bone and the parts of the various tissues which gives them their characteristic appearance, but none of this is capable of reproducing itself—so far as the power of multiplying is concerned, it is virtually dead. The power of reproducing, multiplying and sustaining the integrity of the tissues lies in the bioplasm or active living matter of the tissues. Vital movement under favourable circonstances, characterizes this substance in all living bodies and even for a while after it has been removed from there. The movement is not muscular contraction, but is peculiar to all living bioplasm, whether obtained from bacteria animalcules, white blood corpuscles put or the higher tissues. The natural origin of white blood corpuscles has been already referred to. Their mode of increase is like that of all other bioplasm, by division of the parent mass when it has attained a certain size, and the separation from it, of minute particles of matter similar to itself, which have the same properties, and are capable of undergoing the same processes as the parent mass. It may here be predicated that this is also the mode of growth and increase of disease germs, or minute masses of bioplasm so altered in their vital properties, as to be capable of setting up certain morbid processes when introduced into a previously uninfested organism. When the capillary blood vessels become overdistended from any cause these minute particles of bioplasm or ungrown white corpuscles, in number inumerable, are found to pass through, and grow and multiply in the tissues surrounding the bloodvessels thus disorganizing or destroying the part into which they are effused. The effect of this process is well seen in scarlet fever where the epidemis is thrown of in large flakes when the disorganized layers of cuticular epithelium in turn comes near the surface. These minutes particles by agglutinating in strings, form the fibrillæ of fibrin and by degeneration form pus and the specific germs of the various contagious fevers. When the capillaries become distended the blood current becomes slower and the white blood corpuscles begin to encrease rapidly in number, as may be seen where distension has been produced by any local irritant or where the blood current is slow as in the embryo, in hybernating animals and in the state of the system attending the contagious fevers. When the circulation therefore is slow and the capillaries enfeebled a state very similar to disease and one favourable to the inception of disease exists.

When the amount of material matter or *pabulum* supplied to any tissue is greater than usual or natural, the bioplasm of the part increases and multiplies faster, and the amount of formed material is less than in health. If the supply be continuous for some time, a morbid state is at length reached in which the product no longer resembles that from which it originated, nor can it produce tissue similar to that from which it sprang, nor return to a similar state. It has acquired an increased power of multiplication and tenacity of life, but is capable of progressing only in one direction—onwards —with no tendency to secrete formed material—thus pus is produced, sometimes with peculiar morbid specific properties.

The process may be watched in congestion and inflammation in the fauces ending in the formation of pus.

So minute are the majority of the particles of bioplasm multiplying in the blood and fluids of the tissues both in health and in states of irritation that they are forced out through the walls of the capillaries and pass into the various secretions. They may be seen of a diameter less than the 50,000 of an inch and were instruments made of sufficiently high power others of still smaller size could be seen floating in apparently clear and homogeneous fluids. It is to these that the formation of fibrin is due and upon their healthy or unhealthy condition depends greatly the condition of the animal. It is upon changes induced among these that contagious diseases depend and also protection from future attacks. Being unprotected by any coat, they are liable to be easily acted upon by outside agents, when applied to them external to the body as is well seen in the stoppage of suppuration in wounds by carbolic acid, or when applied thro' the medium of the serum of the blood. It is by the transference of these particles in a morbid condition to the system in a state favourable to their multiplication that any contagious disease is induced, and not by the introduction of simple fluid of any kind. Chauveau has shown that the active particles of incime lymph subsided after 48 hours, and that no effects were produced by inoculating the albuminous supernatant fluid, while the full effects were produced by vaccinating with tne deposit.

There are cases in which we can actually trace the formation of a bioplasm capable of producing specific disease. In peritonitis there may be many degrees of intensity running thro' simple congestion—congestion with slight lymphy effusion—effusion so active in character as to produce a creamy deposit of lymph and puriform bodies. If a small portion of this he inoculated with another individual the action will be at once of equal or greater intensity than that in the person from whom the particles were taken. In some

of the pus formed be inoculated into a third subject a still more virulent form of inflammation may be produced until we arrive at a form of bioplasm capable of instituting specific results with unvarying certainty. The same might be proved of changes in other tissues ending in such poisons as those of purulent ophthalmia gonorrhoea and erysipelas, and the probability is great that future investigations will demonstrate that the poisons of dyphtheria, scarlet fever, small pox and other contagious diseases have originated in a similar manner and if it be impossible to point out the actual formation of all—sufficiently much of the perimeter of the circle will be discovered to enable us to complete it to the satisfaction of the most sceptical.

When these diseased particles have escaped from an infected subject by the desquamation of the disorganized epithelium of the skin and mucous membranes or by means of the secretions and excretions, the tenacity of life peculiar to their lower nature, enables them to exist alive in many altered conditions until they alight, upon some part of the body to which they have been carried by means of the air, water or solid ingesta. They then begin to multiply and by their power of vital movement at length make their way into the blood and tissues where they set up the peculiar action which was manifest in the organism from which they sprang, either by rapid multiplication or by entering and infecting the existing corpuscles of the invaded organism.

Notwithstanding the tendency of the times to look for the spontaneous origin of organic matter from inorganic material—and to look for the causes of contagious diseases as originating outside the human system—there can be but little doubt that all facts discovered by the most careful observers, point to the origin of disease germs from living germinal matter of the human frame and "if man is not indeed responsible for their origin, he has certainly himself imposed the conditions favourable to their production and dissemination. Human intelligence, energy and self-sacrifice may succeed in extirpating them and may perhaps discover means of interfering with the origin of new forms not now known to exist."

Dr. Fraser remarked that Germs are particles having the power of self-reproduction. They exist in the atmosphere we breath, the water we drink and the food we consume. By their agency the body is built up and its nutrition maintained. But though such is their normal purpose, it is assumed that there are Germs, the products of decomposition and other abnormal conditions of organised matter, of so poisonous a nature, as to be the media by which certain diseases originate and are propagated. To such the term Disease Germs has been applied.

The great objection to this Germ Theory of disease is, that the distinction between healthy and diseased Germs has not hitherto been satisfactorily made with diseases supposed to be thus propagated. The reason for this appears to be that they are so minute as to require microscopes of such high powers as have been hitherto but seldom employed by investigators. Dr. Beale has delineated germs so small as the 1,000,000th of an inch requiring a microscopic power of from 2,000 to 5,000 diameters linear for their demonstration and states they are invisible by less powerful glasses. It is not therefore surprising that the germinal theory has been hitherto chiefly hypothetical but recent investigations are clearing up this interesting subject and showing that morbid powers originating within and without the body are, at least in many instances, due to germs.

Dr. Beale has apparently shown that Bacteria germs grow and multiply whenever a change takes place in the solids and fluids of the organism which develops compounds suitable for the propagation of these living bodies and ventures to doubt if the unquestionable efficacy of the carbolic and antiseptic treatment is due as suggested by Mr. Lister to the prevention of the enterance from without of these germs. He thinks it more probable that the carbolic acid acts directly upon the growth and multiplication of the bioplasm of the part.

Dr. Fraser stated his belief that further investigations into this novel and interesting field of Medical Science are likely to lead to results of the most beneficial kind; and that Dr. Bell's paper would he hoped interest the members in following such scientific investigations by whomsoever pursued.

Medicine.

LECTURE ON THE DIFFUSION, PATHOLOGY, AND TREATMENT OF ASIATIC CHOLERA.

By Sir Thomas Watson, Bart., M.D., F.R.S.

[At the present juncture, when we are again threatened with an invasion of Asiatic cholera, it has appeared to us that the publication of that portion of Sir Thomas Watson's revised Lectures on Medicine, which relates to the mode of diffusion, pathology, and treatment of this disease, would be of considerable professional interest and advantage. We have accordingly requested and received authority to publish the following portions of this

lecture from advance sheets of the new edition now passing through the press.]

A fourth great visitation of cholera—that of 1865-66—has come and gone since I last addressed you on this subject, and it has been far more fertile of instruction on many interesting points relative to the disease than any of the three preceding epidemics.

Very few, I imagine, of the original doubters remain unconverted to the doctrine which I have held from the beginning, that epidemic cholera is *catching*; that it results from a material poison which is portable, capable of being conveyed from place to place, and communicated from person to person—or from inanimate substances to which it clings, such as articles of furniture or clothing. That the morbific matter floats also in the air, and may be wafted about by its currents, is a general and well-founded belief. I think, with Dr. Baly, that when it travels over great distances, as from one country or region to another, it uses the vehicle of human intercourse; but that it may be and often is diffused over smaller spaces, as from one part of a town to another, or from a tainted port to a ship anchored to leeward, by the movements of the atmosphere. The long migrations of the disease are not made rapidly. Its rate of progress never exceeds, and is often slower than, that of modern travelling. Its primary appearance in an island or a kingdom is always at its outer boundary. In our own country, for example, it first planted its foot in a seaport town on the east coast, over against the mainland where cholera was raging and whence ships had very recently arrived. The same is true of its subsequent visitations. On the other hand, the crews of vessels sailing from healthy places remain free from the disease until they have entered an infected port, or held intercourse with an infected shore.

In his statistical report of the Royal Navy, published in 1858, Dr. Bryson says:—"The medical records of the (naval) service have been searched in vain to discover an instance in which either cholera morbus or yellow fever made its appearance amongst a ship's company, unless one or more of the men or officers had previously—within at most twenty-one days—been exposed in some house, ship, or locality where the infectious virus which emanates from persons ill of the one or the other of these diseases existed. The spontaneous origin of either malady, far away from an infected locality, is unknown in the naval service."

That the atmosphere forms one vehicle of infection seems clearly proved by some incidents ascertained respecting the last epidemic before it struck this country. I copy them from the *Times* news-

paper for October 15th or 16th, 1865:—"Five miles from Gibraltar stands the little town of San Roque; and San Roque and Gibraltar were abruptly smitten by the plague, not only on the same day, but almost at the same moment. At Gibraltar it was a sudden access of the malady; at San Roque a first outbreak. At a small town near Toulon the plague fell upon the place in the night; and thirty cases occurred simultaneously between evening and morning." (This, let me observe in passing, might possibly, though not probably, have happened from the use of drinking water as a vehicle of the poison.) "At Constantinople it was observed that, while the cholera was raging, all the sea-gulls which used to flit over the waters of the Bosphorus deserted the place, nor did they reappear till the disease had departed and the atmosphere became pure once more."

Compare this with an extract from the *Dublin Morning Register* respecting the first epidemic—that of 1832:—

"A Westport correspondent, upon whose veracity we place reliance, has communicated to us the following extraordinary fact:—In the demesne of the Marquis of Sligo, near Westport House, there is one of the largest rookeries in the west of Ireland. On the first or second day of the appearance of cholera in this place, I was astonished to observe that all the rooks had disappeared; and for three weeks, during which the disease raged violently, these noisy tenants of the trees completely deserted their lofty habitations. In the meantime the revenue police found immense numbers of them lying dead upon the shore near Erris, about ten miles distant. Upon the decline of the malady within the last few days, several of the old birds have again appeared in the neighbourhood of the rookery; but some of them seemed unable, from exhaustion, to reach their nests. The number of birds now in the rookery is not a sixth of what it was three months ago."

A striking proof that the air may be a vehicle of infection—that the poison may enter the lungs with the breath—is furnished by the fact that two pilots took the disease in consequence of having their open boat towed by a ten-fathom rope at a considerable distance astern of the steamship "England," on board of which cholera was raging. They were never on board the vessel. Both of them had cholera, and one of them died of it. Both took the disease home, and transmitted it to their families, near Halifax, where the disease had been unknown for many years.

But although the infection thus proceeding from the bodies or the excretions of the sick, and entering by the lungs the bodies of the healthy, may strike and destroy individuals here and there, it

seems very doubtful whether the disorder can become epidemic, except in certain conditions of the atmosphere.

It appears from the extremely interesting report of Mr. Glashier on this subject, that "the first three epidemics were attended with a particular state of atmosphere, characterised by a prevalent mist" (he is speaking of London and its immediate neighbourhood)—"thin in high places, dense in low. During the height of the epidemic in all cases, the reading of the barometer was remarkably high, and the atmosphere thick. In 1849 and 1854, the temperature was above its average, and a total absence of rain, and a stillness of air amounting almost to calm, accompanied the progress of the disease on each occasion. In places near the river the night temperatures were high, with small diurnal range." He goes on to enumerate, as characteristic of the atmosphere at these periods, "a dense torpid mist; and air charged with the many impurities arising from the exhalations of the river and adjoining marshes; a deficiency of electricity; and (as shown in 1854) a total absence of ozone, most probably destroyed by the decomposition of the organic matter with which the air in these situations is strongly charged."

The ozone here mentioned is endowed, as I told you formerly, with peculiar purifying properties. It has a high oxidising power, in virtue of which it unites with, decomposes, and so destroys miasmata, while it is at the same time itself proportionately destroyed. There is no ground for ascribing cholera, as some have done, to the absence of ozone—except in the sense of there not having been a sufficient quantity of it in the atmosphere to counteract all the poisonous miasm which actually produces that disease. The total absence of ozone affords presumptive evidence of the presence of atmospheric impurities.

A remarkable law of *altitude*, that is of elevation above the level of the Thames, has been announced by Dr. Farr as governing the mortality from cholera in this metropolis; and if here, so doubtless, under similar circumstances, elsewhere. "The elevation," he says, "of the soil in London has a more constant relation with the mortality from cholera than any other known element." The mortality is inversely as the altitude.

This law of altitude—so important and so practically valuable—is but an expression of the result of many concurrent circumstances. The material poison of cholera will be likely to gravitate, as the marsh poison gravitates, with which it has many points of analogy, to the lowest part of the atmosphere; where the high barometrical pressure is the greatest, and vaporous diffusion therefore the least; where unwholesome exhalations from the soil and

from the water are the most abundant; where the dispersing and diluting influence of winds is least felt. Indeed the air may be completely stagnant while on the neighbouring heights a brisk breeze is blowing. The lower regions of the atmosphere are the hotter also as well as the moister; and under the agency of a high temperature the organic impurity with which the air is charged runs more readily into decomposition. The inverse law of altitude is therefore an intelligible law. We see also how it may sometimes be disturbed or broken, under exceptional circumstances.

At the time when Mr. Glaisher's observations were made, the river Thames had become, without metaphor, the common sewer of this enormous and ever-growing town. Foul with the daily and hourly influx of abominable filth, it was offensive to the senses, and a cause of added foulness to the incumbent atmosphere. When we learn from Mr. Glaisher that during the summer months the night temperature of the river is considerably above the minimum temperature of the air, and that its vast area was simmering all night long, and throwing off clouds of noisome and noxious vapour, we need be at no loss to account for the special unhealthiness of those quarters of the town which lie nearest to its banks.

But however unwholesome and pernicious the atmosphere may thus become, it cannot generate cholera, unless the specific exciting poison of that disorder be present also. In the autumn of 1859 the Thames stank horribly; yet we had no cholera. On the other hand, there is good reason, I say, to believe that this poison can never create a spreading pestilence, unless it meets with a congenial atmosphere. The foul air lends force and diffusion to the poison, and aids, or causes, its increase.

Notwithstanding that the choleraic poison in an invisible and impalpable state may thus pervade, and be communicated through, the air, it had long been conjectured, and it is now perfectly certain, that (horrible thought), we may eat and drink the poison, and so obtain the disorder. That, as I shall have to tell you, is the case also with enteric fever; the discharges from the alimentary canal are at once the main outlet for the poison and the chief source of infection. The late Dr. Snow was the first to broach the notion that the poison may be *swallowed* with the food which we eat, or the water which we drink; and that its multiplication takes place within the system, whence, by the alimentary canal, a new and abundant stock of it is voided. He showed how easily portions of the rice-water excretions, colourless and but slightly odorous as they are, may, without our notice, come to adhere to

our food during its preparation, or its consumption. And the horribly disgusting fact had been made too certain by the unchallengeable disclosures of the microscope, that the water which is supplied by the several water companies for domestic purposes to this great city habitually contained visible particles of human ordure. Some striking facts had been collected by Dr. Snow, which warranted the presumption that a most fearful outbreak of cholera in Soho was attributable to the water of a certain pump, contaminated from a neighbouring sewer. A remarkable converse fact had been reported by the late Sir William Lawrence Bethlem Hospital, and an asylum for children called the House of Occupation, stand near together on an open space of ground between fourteen and sixteen acres in extent, lying in the parish of St. George, Southwark. Being dissatisfied with the filthy water then supplied by the Lambeth Company, the Governors some forty years ago sank Artesian wells on the premises, and the pure water thus procured is used exclusively in the two institutions, which between them number about seven hundred residents. There was not a single case of cholera in the Hospital or in the House of Occupation in any of the first three epidemics; although the disease prevailed extensively in the parish, and in the streets in their immediate vicinity.

The result of an inquiry suggested by the Board of Health into the effects of the consumption of impure water during the second and third cholera epidemics was favourable to Dr. Snow's theory. Mr. Simon reported that "the population drinking dirty water appeared to have suffered three and a half times as much mortality as the population drinking other water."

That cholera may indeed be contracted by drinking a mixture of choleraic discharges and water, is demonstrated with all the force, if not with the reality, of an experiment, by the facts thus stated by Mr. Macnamara, a gentleman practising in India:—"I may mention the circumstances of a case in which the most positive evidence exists as to the fact of fresh cholera dejecta having found their way into a vessel of drinking water, the mixture being exposed to the heat of the sun during the day. Early the following morning a small quantity of this water was swallowed by nineteen persons. (When partaken of, the liquid attracted no attention either by its appearance, taste, or smell.) They all remained perfectly well during the day, ate, drank, went to bed, and slept as usual. One of them, waking next morning, was seized with cholera; the remainder of the party passed through the second day perfectly well, but two more of them were attacked with cholera the next morning; all the others continued in good health

till sunrise of the third day, when two more cases of cholera occurred. This was the last of the disease; the other fourteen men escaped absolutely free from diarrhœa, cholera, or the slightest malaise."

At the time of this remarkable occurrence there was no cholera in the neighbourhood, nor had there been for several years, nor, so far as Mr. Macnamara is aware, has there been since.

Mark here the period of incubation, varying from twenty-four hours to two or three days; mark also that the majority of those who drank the tainted water escaped unhurt; in other words, that some persons take the complaint more readily than others.

The epidemic of 1865-66 has illustrated in a very remarkable way the soundness of Dr. Snow's theory. The prevalence of the epidemic in this country was clearly a step forward in the progress of the malady in its rapid advance from Mecca to Egypt, and thence to various places on the eastern and southern coasts of Europe, and in the basin of the Mediterranean. Mr. Simon lays it down as an axiom to be generally accepted in State Medicine, that "contagions current on the continent of Europe must be deemed virtually current in England." The disorder first showed itself here in the autumn of 1865, as usual at a seaport—Southampton. Then, as usual, it slept apparently for a while, to reappear and diffuse itself, after fresh importations from the Continent, and at its customary rate of increase, in the spring and summer of 1866; when, in the middle of July, there occurred in the eastern part of London an increase of the disorder so sudden, vast, and rapid, as to warrant its being spoken of as an explosion. This outburst was limited to a certain definite and remarkable area, the line of limitation having an obvious relation, not to *soils*, but to *houses*; it was contemporaneous over that area, and stopped short abruptly within and along the line of limitation. It had a week's duration only. Its cause began to act during the week ending on July 14, and ceased to act in the week following. On the sixth day of its increased activity cholera had appeared in every portion of the before-mentioned area; the rate of its increase, as compared with the previous week, was nearly seven times greater than in the rest of the metropolis; while in the subsequent week the rate of increase became virtually the same over the whole of London. It is worthy of remark that there had been no undue prevalence of diarrhœa in the affected area.

This strange and definite outbreak must have had some adequate and definite cause; and, upon careful search, there was found evidence only just short of demonstrative proof—evidence which

I cannot stop to state in detail, but which you may study in the ninth Report of the Medical Officer of the Privy Council—that this local calamity was produced by the temporary distribution to the area in question of unfiltered and infected water from certain reservoirs of the East London Water Company.

The peculiar blue mist which was noticed in the epidemic of 1854 was present also in the last epidemic. Mr. Glaisher says of it: "On some days no trace of the mist has been visible; on other days it has been seen for parts of the day only. It has extended from Aberdeen to the Isle of Wight. This mist increased in intensity when viewed through a telescope; usually no mist can be seen when thus viewed." As in previous epidemics, there was a marked deficiency of ozone in the atmosphere. In other respects the meteorological phenomena were in remarkable contrast with those which had occurred during previous visitations of the cholera, and the law of altitude was broken by the predominance of more powerful influences.

With respect to the mode of propagation of the disease, Mr. Simon uses this strong language:—"It cannot be too distinctly understood that the person who contracts cholera in this country is *ipso facto* demonstrated with almost absolute certainty to have been exposed to excremental pollution. Excrement sodden earth, excrement-reeking air, excrement-tainted water—these are for us the causes of cholera."

He adds: "The local conditions of safety are, above all, these two: (1) that, by appropriate structural works, all the excremental produce of the population shall be so promptly and so thoroughly removed, that the inhabited place, in its air and soil, shall be absolutely without fæcal impurities; and (2) that the water supply of the population shall be derived from such sources, and conveyed in such channels, that its contamination by excrement is impossible." And he concludes with the pious hope that "for a population to be poisoned by its own excrement will some day be deemed ignominious and intolerable."

Our knowledge of the *morbid anatomy* of cholera has become more complete and more exact during the last epidemic.

Drawing my conclusions not from any experience of my own, but from numerous and very careful *post-mortem* inspections made by Dr. Parkes, by Dr. Johnson, by Dr. Sutton, and by others, I believe it may be stated as a rule—a rule broken sometimes, no doubt, by disturbing but intelligible circumstances—that in cases of death during collapse, when the examination is made sufficiently early, the lungs are found to be shrunken, light, dry, and pale—in one word, unnaturally bloodless; the left ventricle of the heart is

contracted and nearly empty; its right cavities, the trunk of the pulmonary artery, and the systemic veins, much distended with blood; the mucous membrane of the intestines free from congestion, and pale.

In some of these cases the lungs, though very light in weight, are of a dark colour, which gives them an appearance of congestion. This colour Dr. Johnson refers to a backward engorgement of the *bronchial* veins and capillaries, consequent upon the block in the pulmonary artery and its branches.

When death has occurred during incipient and imperfect reaction, the morbid conditions disclosed by dissection are the reverse of these. The lungs are congested, sometimes even inflamed; and the mucous membrane of the intestines is also loaded with blood.

These are points which bear closely upon the pathology of the disease; and upon its true pathology rests its rational treatment. To these I now turn.

There are two conflicting theories as to the pathology of cholera; and there are two conflicting principles—which accord with and flow from these theories respectively—as to its proper treatment. Upon this momentous problem of treatment, the final appeal must clearly be made to experience.

It is acknowledged on all hands that the primary and special danger in cholera lies in its period of collapse. Now it was a very natural and plausible theory which attributed this state of collapse to a drain upon the blood by the profuse and repeated fluxes from the stomach and bowels, whereby the blood, being robbed of its more liquid ingredients, and made thick like tar or treacle, became incapable of flowing freely, if at all, through its natural channels; and thus the circulation coming ultimately to a stop, life stopped also. And the practice suggested, and put in force, as a direct corollary to this theory, was that of endeavouring to arrest the destructive flux by astringent drugs and by opium, to sustain or urge on the lingering circulation, and to restore the spent strength and the lost animal warmth by alcoholic and other stimulants. Upon similar grounds was advocated the dilution of the thickened blood by water injected into the veins.

It is affirmed, on the other hand, that the condition called collapse is not due to the excessive discharges from the body; that those discharges are really elimiative of the poison, or of the products of the poison, which caused the disease, and are to be permitted, or even encouraged, rather than checked; that to pen the poison and its products within the body is to fight against the conservative forces, and to do what art can do to ensure the mortal

agency of the poison, and, therefore, that astringents and opiates can do no good, but are, on the contrary, positively hurtful.

Were the first-mentioned theory true, there must be a discernible relation between the alleged cause and its effect. The greater the amount of the intestinal discharges, the more certain and the more decided should be the resulting collapse. But no such proportion has, in fact, been observed. Nay, the very reverse not seldom obtains. The most hopeless cases are those of collapse after very scanty discharges, or with no discharges at all.

Again, if the collapse were indeed owing to the drain upon the blood effected through the intestinal discharges, it would be prolonged, deepened aad rendered more perilous, by the continuance of those discharges; whereas it is notorious that patients emerge from the state of collapse, and recover, while the evacuations nevertheless go on, and that the cessation of the evacuations during collapse is a fatal sign. "It may confidently be asserted," says Dr. Parkes, "that there is no one who has seen much of cholera who does not know that, exclusive of the mildest forms of the disease, a case with little vomiting or purging is more malignant and more rapidly fatal than one in which these are prominent symptoms."

Tested, then, by the evidence of acknowledged facts, this theory must be pronounced a failure, and the treatment founded upon it a mistake.

In truth, a fallacious analogy has been assumed between the collapse or exhaustion arising from a drain upon the blood and the collapse in cholera. In one single point—namely, the smallness and weakness of the arterial pulse (in other words, the defective circulation of the blood)—the two may seem to touch each other. In almost every other point they differ widely. A person exhausted by loss of blood, or by a long continued drain upon that fluid, is in a state that is very near to syncope. When the exhaustion is extreme, if he assume the erect posture, he faints outright, and becomes unconscious. To walk, to stand, or even to sit up, is simply impossible; whereas, in the collapse of cholera, a patient, with death stamped apparently upon his features, with no pulse to be felt at his wrist, with a blue and icy-cold skin, may be able to walk about the room, and to perform many of his usual functions. He does this indeed at the peril of his life; but the fact that he is capable of such an effort proves that there is an essential difference between cholera collapse and ordinary syncope. The exhausted man, if he recover, recovers slowly; the repair of his impoverished blood is necessarily a gradual process. The cholera patient rallies from his collapse at once, if at all. He may be in full collapse to-day, and convalescent the day after to-morrow, and apparently but

little the worse for the terrible disorder through which he has so recently passed. "I have seen", says Mr. Grainger, "a man stand at his door on Wednesday, who on Monday was in perfect collapse." Again, the way in which remedies tell upon the two contrasted conditions is totally and instructively unlike. The coldness and faintness of exhaustion are relieved at once by a glass of wine or of brandy; the pulse instantly acknowledges the virtue of the stimulus. But alcoholic stimulants do not warm or invigorate, even for a moment, the patient in choleraic collapse; rather, they seem to make matters worse. On the other hand, blood-letting has often brought marvellous relief under collapse; while to draw blood from a person who is fainting from exhaustion would probably ensure his death, and would certainly aggravate his danger. Take the following instances, recorded by Sir Ranald Martin, of the effect of venesection. "On visiting my hospital in the morning, the European farrier-major was reported to be dying of cholera. I found that during the night he had been drained of all the fluid portion of his blood. His appearance was surprisingly altered: his respiration was oppressed; the countenance sunk and livid; the circulation flagging in the extremities. I opened a vein in each arm; but it was long before I could obtain anything but trickling of dark treacley matter. At length the blood flowed, and by degrees the darkness was exchanged for more of the hue of nature. The farrier was not of robust health, but I bled him largely: when he, whom not a moment before I thought a dying man, stood up and exclaimed, "Sir, you have made a new man of me. "He is still alive and well."

The question has naturally been put, "Is it possible to reconcile facts of this kind with the theory that the collapse of cholera results from the loss of the liquid constituents of the blood?" If Sir R. Martin's hypothetical statement that his patient "had been drained of all the fluid portion of his blood" were an accurate expression of facts, can we conceive it possible that he could have "made a new man" of him by extracting largely the blood which remained in the vessels?

The main advocate in this country, and, as I think, the triumphant advocate, of what may be called the evacuant or cleansing practice in cholera, is your present able professor of physic, Dr. George Johnson. To him is justly due the great merit of having established, by his persevering efforts in the face of much opposition and discouragement, the worth and efficacy of that practice, although he was not the first to recommend or to adopt it. It was, in fact, tried, with favourable results, nearly half a century ago, by English practitioners in India; its professed object being that of

getting rid of offensive morbid secretions. The practice thus vouched for by Dr. Johnson is directly in accordance with, and serves to confirm, that view of pathology of cholera which, by a methodical display of numerous facts, and by a process of close and conclusive reasoning, he may fairly challenge as his own. Briefly, he holds, as many before him held, that the phenomena of cholera result from the entrance of a peculiar poison into the blood, where it probably undergoes, like that of small-pox, a rapid process of self-multiplication, and spoils certain of the blood-constituents, which are then ejected through the mucous membrane of the alimentary canal ; that the feelings of general oppression and *malaise* sometimes experienced before the onset of the bowel symptoms, are indicative of blood-poisoning; that the copious discharges are expressive of the efforts of nature to throw off a noxious material, and really form, therefore, a necessary part of the process of recovery ; and that, if the pouring forth of the vascular excretion be checked (as it can, perhaps, be by opium), the risk of fatal collapse is thereby increased. He declares that the results of his own practice, founded on these views, have amply justified them ; and a considerable body of other evidence has now been furnished in support of the same plan of treatment.

It is plain that, if "elimination" be a condition of recovery, the method of elimination is Nature's method, which Art may help or hinder—help by the cleansing method, hinder by the astringent.

In discussing the principle of treatment I have shot ahead of several points in the novel, interesting, and, to my mind, satisfactory exposition of the general pathology of cholera by Dr. Johnson.

Remember the abrupt contrast seen, upon early examination of the body after death during collapse, between the anæmic condition of the lungs, and the gorged condition of the trunk of the pulmonary artery and of the systemic veins. What is the explanation of this sudden arrest of the stream of blood in the small arteries, just before it reached the capillaries? Were the arrest of motion due to gradual thickening in consequence of the continued abstraction of its liquid portion, it would be found stagnating in the capillaries, as well as in the arteries. Bear in mind that one characteristic symptom of cholera—that symptom which, irrespectively of the fatality of the disease, renders it truly a disease to be dreaded—consists in very painful cramps of the larger muscles of the body. These contractions, it may be assumed, are produced by the choleraic poison, just as we know they are producible by the poison of strychnine. Dr. Johnson supposes that a similar spasm or cramped state of the muscular fibres which embrace the minute pulmonary arteries, is caused by the same choleraic poison,

and bars these slender channels against the advancing blood: that the stopcock action which I have so often explained to you, comes here into play. The thickening of the blood is a consequence, and not a cause, of the arrested circulation and the collapse. Precisely the same blood-thickening occurs as a result with long continued, extreme, and fatal apenœa, as I have explained to you in a former lecture.

The true explanation of the fact that mere diarrhœa, however profuse, does not thicken the blood, is probably, as Dr. Johnson suggests, that water is rapidly absorbed by the soft tissues to take the place of that which escapes from the alimentary canal. Acting on this principle of physiological hydraulics, we remove a dropsical accumulation by the action of a hydragogue purgative.

Surely the theory that I have now placed before you seems a reasonable theory. It is founded on a true analogy; it is consistent with the symptoms noticed during life, and with the conditions discovered after death. We may, therefore, legitimately regard it, until fairly refuted, as a sound as well as a most ingenious and important theory. In truth, it derives strong confirmation from the fact that it unlocks, like the right key, the whole of the pathological intricacies of the disease. Thus the emptiness of the systemic arteries accounts for the extinction of the pulse at the wrist, for the cadaverous sinking in of the eyeballs and falling of the features, for the blueness and coldness of the skin, and for the absence of syncope. The circulation stops, not from debility of the heart, as in exhaustion, but in consequence of a direct mechanical impediment to the onward course of the blood. We can understand the impotence of brandy against this condition; and how, on the other hand, bleeding may help, both by relaxing the spasm and by unloading the distended right heart, to restore the circulation. Into this explanation Dr. Johnson presses, plausibly enough, the singular effect of the injection of fluids into the veins of their patients. It appears that, to be most influential, the fluids must be hot; and he concludes that they act partly by diluting the morbid blood, but chiefly by relaxing, through their warmth, the spasm of the smaller arteries. The blood then flows on again, and the symptoms of collapse are for a time removed. Again, the husky whispering voice is owing, not to muscular weakness, but to the small volume of tidal air in the respiratory currents. As but little venous blood reaches the lung-tissue proper, there is but little demand for air to meet and decarbonise it. The respiration accordingly becomes shallow, and the vocal pipe, feebly blown through, refuses to speak. Under the temporary impulse of the warm injections, the voice regains its usual tone and note. Once

more, there are chemical and less obvious changes which receive their explanation from this theory, and further attest its truth. The stream of blood through the pulmonary capillaries being greatly lessened, the supply of oxygen is proportionally reduced in quantity. Hence during the stage of collapse there is defective oxygenation of the blood and of the various tissues of the body, coldness and blueness of the surface. diminished exhalation of carbonic acid, and suppression, nearly absolute, of bile and of urine —carbonic acid, and the chief constituents of bile and urine, being all results of oxidation. That this is the correct explanation of the suppression of bile and urine during collapse is rendered all the more probable by the curious fact that, when a nursing mother becomes the subject of cholera, and falls into collapse, the secretion of milk continues unchecked. Now the chief constituents of milk —casein, sugar, oil, and water—may be obtained from the blood without the addition of oxygen. They are *not* products of oxidation.

If the doctrines advanced by Dr. Johnson be well-founded, as I firmly believe them to be, it must be wrong to dam the choleraic poison and its products within the body. Even when those products have, in one sense, been separated from the system, they may produce highly noxious effects if they remain shut up in the stomach or bowels, there to ferment and decompose. Admitting, as we must, that a minute quantity of the morbid excretions swallowed with water may suffice to produce the disease, a large quantity retained, through weakness or the expulsive powers or otherwise, can scarcely be harmless. Rather may we expect that its expulsion will tend to liberate the patient from danger and discomfort; just as the opening of large abscesses, and the discharge of foul pus and imprisoned gases, are often seen to rescue, as if by magic, a sick man from apparently impending dissolution. Whatever may have been Dr. Johnson's earlier purpose, he does not now propose to *excite* discharges from the mucous surface of the digestive canal; but simply to facilitate the removal of matters lodged there. And this he would do by emetics, by draughts of tepid water or other diluents, or by castor-oil, of which the action is both speedy and gentle. The recommendation of the evacuant plan must, after all, lie in its comparative success, and its worth has already been put closely and extensively to the proof.

In the fiftieth volume of *Medico-Chirurgical Transactions* there is a most instructive communication from Drs. M'Cloy and Robertson. They show that, of 375 cases of cholera admitted into the Liverpool Parish Infirmary in the last epidemic, 161 proved fatal—a gross mortality, under all the modes of treatment adopted, of 42.-

93 per cent. Of these cases, 91 were treated with astringents and stimulants, camphor and iced water, applications of ice, and hypodermic (opiate) injections; and the mortality per cent. of these cases was 71.42. 87 cases were treated with castor-oil, and with a liberal use of food and alcohol; and the mortality was 41.37 per cent. 197 cases were treated with castor-oil only, and the mortality was 30.45 per cent. The authors of the paper declare that "recovery never occurred without the continuance of the intestinal discharges; on their restoration, if previously arrested."

The late Inspector of Prisons, Mr. Perry, had charge, in 1832, of the cholera patients in the Marylebone Workhouse. He told me that, though he had no specific notes to refer to, he distinctly remembered that about thirty patients were treated with castor-oil; and that they did better than any of the others.

When I last spoke on this subject in these lectures, I stated that the few recoveries which I had witnessed had all taken place under large and repeated doses of calomel, but that I could not venture to affirm that the calomel cured them. At present, I am much disposed to believe that, by its cleansing action, the calomel may have helped the recovery; and, after all that I have since seen, heard, read, and thought upon the matter, I must confess that, in the event of my having again to deal with the disorder, I should feel bound to adopt, in its generality, the evacuant theory and practice; and to avoid alcoholic stimulants and opiates.

Now, if this theory and practice in respect of cholera be true and right, the practice ought to be right in respect of the associated diarrhœa also; and it is strongly affirmed by those who have largely tried it, that it is right, inasmuch as it is eminently successful. Dr. Johnson avers that he has found it so.

Hear the concurring testimony of Drs. McCloy and Robertson: "Our experience of diarrhœa was very extensive. Several thousand cases came under our observation in the different dispensaries connected with the West Derby Union and in the Liverpool Parish Infirmary. Among these were doubtless many which would have recovered under any mode of treatment, or by the *vis medicatrix nature* alone. But there were many, too, of a most severe choleraic type. The treatment adopted was generally evacuant in its nature; and consisted in the administration of castor-oil, calomel, rhubarb, or magnesia. In every case relief was afforded 'pleasantly, quickly, and safely.' It was but seldom that more than two or three doses of oil were required." The medical officers of the Bootle Dispensary depose to the same effect: "We certainly had less trouble with the evacuant mode of treatment. Our patients seldom gave us a third visit; two doses of castor-oil or

rhubarb mixture being generally sufficient to cure the disease." "We never saw a diarrhœa patient, treated with evacuants from the commencement of his attack, require subsequent removal to hospital. In a large proportion of our cases there was 'premonitory diarrhœa,' which had been treated, often for four or five days, with astringents. Diarrhœa patients undoubtedly recover when treated with astringents; but the recovery is not consequent upon the arrest of the discharges, as these are invariably restored before the patient feels well."

In the face of this and of much similar evidence, I feel bound to say that the rules laid down by Dr. Johnson for the treatment and prevention of diarrhœa and cholera, seem now to me safer and better then the less discriminating advice which heretofore I gave you, "whenever a suspicion arose that cholera was present in the community, not to try, in cases of diarrhœa, to carry off the presumed offending matter, but to quiet the irritation and to stop the flux as soon as possible, by astringents, aromatics, and opiates."

No doubt, the true indication of treatment is, to stop the flux as soon as possible; but this may sometimes be best effected (as also in "crapulous diarrhœa, and in the summer cholera of Sydenham") "*by* carrying off the offending matter."—*British Medical Journal.*

ON THE ACID DYSPEPSIA OF INFANTS.

By Eustace Smith, M.D., Phys. Ext. to H. M. the King of the Belgians, Phys. to the North-west London Free Dispensary for Sick Children, etc.

Acid dyspepsia is one of the commonest digestive derangements met with in young children, and few infants can be said to escape it altogether. A trifling complaint, and readily recovered from when attended to early and judiciously treated, if neglected it becomes a most serious and obstinate disorder, which may resist all treatment, and may lead to the most extreme emaciation, or even to death itself.

The food taken seems shortly after being swallowed to undergo an acid fermentation; sour gases are evolved, great discomfort is produced, and nutrition is seriously interfered with. The derangement is usually caused by overfeeding with farinaceous foods. It is too commonly the case that these foods are given in enormous quantities—in quantities greater than any infant with ordinary digestive power can by any possibility assimilate. The reason of this reckless feeding is, partly, the mistaken notion which so

universally prevails of the digestibility of these foods; partly the eagerness with which the child himself will swallow large masses of sop; for the griping and flatulence occasioned by the presence of large masses of starchy matters in the alimentary canal will—if not too severe—excite a fictitious hunger which is not easily appeased. An infant of three or four months old, in whom the secretion of saliva is but lately established, or an infant of a yet earlier age, who has no saliva at all, is often fed with a large tablespoonful of corn flour or other farinaceous powder, boiled with milk or with water, four, five, or even more times in the day. The food lies undigested in the bowels, ferments, and a state of acid indigestion is set up, which does not cease with the removal by vomiting and purging of the cause which has produced it. Even a return to a simpler diet is often insufficient by itself to put an end to the derangement; plain milk and water is vomited sour and curdled, and everything taken into the stomach seems to undergo the same acid change.

As this derangement is so easily excited by improper feeding, even in healthy infants, children whose strength has been already reduced by disease, and whose digestive power is therefore lowered in proportion to the weakness of the whole system, are still more likely to be affected by the same cause. On this account acid dyspepsia is a not unfrequent sequel of acute disease in infants, and may, after apparent convalescence from the primary disorder, lead to death by the interference with nutrition and by the exhaustion which it so often produces. The diarrhœa, which is a not uncommon sequence of some of the acute specific diseases, as scarlatina and measles, is often primarily excited by this derangement, and is too frequently a cause of death. Severe operations upon the child, such as that for stone in the bladder, may also be followed by the same complication, for anything which lowers the easily depressed general strength reduces also the digestive power and predisposes to this complaint.

Children brought up by hand are especially liable to this acid dyspepsia, for even when fed upon a suitable diet, carelessness in the administration of the food selected, so that the stomach is overloaded by too frequent or too copious meals, or neglect of the necessary cleanliness, so that they are allowed to take milk which by being put into a sour bottle has already begun to change, will excite this indigestion. Amongst the poor of London it is not uncommon to find a child brought for medical advice sucking at a feeding bottle, of which the intensely sour smell at once discloses the cause and suggests means for the relief of the complaint under which he is laboring.

The earliest symptoms of this derangement are due to the uneasiness produced by flatulent distention and griping pains. The infant is restless and fretful, whining and crying and refusing to be pacified. Large quantities of gas are evacuated both by the mouth and by the rectum, affording at first some relief, and the child becomes quieter until a reaccumulation takes place. At night the griping is exceedingly distressing, and his sleeplessness at this time, by the discomfort it occasions to his attendants, is usually the symptom which assumes the greatest prominence in the mind of the mother, and is the chief reason for applying for advice. The infant, after lying for a time in uneasy sleep, starting, twitching, moaning, frowning, and drawing up the corners of his mouth, suddenly wakes up with a loud cry, and is seized with a fit of violent screaming which resists all efforts to calm him. He throws himself from side to side, jerks about his lower limbs, or suddenly straightening them out in a line with his body, becomes for a few moments rigid as if turned into stone. These attacks of colic are sometimes so severe as to cause great alarm; the child falling into a state of collapse, or being thrown into convulsions, which may be repeated again and again. The ravenous appetite noticed in children suffering from flatulence has already been referred to. This symptom usually disappears as the derangement becomes more marked. Vomiting comes on after a time, the appetite then fails, and the child is thirsty and feverish. Vomiting is at first excited by taking food, but may afterwards occur when no food has been lately taken, and in bad cases may be caused by a sudden movement, or even by a touch, as in wiping the mouth. The vomited matters consist at first of food and curdled milk, afterwards of clear fluid like water; the smell is usually intensely sour. The bowels at first are confined, but after a time diarrhœa comes on, the motions being either pale, frothy, and sour-smelling, or watery and fetid. There may be straining during the passage of a stool, in which case the motions may contain streaks of blood. An eruption of red strophulus, covering the body and arms of the child, is a not uncommon symptom; it may be mixed with urticaria.

An infant suffering from this derangement soon becomes pale and thin. His face assumes a constant expression of fretfulness, which is increased by the furrow which appears, passing on each side from the nose, to encircle the corner of the mouth. The lower eyelid and upper lip are disposed to be livid; the lips twitch, and the corners of the mouth are frequently drawn up, giving a peculiarly plaintive and helpless expression to the face. The fontanelle is depressed more or less deeply, according to the

degree to which the strength is reduced. The eyes sometimes assume a fixed stare, while the musles of the face twitch, and the thumbs are drawn inwards upon the palms of the hands. These nervous symptoms—well known to nurses by the name of inward fits—are of importance, as being sometimes the forerunners of convulsions. The tongue is at first covered with white fur, through which red papillæ project; afterwards it is apt to become pale and clean, or with little patches of fur scattered here and there over the dorsum. In bad cases the whole body has an offensively sour smell. This smell proceeds not only from the breath, but from acidity of all the secretions; the saliva, the perspiration, and the urine being all intensely acid. The cutaneous secretion is, however, seldom in excess; more usually the skin is dry, and is in consequence harsh and rough to the feel, especially at the backs of the arms and the belly. The feet are generally cold, and the child lies with the knees drawn up to the abdomen. The coldness of the feet is no doubt one cause of the griping pains which are so constant in this derangement, for even in healthy infants abdominal pains are frequently excited by coldness of the feet, and cease when these are warmed. During the earlier periods of this disorder the complexion turns slightly yellow from time to time, the yellow tint remaining for some hours or days. Occasionally the skin becomes completely jaundiced. After the complaint has existed for some time a peculiar earthy tint is noticed of the face and whole body, which is very characteristic of chronic derangement.

If the disorder is primary, and is not soon arrested, a chronic catarrh of the stomach is often set up, the bowels becoming obstinately confined, and the vomiting continuing as a persistent condition. In other cases, again, the derangement may settle principally upon the bowels, leading to a chronic diarrhœa. The most extreme emaciation is often reached through these means, and it may be only after weeks, or even months, of illness that a termination by recovery or by death is arrived at.

When the disorder is secondary to some acute disease, or follows a serious operation, the strength is usually so much reduced by the original illness that the child, weakened more and more by the vomiting and diarrhœa, and by his inability to digest any nourishment whatever, soon becomes exhausted. Thrush appears upon the inside of the mouth, and the child sinks and dies. Pneumonia is a not uncommon complication in the latter stages of the disease, and, if the strength be much reduced, may exist without manifesting its presence by any of the usual symptoms. There is no cough, and the heat of the body is not appreciably

heightened, or if heightened at first the elevation of temperature soon passes off. This pneumonia usually attacks the bases of both lungs.

The earlier treatment is commenced in this derangement the more readily will the complaint be arrested, for as the strength becomes more and more reduced, and the stomach and bowels become more and more disordered, treatment which in an early stage would be at once attended by improvement, loses much of its efficacy, and great difficulty is experienced in making any impression upon the disease.

When the case is seen early, and the symptoms complained of are merely griping flatulence, with ravenous appetite, unaccompanied by sickness or diarrhœa, careful inquiry should at once be made into the diet and general management of the infant. It should be explained to the parents that the appetite will best be satisfied, not by increasing the quantity of farinaceous matter and the frequency of the meals, but by carefully adapting the food supplied, both in quality and quantity, to the digestive power of the child, so that the nourishment given may be only such as the stomach is able to digest. This may seem a simple and self-evident proposition, but it is one which is constantly forgotten. That a child will be nourished in exact proportion to the amount of food he swallows, and that the more solid the food the greater its nutritive power, are two articles of faith so firmly settled in the minds of many mothers that it is very difficult indeed to persuade them to the contrary. To them wasting in an infant merely suggests a larger supply of more solid food—every cry means hunger, and must be quieted by an additional meal. It is difficult to lay down precise rules for diet in every case of this derangement. This is a matter which can be properly learned only by experience. There are, however, certain plain rules which should always be observed. Of these one of the most important is, that farinaceous food is unsuitable to an infant under the age of three months. Before that age he should be restricted entirely to the breast, supposing that the secretion of milk be of proper quality and be supplied in sufficient quantity. In cases, however, where additional food has to be given on account of the insufficient supply of breast-milk, recourse must be had to cow's milk, or the milk of the ass. If cow's milk be used, it should be diluted with a third part of lime-water, in order to prevent the too firm coagulation of its casein. Even, however, when thus diluted and alkalinized, the cow's milk is sometimes undigested by young infants, who seem to thrive better upon the milk prepared with a very small quantity of arrowroot or baked flour. This scarcely accords with the

statement made above, of the unsuitableness of such foods to young infants; but an explanation of the seeming contradiction is found in considering the action of the farinaceous food under such conditions. The arrowroot itself probably contributes little, if anything, to the nutrition of the body, but when thus intimately mixed with the cow's milk it has a mechanical action in separating the casein into minute portions. The curd, therefore, coagulates, not in one large clot, but in a multitude of small clots, which are more readily attacked by the digestive juices. It is, however, as has already been said, always a risk to give farinaceous food to young infants, and the same object may be as readily effected, and without any danger to the child, by adding a small quantity of isinglass or common gelatine to the diluted milk in the proportion of one teaspoonful to four ounces.

In older children, brought up upon artificial food, the above symptoms are often complained of, even although the quality of the food with which they are supplied leaves nothing to be desired. In these cases it is the quantity which is the fault: the child is supplied with food largely in excess of his wants or his powers of digestion, and the stomach and bowels revolt against the burden imposed upon them. For an infant of six months old, one, or for a very robust child two, teaspoonfuls of farinaceous food, carefully prepared with milk, and given twice in the day, are as much starchy matter as he is able readily to digest. His other meals should be composed of milk and lime-water, or the milk and water with isinglass, as directed above.

The kind of farinaceous food is of some importance. Different foods vary very much in the proportion of their several constituents, and the albumen, gluten, salts, &c., they contain are to be considered quite as much as the starchy matter. The very best food is, perhaps, pure wheaten flour slowly baked in an oven till it crumbles into a light grayish powder. This, prepared with milk, and sweetened with milk sugar, forms an admirable morning and evening meal. It may be varied occasionally with other farinaceous articles, but whatever be the food selected, the quantity mentioned must not be exceeded. An alteration in the diet, in accordance with the above rules, a small dose of castor oil, or rhubarb and soda, to clear out undigested matter from the bowels, and the administration of a little bicarbonate of soda or potash, with an aromatic to neutralize any remaining acidity and promote digestion, are all the measures that are required at this stage.

If the derangement have gone on to vomiting and purging, with an intensely sour smell from the breath and from the ejected

matters, other means must be resorted to. In this case the stomach and bowels are filled with the acid products of fermentation, and the vomiting and diarrhœa are merely the forcible efforts of the alimentary canal to expel its irritating contents. Sedatives to the stomach and astringents to the bowels are here out of place; we shall best cure the derangement by assisting the expulsion, and not by obstructing the exit of the fermenting food. In determining, however, the exact measures to be adopted, the state of the child's strength is an important consideration, and this is best estimated, not by the condition of the pulse, but by the degree of depression of the fontanelle. If the fontanelle is not much hollowed, a teaspoonful of ipecacuanha wine should be at once administered, and should be repeated every ten minutes until vomiting be produced. The acrid matters in the stomach having been thus evacuated, half a teaspoonful of castor oil should be given after a short interval, to act gently on the bowels, and the child should be allowed nothing but a little cold, thin barley-water, given occasionally with a teaspoon. At the same time the belly should be kept covered with a hot linseed-meal or bran poultice, and the child, warmly wrapped up, should be kept perfectly quiet in his little cot.

If the derangement have only existed a short time, the above measures will be usually successful in checking the symptoms, and the child will be found to retain the breast-milk, or the milk and water with which he is supplied in small quantities. Any tendency to acid fermentation that may remain should be neutralized by five-grain doses of bicarbonate of soda, given three or four times a day, and the patient may be allowed to return very gradually to his ordinary diet.

When, however, the derangement is of long duration, or is secondary to a severe operation or to some acute disease, the symptoms are not so easily overcome. Here the weakness, as shown by the depressed fontanelle, will not allow very active measures to be employed, and therefore the accomplishment of our twofold object, viz., of removing already formed acid from the system, and of preventing further fermentation, requires the most careful management. Emetics are here out of the question, for the strength will not bear further reduction, and the administration of such a remedy would be attended by the greatest danger. Our first care should be to endeavor to restore the circulation to the extremities, by placing the feet as high as the knees in hot mustard and water. If the weakness be very great, the whole body may be immersed in a mustard bath as high as the neck. It is of extreme importance in such cases to restore the

proper action of the skin, for it is by this means chiefly that we hope to effect the escape of acid from the system. On being removed from the bath the infant should be carefully dried: a hot linseed-meal poultice is then to be applied to the belly, and the child, well wrapped in flannel, must be returned to his cot. The warmth of the surface must be kept up by hot bottles placed by his sides, and the feet and legs should be well rubbed at intervals with the hand alone, or with a liniment composed of equal parts of compound soap liniment and the compound liniment of camphor. If the child can bear the motion, frictions with the same embrocation may be used to the whole body; but in cases where the weakness is extreme and the vomiting obstinate, violent retching may be excited by the slightest movement, so that the frictions would have to be discontinued. In such cases the feet and legs should be wrapped in hot flannels on which some flour or mustard has been sprinkled, and the most perfect quiet should be enforced. A napkin must be placed under the chin, to receive all matters ejected from the stomach, and when moistened the cloth must be immediately removed and a clean one applied in its place.

If diarrhœa exist, astringents are not to be employed so long as a sour smell from the breath and evacuations indicates the continuance of fermentation in the stomach and bowels. For a child of a year old, twenty drops of castor oil can be administered, and will be usually kept down. After its action a simple chalk mixture may be given, or a draught containing five grains of bicarbonate of soda, with three grains of nitrate of potash, in some aromatic water, three or four times in the day. Half a drop of tincture of capsicum is a valuable addition to each dose of this mixture.

If there is constipation, the bowels must be opened by an enema containing castor oil, and be kept in regular action by the occasional administration, as required, of one or two drops of a solution of podophyllin in alcohol (a grain to the drachm), or by suppositories of castile soap placed in the rectum.

The form of nourishment to be given in these cases is of the utmost importance. All matters capable of undergoing fermentation must of course be excluded. Even milk itself, however diluted and alkalinized, can seldom be borne, as it is usually vomited sour and curdled immediately after being taken. Women's milk is usually well digested, but not always. In some cases it seems to agree as the milk of the cow; in others, where the irritability of the stomach is very great, the mere movement of the mouth in the act of sucking may be sufficient to excite a

return of the vomiting. If this be found to occur, the breast-milk should be given with a teaspoon. In cases where a return to the breast is impracticable, or is not followed by the expected improvement, a good food is whey, made fresh as required by adding prepared rennet to cow's milk in the proportion of a teaspoonful to the pint. To two tablespoonfuls of the whey add one tablespoonful of fresh cream, and dilute with two tablespoonfuls of hot water. Of this food small quantities can be given at regular intervals, and care must be taken that it be either hot or cold, but not tepid, as liquid food given in a lukewarm state would be apt to favor a return of the vomiting. Liebig's food for infants, carefully prepared with freely diluted cow's milk, will often be borne; but in very bad cases it is inferior to the diet just described. In addition, the waning powers of life must be supported by five-drop doses of pale brandy, given in a teaspoonful of the food every hour, or even oftener, according to the condition of the fontanelle.

By such measures success is often attained even in the very worst cases of this derangement. The obstinate vomiting is best arrested not by sedatives, but by giving the stomach as much rest as is consistent with supporting nutrition. Of all special drugs, calomel in doses of one-eighth or one-sixth grain, laid dry on the infant's tongue, is perhaps the one which is the most generally successful; but our chief reliance should be placed on a careful diet, and on stimulating and hot applications, so as to promote the circulation and encourage the free action of the skin. The existence of cold feet alone would be a sufficient obstacle to the success of any treatment whatever.—*Amer. Journ. of Obstetrics*, p. 597.)

A CASE OF HEREDITARY EPILEPSY CURED BY BROMIDE OF POTASSIUM.

By Henry K. Steele, M.D., Dayton, Ohio.

November 19, 1866, I was called to see MissE., aged about 15, who was suffering for the first time from an epileptic paroxysm. She had recovered from the attack when I reached the house. Her catamenial period had just commenced, and the flow was still on her. I prescribed a solution of bromide of potassium, ten grains three times daily, with directions not to omit it until I gave permission. On the 29th of May, 1867, almost six months afterwards, I was again called to see her. I learned that having presumed she was well, she had omitted the medicine for three weeks, and was now undergoing a second epilectic paroxysm.

I repeated the prescription, impressing upon her the impression of continuing it; which she has done to the present time, a phriod of two years and almost four months from the date of the last attack, without the omission of a single day, and without the recurrence of the paroxysm.

It has been suggested that after fifteen or sixteen months' exemption from the disease a cure might be considered effected, but I have not thought advisable to follow that suggestion, although emanating from so distinguished a source as Dr. BROWN-SÉQUARD; on the contrary, in May, 1869, after an uninterrupted continuance of the remedy for two years, I added five grains of the bromide of ammonium to each dose, believing that the system having adopted and appropriated as part of its natural sustenance the bromide of potassium, it might require a little more of the bromide as a counteracting tendency to the disease. She still continues the prescription, therefore, as increased last May.

The mother of this young lady, whom I saw frequently, was attacked with epilepsy about the same period of life her daughter was. The attacks were not controlled, but became gradually more frequent and violent; insanity followed, and she died in an insane asylum, the epilepsy continuing to the close.—*Amer. Journal of the Med. Sciences.*

THE CLIMATIC TREATMENT OF CONSUMPTION.

The *Practitioner* concludes a review of recent publications on the treatment of pulmonary phthisis with the following "brief retrospect of the progress made, on the whole, towards a clear idea of the best way of treating consumption:"

1. It seems difficult to doubt any longer that the circumstances, whatever they are, which prevail in certain montain valleys offer a more complete immunity from phthisis to the natives, and a better chance of cure to phthisical visitors, than is afforded by any other mere climatic influence whatever. It also appears very doubtful whether the influence really is climatic merely, and quite certain that it, at any rate, is not regularly proportionate to the mere degree of elevation of the district.

2. It is nevertheless impossible to suppose that all the benefits have been attributed to warm southern climate which were imaginary; on the contrary, there is scarcely a practitioner who has not seen the greatest benefits accrue from sending consumptive patients to climates which, compared to their own, may be called, on the whole, decidedly mild and equable. Note here, however, two points. With very few exceptions those climates which have been

popularly associated with this idea are, in reality, both much less mild, and much less equable, than the majority either of patients or even of medical men are accustomed to think, until they have had personal experience. And secondly, those who are in the habit of analysing results with care have often noted this singular fact—that patients who have returned from wintering at such places, where they had expected to be bathed in the luxury of the *ideal* "Italian" climate, complaining bitterly that they have been starved with cold, and really giving evidence in some particulars of apparent increase of catarrhal mischief for the time, do nevertheless appear after a short interval to show the unmistakeable influence of their winter sojourn, unpleasant though it has proved to them.

3. A more important practical observation than any other, except that of the influence of elevated health-resorts, is the discovery of the extraordinary value of *long sea-voyages*, which, during the last few years, has been increasingly impressing itself on the medical mind. It is, perhaps, not too much to say, that we are now certain the voyage itself was the only really beneficial agent in the otherwise mistaken and disastrous practice of sending consumptives to Madeira.

4. The kind of alimentation and medication which alone are useful is now pretty well settled; the only question which remains open being the degree of development that may be given to the use of certain metallic tonics, especially arsenic, which seems to offer the good results of iron *plus* an unknown, but probably very valuable, influence on the nervous centres.

5. The question of the kind and amount of physical exercise to be enjoined or permitted offers serious difficulties: but it also, so we think, promises to shed indirect light on the general climatic question. It is, on the one hand, known that great benefits often result from the mere influence of the free use of open-air exercise, independent of temperature or the other features of climate. It is, on the other hand, loudly protested by some of the most experienced practitioners, * that nothing more frequently ruins a patient's chances of recovery than the incurrence of muscular fatigue. Now let us turn to the instances of long ship-voyages, a mode of treatment which is quite indisputably successful in a great number of cases—does it not strike the reader forcibly, on reflection, that one most important circumstance of ship board life is its *lazy, effortless monotony*, giving nearly perfect *rest*, if one

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* We may mentioned that Dr. Burslem of Bournemouth has particularly enforced this view, in conversation with us.

may say so, to both bodily and mental muscles? Now, the other grand feature of life on a ship is the *constant and copious inhalations of air free from organic impurity* and charged only with matters (especially, perhaps, chloride of sodium) which are directly beneficial to nutrition and general health. Does it not seem as if there were, after all, a common measure, discernible if not completely definable, to all the various plans of hygienic treatment for consumption which of late years have commanded any wide support from medical men? It appears to us that we may tabulate side by side the elements of equal success from either of two modes of treatment:

1.	2.
Prolonged residence in a high but fairly sheltered mountain valley.	A prolonged ocean voyage.
Free carriage exercise, little or no walking.	Free exposure on deck, only gentle and slight walking exercise.
With, of course, all proper precautions about warm clothing, and the avoidance of draughts indoors.	Same precautions about sufficient clothing, and avoidance of draughts, getting chilled with wet clothes, &c.

If this view be ultimately justified by larger experience, it will then, we think, be obvious that by either of these two plans we offer, in a regular and necessary manner, all those advantages which are only partially and in an uncertain and fluctuating way offered by the fashionable health-resorts of which the Riviera may be taken as the type; and that there is no evidence that the latter really possess special advantages of their own. The copious inhalations of an air comparatively free from organic impurities very probably accounts for fifve-sixths of all the benefits received at such places; and to the pleasing novelty of a foreign residence we should be inclined to attribute the rest.

ON HYPODERMIC INJECTION OF MORPHIA.

By George Oliver, M.D., London.

I am glad the question of hypodermic injection of morphia has been raised by so excellent an authority on the subject as Dr. Allbutt. I have met with two undesirable results from hypodermic morphia: one connected with the oft-repeated use of the injections, the other with the operation itself. But after all, I think these objections to the hypodermic use of morphia are as nothing in the scale against the benefits conferred by this mode of treatment.

I. A craving for repetition of injections—mainly because of apparent or real benefit from them—with toleration of increasing doses of morphia; and after a time, great misery, and, to all appearance, considerable physical exhaustion, when the injections are withheld altogether, or the dose of morphia much reduced. This effect of the continued hypodermic use of morphia has no doubt been noted over and over again; it is evidently akin to the opium-habit; but, unlike this, it is not attended by derangements of the gastro-intestinal tract; on the other hand, it not unfrequently does good to the stomach and bowels, and, above all, to the circulation; the feeble frequent pulse, for instance, not unfrequently opens up, and becomes firmer and less frequent; of course, hypodermic morphia by cutting off (at any rate very considerably) the baneful influence of pain on the heart and stomach may, on the principle of rest and ease, in great part produce these tonic effects. But against them we have the setting up of a morphia-habit, and, as suggested by Dr. Allbutt, the possible—nay, in some cases, probable—perpetuation of pain by oft-repeated injections of morphia, when resorted to as the sole method of medicinal treatment. I suspect it will be shown, by those practitioners who have had large experience of the hypodermic use of morphia, that this mode of treatment does tend to perpetuate pain in certain cases. I believe these will fall chiefly under that class of patients suffering from obstinate chronic neuralgia; in fact, the very class for which hypodermic morphia was at first thought of specially as the cure. A prominent instance is presented in intractable menstrual neuralgia—neuralgic dysmenorrhœa. I have met with more than one instance of this kind of suffering which clearly supported the position, that one effect of morphia was to greatly aggravate the intensity of the periodic pain. Except in the very worse cases of this kind, when it may come to a balancing of evils nearly equal, I should refrain from prescribing the injections of morphia, even in very small doses, because of the danger of these leading on to larger and larger doses, and of a progressive increase of suffering proportionate thereto, when the time came for the reduction of dose, and, in particular, when we must abandon the injections altogether.

But, on the other hand, I am convinced there is another important class of cases, though smaller than the foregoing, in which we may secure all the good out of morphia (alleviate pain and improve the general health) set up a morphia-habit, and then get safely over this habit by firmly withholding the morphia, and yet retain the good results—absence of pain and restoration of health. The cases I refer to are such as are apt to run a lingering course,

with pain the principal element of trouble, and even of danger to the patient's life, affecting some part (*e. g.*, some of the abdominal viscera) which clearly needs much a rigid application of the principle of rest and ease, so as to give nature the most favorable opportunity of restoring some damage done, of effecting her own cure, which she is unable to do while the part is in a state of irritation, and perhaps of undue activity. Here hypodermic morphia may help us much in the cure; it may secure the intelligent end of rest for long periods; beside the temporary alleviation of pain far better than any other means at our disposal; and the rest and ease are not for the patient's comfort only, but also for his cure. In such cases pain is not perpetuated by hypodermic morphia; it diminishes day by day until it is quite gone, and when the morphia is given up—if the cure of the affected part be complete—it does not return. This may be best illustrated by a case of which the following is a brief outline:

Mrs. R., aged 32, when in her usual health, stout and robust. A week or two after her first confinement, which was in every respect easy and natural, she was seized with what appeared to be an attack of ordinary typhoid (this fever had been in the house adjoining a few months before; the drains were altogether very unsatisfactory; into her bedroom drain-effluvia entered; and drinking water was taken from a well within a few feet of the ordinary drain, privy, and ashpit); but there were no spots. Toward the end of the fourth week she had most troublesome bowel complications—tympanitic distention, severe paroxysmal pain, etc., which really for a time threatened her life, and from which she only recovered imperfectly. She got about the house after a while, the abdomen still a little blown. In a week or two paroxysms of most severe pain within abdomen came on, accompanied by very loud rumbling and bubbling sounds, and she completely broke down. The abdomen was tympanitic; nowhere could I detect dullness or any indications of fecal accumulation. Pressure of hand over umbilicus produced great pain, which appeared to be connected with vermicular contraction of bowels, and this could be seen travelling across the abdomen, and setting up loud rumbling. Every now and then severe pain came on without any external exciting cause. Obstinate sickness would last for hours together. There was great uncertainty as to the kind of lesion, the cause of all this trouble; but there was much evidence to support the theory of obstruction, and, in fact, the pathological reading of the symptoms could only come to this. Enemata and aperients were resorted to on the slender hope of there being fecal accumulation, but these means were tried with a doubting

mind as to whether they might not do harm to the bowel possibly distressed by some pathological lesion. The result of this treatment was far from satisfactory; and I was led again to give aperients only at the request of a practitioner of great experience whom I met in consultation, and the symptoms were again so much aggravated by them, that I was compelled for the patient's safety to relinquish them as positively harmful. Then sedatives by mouth and rectum were diligently tried; suppositories per rectum had, however, little chance of doing much good, because there was great relaxation of the spincter ani. Then for a while I gave up all medicinal treatment. The patient's condition became daily worse and worse—vomiting and pain more severe, emaciation extreme, pulse from 120 to 150, very small, face pinched. Though we only got an evacuation now and then, still it seemed every day more and more clear that to give rest and ease to the distressed bowel was the correct thing to do in the way of treatment, and all hope of a successful issue seemed to center in that. At last we determined to rely entirely on the hypodermic injection of morphia night and morning. The severe pain and loud rumbling (which before the injections had been almost constant) at first gradually diminished in intensity, and these, in the course of a week or two, entirely ceased after every injection, but still frequently returned toward the time of the next injection. It was clear we were gaining ground, and we had at last got rest to the bowel. As the night and morning injections were continued, it was most interesting to observe how the tongue cleaned and the vomiting ceased, how food began to be tolerated by the stomach, how the appetite returned day by day, how the pulse enlarged in volume and became more and more reduced in frequency, how the previous constipation gave way (without any treatment specially addressed to it), and, as a result of all this, how the flesh and strength came back. Progress dated from the time the irritated bowel got under the influence of hypodermic morphia. In the course of a few weeks it was observed that the omission of only one injection at the usual time caused the patient to pass several miserable hours—not so much from pain in abdomen, though this was still felt, as from a feeling of great prostration, as if because of the withdrawal of an accustomed stimulant. Being fearful lest my patient, imperfectly cured, should, without the injections, relapse into something like her previous state, and seeing how useful the morphia appeared to be as a tonic, I advised the night and morning injection to be continued. This was done for two months, and then she had one injection daily for three months more. She now being quite restored to her usual health,

health, the only remaining thing to do was to withhold the injections, and this involved a struggle. I sent her away without her syringe (she injected herself), and she passed a few very miserable days, and got over it without further trouble. I might have stopped the morphia before this, but it appeared to me it brought back her health far more quickly than any other tonic I could have prescribed.

I look upon this case as a triumph for hypodermic morphia; without it I fear my patient would have died. But beside this bright side, the case shows there is undoubtedly such a thing as morphia habit, which may, however, be overcome without harm resulting.

I relate this case for the purpose of insisting on the fact that medical cases *now and then* appear, which may be best treated even for long periods by hypodermic morphia alone; and chiefly because this is perhaps the best medicinal means the physician has for carrying out efficiently the valuable principle of rest and ease to excited and irritated parts, so as to put them into a state in which natural restoration is favored, and to shield the nervous system, and the heart in particular, from the depressing influence which they are apt to exert upon these important organs. I have found that pain and unrest of the viscera—parts supplied by the sympathetic system—are very susceptible to the control of hypodermic morphia; and when doses of this remedy are repeated often enough, and for a sufficiently long period, it forms no small item in contributing to the restoration of the affected part—if repair will go on at all—and of the patient.

Then, of course, as everybody knows, there is the class of recently established neuralgiæ—*e. g.*, sciatica in particula—which, even when rather obstinate to ordinary treatment, often gives way under hypodermic morphia alone, and this does not in any sense perpetuate pain even when the treatment must be pushed on for some time.

II. Alarming symptoms may arise from the injection of morphia directly into a vein. This accident must be of rare occurrence; yet it should be kept in mind. I have only met with (what I suppose was) one instance. Immediately after the morphia was turned on, the patient cried out with an expression of great alarm, eye-balls prominent, face very red, pulse extremely small. Brandy was given freely, and all came right in about half an hour. The patient told me afterward something shot to the head like lightning the instant the injection took place. On withdrawing the syringe there was a good deal of hemorrhage. The patient had had several injections before without any untoward results. I

have thought of the possibility of sudden death from the injection of morphia into a vein. Might not some of the deaths which have followed the hypodermic use of morphia be referred to this cause? To avoid such a serious risk, we should keep from parts freely covered by superficial veins, and insert the syringe perpendicularly to the surface, and not in a slanting direction under the skin, so as to avoid running the needle along the longitudinal axis of a vein.

Redcar, December, 1870.

Midwifery.

CAUSE OF THE OCCURRENCE OF LABOR AT THE CLOSE OF THE NINTH MONTH OF UTERO-GESTATION.

Prof. Alexander R. Simpson, in his introductory lecture (*Edinburgh Med. Journal*, Dec., 1870), gives the following explanation of this: "Since the true nature of the decidual membrane came to be fairly understood, it was natural to seek in the changes which it undergoes for an explanation of the cause of the occurrence of labor at the close of the ninth month of utero-gestation. The search has not been fruitless. For it has been found that in the natural course of development, the decidual membrane at this period has undergone a degree of fatty degeneration which has brought it to the last stage of its existence, when it would either require to be melted down and absorbed, or be thrown off as a foreign substance. The same change occurs in it at an earlier date, if through some disease, an end be put to the life of the fetus, and in such a case expulsion of the dead child does not take place until the time has been given for the degeneration to occur in the decidua, which leads to its being loosened from the uterine parietes and reduced to the condition of a foreign body. The observation of this phenomenon has led by a beautiful induction to the employment of the simplest, safest, and surest means of bringing on labor, by imitating the process of nature and producing an artificial separation of the membrane from the interior of the uterus in those cases where, to save the life of the child and to lessen the mother's risk, it is found needfal to induce the labor prematurely.—*Med. News and Library.*

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Another Case of Ovariotomy:—Successful. By Robert Craik, M.D., Professor of Chemistry McGill University, Consulting Physician and Surgeon to the Montreal General Hospital, &c., &c., &c.

It will be remembered by some readers of the Journal, that in July, 1869, I published the reports of two cases of Ovariotomy occurring in my own practice, one of which was unsuccessful and the other successful. I have now to add a third case which has also, I am happy to say, proved successful, and which—apart from the obvious duty of placing all such cases on record, whether successful or unsuccessful—may be considered of sufficient interest to repay perusal, on account of its involving several important points of practice.

Mrs. G., aged 37, the mother of four children, the youngest born in 1865, consulted me on the 10th of August, 1869. She had been increasing in size during the previous five or six months, without pain, and without cessation of the menses. Her circumference at the time of my examination was 32½ inches at the umbilicus, and a distinct fluctuating mass could be felt extending upwards from the left iliac fossa, and causing the abdomen to project as in the seventh month of pregnancy. There was dullness on percussion over the tumour, and resonance towards the lumbar regions and ensiform cartilage.

A vaginal examination showed the uterus of its normal size, and slightly displaced downwards, and to the right.

As the patient's general health had scarcely at all suffered although there was undoubted evidence of an ovarian tumour of considerable size and of rapid growth, it was a very serious question what to advise under the circumstances. I need scarcely say that no other mode of treatment than that by operation was for a moment entertained, but the embarrassing question was *when* should the operation be undertaken, whether would it be better

to operate early, while her general health and strength were still unimpaired, or to wait until the disease had begun to tell seriously upon both.

If the operation were one not attended by much danger, there can be no doubt that the sooner the operation were performed the better; but when we reflect, that even in favourable cases the mortality is great, it becomes a serious question whether we are justified in recommending such a risk, so long as the patient enjoys a moderate degree of health and comfort.

On the other hand, there are risks to be incurred by deferring the operation to too late a stage, such as the bursting of the sac, (which occurred in one of my former cases, and nearly proved fatal by collapse,) inflammation with adhesion, extreme debility, &c., &c., and which would seriously interfere with the success of an operation undertaken at this stage.

To my mind, therefore, the safest course seems to lie between these two extremes, neither risking a dangerous operation at a stage when the patient's health and comfort are scarcely impaired, nor deferring it till the occurrence of serious complications have rendered it almost hopeless.

In accordance with these views, I simply advised her to avoid everything which would tend to promote the growth of the tumour, or to excite inflammation, and to wait patiently for the proper stage for operation.

August 30th, 1869.—I saw her again to-day, just twenty days after my first examination, and found that the circumference of the abdomen had increased one inch, being now $33\frac{1}{2}$ inches. In other respects the symptoms were unaltered.

July 13th, 1870.—Eleven months from my first visit. No important change has occurred in her condition, except a moderate increase of size. The abdomen now measures $34\frac{1}{2}$ inches at the umbilicus, an increase of six inches in eleven months. Her general health is quite unimpaired, and she is still quite able to attend to her household duties.

May 11th, 1871.—Ten months since last report. Scarcely any change occurred after last report until a few weeks ago, when rather severe pains began to be felt in the left hypochondriac region, particularly after exercise. It was unaccompanied by fever or other inflammatory symptoms, but was sufficiently severe to confine her almost entirely to the sofa, and her health is in consequence beginning to suffer. The growth of the tumour has been remarkably slow during the last ten months, the increase in circumference amounting only to one inch and a half.

As she has now reached that stage when the tumour by its

bulk and pressure is beginning to tell seriously upon her general health, and as the hot summer months are approaching, I have thought it my duty to advise her to submit to the operation without delay.

My friends Drs. G. W. Campbell, Howard, Fenwick and Drake, having seen her with me in consultation, and agreed as to the suitability of the case for operation, and the propriety of operating without further delay, the 31st of May was fixed, with her consent, for the operation.

The Operation, May 31st.—Having taken the usual precaution of administering a dose of castor oil on the previous evening, and the patient having taken a very light and early breakfast, the operation was begun about 1 o'clock P.M., about a dozen of my medical friends from this city and elsewhere being present.

Ether having been administered by my friends Drs. Ross and Roddick, of the General Hospital, and Drs. Campbell and Fenwick kindly acting as my chief assistants, I made an incision about four and a half inches in length in the mesial line, extending from about an inch below the umbilicus, to within an inch and a half of the pubes. The several layers were then rapidly divided upon a director, and the tumour exposed.

No adhesions being found within reach, the patient was turned over almost upon her face at the edge of the table, thus making the projecting tumour the most dependant part, and of course making it impossible for any of the fluid to flow into the abdominal cavity. The cyst was then punctured with a large trocar, and as the fluid escaped, pressure was gently and evenly exerted upon the sides of the abdomen, thus causing the tumour to protude more and more until a slight effort at vomiting caused by the ether, expelled the whole mass, much as a sharp pain sometimes expels a placenta. The tumour was now slit up freely with the scalpel, to get rid of the weighty contents more quickly, and I then proceeded to secure the pedicle. The pedicle was long and thin, and was easily secured by transfixing it with a stout double hempen ligature well carbolized and waxed, and tying it in two portions. The ends of the ligatures having been cut off short and the tumour removed at a distance of about half an inch from the ligatures, the free end of the pedicle was brushed over with concentrated carbolic acid, the excess wiped off with a moist sponge, and the pedicle with its ligatures was dropt into the abdominal cavity.

Having examined the other ovary and found it perfectly healthy, I proceeded at once to close the wound, by passing strong silver sutures through the whole thickness of the abdominal parieties, being careful to include the edges of the peritoneum. A little

oozing of blood occurred at the lower end of the wound, from a superficial vein which crossed the line of incision, and was of necessity divided, but the bleeding had entirely ceased before the last suture was applied. The wound was then dressed with a carbolic lotion (about 1 to 30) and oiled silk, the abdomen covered with a thick layer of cotton wool and a couple of thick compresses, and firmly supported by a flannel roller, and the patient was finally removed to her bed.

The pulse at the close of the operation was exactly 100, and of natural volume and force. There was no pain, nausea, nor uneasiness, and scarcely any thirst. I made my arrangements to remain with her during the afternoon and night to secure perfect quiet, and to be prepared to give prompt attention to any unfavourable symptoms, should any snch arise. The weight of the tumour with its contents was 23 pounds.

June 1st, 10 A.M.—She passed a most comfortable night, and slept a little towards morning. There was some slight reactionary fever in the afternoon and evening, when the pulse rose to 110, but the reaction subsided towards morning, and the pulse fell to 105, at which it still continues. Skin moist, no nausea or pain beyond a little smarting in the wound. She passed about eight ounces of healthy urine at 4 A.M., (15 hours after the operation) without any difficulty. She has had nothing but little bits of ice occasionally since the operation.

4 P.M.—Dr. Roddick who kindly relieved me for a few hours, reports everything going on favourably; pulse 105. She has again passed urine without difficulty, and she has taken a few spoonfuls of beef juice with relish.

June 2nd.—No change worth reporting. Pulse fluctuates from 106 to 110. Skin moist, no thirst, nausea, nor pain. Has passed urine twice during the last 24 hours, and has taken small quantities of beef juice, and bits of ice occasionally. She slept considerably during the night. Dr. Roddick again kindly relieved me at intervals, and has arranged to remain with her to-night.

June 3rd.—All going on well. Has had considerable sleep; pulse 103. Replaced dressing upon wound. There were very slight traces of pus at some points. To have barley water alternately with the beef juice.

June 4th.—Doing well. About a teaspoonful of sanguinolent pus escaped from the lower end of the wound. No rigor nor other unfavourable symptom.

June 5th.—Suppuration at lower end of wound rather more free. There is evidently a small pocket of pus in the subcutaneous cellular tissue, probably caused by a clot of blood, as the pus is

still sanguinolent. In all other respects doing well. To have a saucer of porridge and milk twice a day.

June 6th.—Doing well. Complains of slight colicky pains and flatulency. Prescribed an enema of soap and water.

June 7th.—Bowels slightly moved from enema. Appetite good. Allowed a piece of broiled steak.

June 9th.—Doing remarkably well, sleeps and eats well. Suppuration diminishing; pulse 88.

After this date there was nothing special to report; the sutures were removed from time to time, and the suppuratim soon ceased entirely, while her health soon became entirely re-established, and is now quite as good as it has been for many years.

Remarks.—The points in the above case which seem of sufficient interest to call for special notice, are: 1st. The proper time for operating in chronic cases, namely, after the disease has begun to interfere seriously with health and comfort, and before complications are likely to arise. 2nd. Turning the patient over before puncturing the cyst, so as to prevent the possibility of the fluid finding its way into the abdominal cavity, an accident which can scarcely be avoided in any other way. 3rd. Brushing the stump of the pedicle with at least tolerably strong carbolic acid to prevent decomposition, bearing in mind that it is cut off by the ligature from the circulation, and is therefore more prone to decomposition than it would otherwise be; and lastly, securing the pedicle by means of the carbolized ligature, instead of the clamp. Although aware of the preference of some great ovariotomists for the clamp, I prefer the ligature from the simple fact, that in this city the ligature has been used in all the successful cases, and in every case where the clamp has been used, the case has not done well. Although I am far from attributing the success in the one set of cases to the ligature, or the want of success in the other to the use of the clamp; yet as there seems to be no special objection to the ligature when 'properly applied, and as its prestige is with us' decidedly greater than that of the clamp, I would be loth to change a practice which has hitherto given such good results.

Place d'Armes Hill, September 1st 1871.

CHARCOAL IN BURNS.

A piece of vegetable charcoal laid on a burn at once soothes the pain, says the *Gazette Médicale*, and, if kept applied for an hour, cures it completely.—*Nashville Journal of Medicine and Surgery.*

Vulcanite Plate with three Artificial Teeth, swallowed and retained in the stomach or bowels. Read before the Halifax County Medical Society, June 6th, 1871. By Honble. D. McNeill Parker, M.D., Edin., L.R.C.S.E., Member of the Legislative Council of Nova Scotia, Halifax, N. S.

Mrs. H., a lady's maid, aged 25 years, a pale, thin, and small woman, of delicate constitution, had worn for some length of time, a vulcanized plate containing originally five artificial teeth, which had been manufactured and fitted by a Dentist, in Liverpool, England.

It occupied the front portion of the upper jaw and held teeth, to represent the two incisors and canine of the right superior maxilla, and the second incisor, and first bicuspid of the left bone; both the latter being absent at the date of the accident. The platinum pins (four in number) which had connected the two lost teeth to the plate, projected from its surface.

Absorption of the alveolar process, and an altered condition of the gum had caused the plate which at first fitted well, to become loose, and hence difficult to be kept in position. On rising from bed on the morning of March 3rd, 1870, she sneezed violently, and this was immediately followed by a deep inspiration. The former act displaced the plate from its position, and the latter, (the deep inspiration) drew it instantly into the pharynx, where it was fixed for some little time, beyond the reach of the finger. The contractile action of the pharynx and œsophagus, by degrees forced it downwards, so that on her arrival at my office a few hours after the accident, she felt it near the lower part of the sternum; and before I could use an instrument, she was aware that it had escaped from the œsophagus to the stomach.

I immediately passed a probang, but failed to discover it. She had suffered much from pain and difficult respiration during its descent. The pain continuing in the cardiac extremity of the stomach, an opiate was administered, rest was enjoined, and she was admitted shortly after to the Provincial and City Hospital for treatment. Efforts were there made to discover its locality, but without success. She was put on a diet of farinaceous food, with milk and prunes *ad libitum*. The latter (the prunes) were given with the idea that their outer and less soluble parts would be likely to become entangled in, and firmly connected with the plate and teeth, so as to round off the sharp points, and thus lessen the risk of injury to the canal. She was soon dismissed by the surgeon in charge, relieved from suffering, but with the foreign body still in the stomach, or some other part of the alimentary canal.

Since then she has from time to time, suffered from general

abdominal tenderness and swelling, nausea, vomiting, frequently recurring attacks of diarrhœa, accompanied by inflamed mouth, tongue, and pharynx; (when these latter symptoms have been present, she has always with one exception, tasted throughout the attack, the vulcanite of which the plate was composed,) temporary suppression of urine, loss of voice, pain and numbness in left arm, hand, face, and sometimes of whole left side.

On several occasions she has been faint, powerless and unconscious for some hours. I have never seen her while thus attacked, but from the description of her then condition, given me by others, I may state that her symptoms resemble those of a person suffering from a form of hysteria not unfrequently met with in young females. It is necessary here to add, that she had on more than one occasion been somewhat similarly affected prior to the accident.

The menstrual function has never been interfered with, and I have generally found the heart's action undisturbed.

At times she has been apparently well, and for some weeks after her discharge from hospital, her health was as good as usual; but recently she has failed in strength, and has more frequently suffered from some of the local or reflex symptoms above referred to, and will be obliged to relinquish her situation from physical inability to perform its duties.

REMARKS:

The measurements taken by me of the space occupied by the plate—as defined by the patient—would make its length about three inches, and its breadth fully one inch; but it is probable that the figures given by A. C. Cogswell, Doctor of Dental Surgery of this city, who has written an account of this case in the *Canada Journal of Dental Science* for November, 1870, are more accurate. He states the measurement to be respectively 2 inches, and $\frac{3}{4}$ of an inch. Allowing these figures to be correct, it seems difficult to imagine how a plate of this size, with three teeth attached,—its curve being more acute than usual, in consequence of the formation of the superior maxilla of the woman—could have passed down the canal from the mouth to the stomach.

By a most unhappy circumstance, the deep inspiration which drew the loosened or detached plate into the pharynx, carried it thither, with its long axis directed backwards and downwards; else it never could have entered the narrow superior strait of the canal. Being properly directed by the contractions and propelling power of the stomach, it may have passed through the pylorus; but I think this is not probable. There is not, neither has there

been, any persistent local symptom which would indicate with any degree of certainty its true position.

The efforts made to detect it in the stomach having proved abortive, the idea of snaring or hooking the plate by appliances which had suggested themselves to the surgeons of the hospital, could not be carried out,—hence she still wears the teeth, but in a locality where I fear they will rather retard than assist the process of digestion.

Within the past year a case almost identical with that now under discussion, was recorded in the London *Lancet*, if I mistake not, in which a hospital surgeon, not only discovered the site of the plate, but successfully extracted it by means of an instrument used for the purpose of removing coin or other foreign bodies from the œsophagus. To have hooked or seized such a body, in a large, distant, and dark cavity like the stomach, and to have caused it to enter the œsophagus in its long axis, precisely as desired, was, to say the least, a most happy result, and one that might not be attained again, even by the same operator, in 90 cases out of a 100.

In this connexion I may remark, that a practical difficulty may meet the surgeon seeking to remove such a foreign body as a plate, with teeth attached to it, from the stomach.

He might be able to seize it firmly, and yet fail to get it to enter the œsophagus; and still have further and greater difficulty in detaching the instrument from its hold of the plate or teeth, without doing serious violence to the stomach; and this difficulty might very readily occur where snares of wire or twine are used for such a purpose. Hence the necessity of being guarded in selecting the surgical appliance for such an operation.

The question arises—What will become of this foreign body if it is not passed "per vias naturales?" And a second enquiry very naturally follows the first—What will become of the patient if it remains in the alimentary canal? If I am correctly informed, the material of which it is composed is not likely to be dissolved by the action of gastric juice, or by any of the secretions it may come in contact with, should it pass the pylorus. Dr. Cogswell in the article already referred to, says:—

"I felt desirous to know what mineral acids would dissolve vulcanite rubber, hence I experimented with the various muriatic, sulphuric, and nitric acids, found the two former had no effect upon the piece placed in it, but by applying nitric acid and chloroform, after 24 hours the piece had become quite like a sponge in softness, could easily express the colouring material from it, and in drying it could be rubbed up like powder between the fingers."

If these strong mineral acids have failed to dissolve, or chemically change the material of which vulcanite is composed, I think we may safely conclude that the secretions of the digestive organs will hardly be able to accomplish it, and that the plate in question will, if not passed "per rectum," long continue in the canal without material alteration.

In reply to the second question—What will become of the woman should the foreign body continue in the canal? No certain statement can be given; but bearing in mind the history of recorded cases, somewhat analogous in their general features to that now under consideration, it may be remarked that it is possible, and even probable, that this vulcanite plate and teeth may be retained for years without destroying life, or even producing very alarming symptoms. On the other hand, grave symptoms may unexpectedly present themselves; the patient's life may be placed in jeopardy; or death may suddenly occur from inflammation, from ulceration, and perforation, or from its becoming impacted and obstructing the canal.

Dreading these not improbable contingencies, I objected to her being sent across the Atlantic to her friends in England, shortly after the accident occurred, on the ground that sea sickness, if troublesome and violent, would be likely to produce irritation and perhaps fatal consequences.

The practical lessons to be learned from this care, are:

1st. That badly fitting plates holding artificial teeth are unsafe, and should not be worn--especially at night.

2nd. That much larger bodies than we would suppose, may find their way (accidentally or otherwise) into the stomach.

3rd. That when received there, even large and irregularly shaped bodies, may—and often do—remain for a length of time without producing alarming symptoms.

September 14th, 1871.

I heard from this woman about the first of the present month, at which time she was a resident in the State of Rhode Island. She still *wears* the plate in the alimentary canal, and says that her health is quite as good as it was prior to the accident.

Femoral Aneurism successfully treated by Digital Compression. Reported by A. P. Reid, M.D., Professor of Practice of Medicine, Dalhousie College and University, Halifax, N.S.

August 22nd, 1871.—Was called in consultation with Dr. Almon, to see Mr. D. F. S., tobacconist, aged 29, who had a pulsating tumour about the size of a hen's egg, situated six inches below

Poupart's ligament on the right femoral. About a week previous had consulted Dr. R. Craik, of Montreal, who suggested the treatment by digital compression, but circumstances required the patient's immediate leaving for Halifax.

Being a case in every way favourable for treatment by "compression," this was decided on, as it had been successful in a less favourable case in this city a little over a year ago.

August 23rd, 11 A.M.—Treatment commenced. A sufficient relay of assistants being secured, who were easily taught how to apply the compression with the thumb, just below Poupart's ligament. This was kept up unremittingly until the 26th, at 7 A.M., when the pulsation in the tumour stopped suddenly, on the accession of a paroxysm of pain, which caused the patient to jump out of bed with a loud scream.

The duration of the treatment was 68 hours, and there has not been the slightest impulse in the tumour since (4 weeks). As a precautionary means, compression with a 7lb. weight, resting by means of a pad along the course of the vessel, was kept up for 24 hours longer, as it produced little or no inconvenience. On the 29th, the patient went out in a waggon to see the races; has been well and attending to his business since. The tumour is gradually diminishing in size, and the femoral pulsating up to its edge. The strength of the limb is improving all the time, but he complains of a numbness in it, and that it is easily fatigued. The temperature is normal.

Remarks.—For the first 24 hours of the treatment, he was very restless under the pressure, which was relieved by gr. i of opium every two hours—afterwards it was better borne—he had snatches of sleep every night. Compression was tried by means of various instruments, but it could not be borne but for a few minutes. It required a weight equal to 25lbs. to prevent the impulse from being conveyed to the tumour, and this could only be borne through the thumb of an attendant. The relays had to be changed every 10 or 15 minutes. After the first 24 hours the tumour was painful on pressure and a little hardened, but the impulse continued on removal of the pressure up to the time it so suddenly ceased. The temperature of the limb was not interfered with during the whole time, and it received no treatment.

The patient could assign no cause for the Aneurism; the first intimation he had, being the discovery of a beating tumour a few days before he called for medical aid.

Halifax, N.S., September 19th, 1871.

Hospital Reports.

Montreal General Hospital.—Cases in Medicine and Surgery under the care of Dr. D. C. MacCallum.

CASE 1—CARCINOMA MAMMÆ. REMOVAL BY EXCISION.

(Reported by Mr. W. Osler.)

C. S., aged 47, was admitted into Hospital on the 1st of July, under the care of Dr. MacCallum. The tumour was situated in the left mamma, to the inner side of the nipple, where it was felt as a hard circumscribed mass about the side of an egg. The disease appeared limited to the gland structure, the skin and subjacent parts being unaffected. On questioning her as to its origin and progress, she stated: that she noticed it first, about four years ago, as a small round lump, the size of a bean. There was no pain in it and she forgot about it for three months, when her attention was drawn to it again by the pain which it caused. She then perceived that it had increased somewhat in size. From that time until a few months ago its growth has been slow and the pain, especially at night, caused much uneasiness. Lately its growth has been much more rapid and the pain increasing in severity. These circumstances exciting her fears, caused her to consent to its removal.

Having been placed under the influence of chloroform, Dr. MacCallum proceeded to excise the tumour, by means of two elliptical incisions about six inches in length, and inclosing the nipple, the direction of the incisions being downwards and inwards. The whole gland was removed, exposing the fascia of the Pectoralis major. There was but little bleeding, a few small vessels requiring torsion. The edges of the wound were brought together by means of wire sutures, and carbolic acid dressings applied.

General and Minute Structure.

On removal it was found to be an irregular, hard mass covered with fat, connective tissue, &c. On section a distinctly creaky feel was communicated to the knife, and a large quantity of dark turbid matter,—cancerpus—exuded. This was contained principally in numerous small cysts, scattered through the structure. The cut surface was of a greyish white colour, intersected with numerous irregular bands of firm connective tissue. The microscopical structure agreed in the main with that of schirrus, the cells were however much broken down, especially those of the cysts, and the arrangement of the stroma and contained cells presented a greater irregularity than is common.

4th.—Complains of slight pain in the part, but feels pretty easy. Pulse 96.

5th.—Slept very well, no pain, but has been troubled with vomiting. Ordered, Spt. Chlorof. ʒii. Tinct. Cardam Co. ʒvi, Aquæ ad ℥vi., a tablespoonful to be taken every third hour. Pulse 126, Temp. 102.

6th.—Passed a tolerable night, complains of headache. The bandages were removed for the first time. An erysipelatous redness exists about the part, extending as far as the arm. The edges of the wound have united firmly, preventing the matter (which was discovered by fluctuation) from escaping. To relieve this two stitches were removed, and a considerable amount of pus came away. Ordered P. Quiniæ Sulph. gr. i Tinct. Ferri Mur. gtt. x, every four hours and lead lotion to be applied to the breast. Pulse 112.

7th.—Had an uneasy night. Breast very painful. Erysipelas not diminishing. Discharging freely.

8th.—About the same. Redness appears diminishing.

9th.—Had a good night and feels much better. Appetite pretty good.

10th.—Not as well, bad night, much heat and redness about the wound, and the discharges continue free.

11th.—Slept better than usual. A small slough is forming where the stitches were removed. Redness still present.

12th.—Stitches all taken out. The wound has united completely, with the exception of the spot where the slough has formed.

14th.—Discharge more profuse to-day. Erysipelas disappearing.

16th.—Is improving fast. Heat and redness not nearly as intense.

18th.—Erysipelas altogether gone, but complains of pains shorting down the arms.

19th.—Got up for the first time. Discharges diminishing.

20th.—Not nearly as well, very feverish. As the pus appears to collect in a pocket some distance, from the orifice of exit, a drainage tube was put in to enable it to escape. Ordered the Quinine and Iron mixture again.

22nd.—Better. Fever has disappeared. Discharges very free.

24th.—The discharges still persist, and a good deal of hardness exists about the inner margin of the wound.

28th.—Not much change, discharge still continues, but seems to come entirely from a sac that has formed at the inner extremity of the wound.

1st.—The discharge has sensibly diminished and the spot where the slough came away is granulating nicely.

6th.—The healing process appears very slow, but the discharge has almost ceased.

12th.—Only a small surface remains unhealed. The discharge has ceased entirely, but a slight induration exists.

18th.—Discharged cured.

CASE 2.—LUPUS EXEDENS OF THE NOSE.

(Reported by Mr. Geo. A. Starke.)

A. McD., 29 years of age, was admitted into the Montreal General Hospital, June 28th. 1871, under care of Dr. Reddy, who was succeeded by Dr. MacCallum. He is about 5 feet 9 inches in height, and comparatively speaking, a well built and healthy looking man, of fair complexion. He has a high forehead; light brown eyes, high cheek bones, florid cheeks and light brown hair.

He says about three months ago, while at Ottawa, he experienced a feeling of lightness, &c., about the head, and his nose had an injected or reddish looking appearance. He also thought that it was somewhat swollen at the tip. At the same time he was troubled with a discharge from the nose; which was of a thick consistency; tenacious and somewhat dark coloured. His nose felt itchy.

He did not feel anxious about it in any way as he thought it was merely the result of a cold, and would soon pass away. However, it did not leave him; and about a month ago, he noticed a little spot appear externally—of a somewhat greenish colour, just where the integument covering the ala of the left side of the nose becomes continuous with that covering the face. It did not encroach upon or extend to the skin of the face, but was entirely confined to that of the left ala. He also states that his nose first felt sore internally, and he attributed the spot on the outside to the irritation caused by the habit of picking his nose. The spot felt sore, itchy, and annoyed him a good deal, his nose still presenting the reddish and congested look.

He applied for advice and was given a bottle containing a liquid, which was to be used as an injection three times a day. This not proving efficacious, he next tried, as he says, a pot of the salve known as the "Poor Man's Friend," and applied it to the part, but to no purpose.

He then came to the M. G. H., on the 28th June, 1871.

Present condition :—

The external spot has extended its boundaries, and spread so as to involve nearly the whole of the inferior and terminal part of the

left ala. The mucous membrane is also involved. Is somewhat sensitive to the touch, but not markedly so. His nose presents a reddish look and seems slightly swollen. The redness presents a slight violet tinge. The mucous membrane seems to have been first affected. I also noticed a number of dusky red lines which seemed to be small vessels in a conjested state running from the surrounding integument to the spot where the disease is seated. The sore has the appearance of elevations or tubercles covered with crusts or scabs of a somewhat greyish colour.

Dr. Reddy ordered a poultice to be applied.

July 1st.—The crusts being removed, the sore underneath, which presented soft tuberculous looking eminences, was well exposed. The patient was then put under the influence of chloroform and a solid stick of chloride of zinc thoroughly applied by Dr. MacCallum to the external tubercles and to those within the nose, after which they were carefully covered with teased lint, so as to form a complete covering for the diseased part; and in the event of much pain resulting from the application, was ordered Pulv. Opii gr. I, to be repeated if necessary. He was also ordered the following :—

R. Liq. Arsenicalis gtt. LXXII.
Aquæ ℥ VI.

Take a tablespoonful three times a day.

July 6th.—Slight headache; tongue slightly coated except at the tip and edges; did not sleep well last night. Felt well otherwise.

July 7th.—Feels comfortable; a slight discharge from the left nostrils. Medicine agreeing well with him.

July 8th and 9th.—Inflamed appearance subsiding; doing well;

July 10th to 14th.—Doing well; redness almost none on the 13th. Is in good spirits. Medicine agreeing well with him. The covering taken off and dressed with simple dressing and covered with lint.

July 15th.—Looks well; lint smeared with simple cerate is put up the left nostril and an ointment composed of the following; viz :

R. Hyd. Amm.chlor : ℥I.
Ungt Simpleicis : ℥i.

To be thoroughly mixed and applied to the part externally, He says considerable discharge escaped from the left nostril to-day. The disease seems completely subdued—merely a small elongated crust is seen along the centre of the anterior margin of the left ala, at the junction of the skin with the mucous membrane. Redness gone and looking well.

July 15th to 21st.—Doing well, carefully dressed every day with the above—does not require a second application of Zinc Chlorid.

July 22nd.—Discharged quite well.

CASE 3.—JACOB'S ULCER OF THE EYELID,

(Rodent Ulcer,) Removed by Excision, and the portion of Eyelid affected restored by Plastic Operation.

(Reported by Mr. Geo. A. Starke.)

J. L., 48 years of age, Canadian, was admitted into the Montreal General Hospital, July 13th, 1871, under the care of Dr. MacCallum.

The patient states the disease showed itself first about 12 years ago, appearing like a little pimple about the size of the head of a common pin. It felt somewhat hard. It often broke and then crusted over again. It felt sore and ached a good deal. When it was about to rupture there was a sort of lancinating, stabbing or pricking pain felt in it. Had no pain in the eye or head. The period of this breaking was also indicated by the red appearance which it presented and its hardness, and at these times it discharged a sanious looking fluid. It often bled of itself as well as when touched. She felt well every other way. It first appeared about $\frac{1}{2}$ or $\frac{3}{4}$ of an inch below the outer canthus on the lower eyelid. She applied to several medical men, &c., for advice : Salves, caustics, &c., were recommended and tried, but to no purpose. It grew very gradually, bled frequently, and annoyed her a good deal. The pain was lancinating, or as she calls it "pricking." It grew half of its present size during the last two months.

When she was admitted into Hospital, the diseased part measured either way diagonally one inch and a quarter, and about an inch in diameter, measuring from any two of its opposite sides. Its outer side measured one inch and a quarter, inner three-fourths of inch, lower an inch, and upper side one inch. It is oblong in shape ; except that its external superior angle projects upwards past the outer canthus, and involves a small portion of the upper lid in that situation. The upper side is marked by the margin of the lower lid, with the exception of the projecting angle just mentioned. Its inner side is about one inch from the side of the nose. It occupies that portion of the face, immediately below the outer half of the lower lid, and extending outward a little beyond the outer canthus, corresponding to the measurements given above. It is directed somewhat obliquely from above downward and outward. The margins

of the ulcer are well defined, and elevated above the level of the surrounding parts (especially the outer and lower) into hardened portions presenting a tuberculated appearance. The centre which probably at one time was similar in appearance, is now somewhat depressed and covered with a dark bloody looking encrustation like dried blood, which if touched bleeds freely and easily. It does not seem very sensitive to the touch, but feels hard. It seems to involve only the skin, having formed no attachments to the subjacent textures; is quite moveable. She complains of nothing else, and is a strong and hale looking woman of a swarthy complexion. She was put on milk diet, &c., no medicine.

July 15th.—The patient being placed under the influence of chloroform, an incision was made, beginning well in the healthy textures, commencing a little internally to the middle of the lower lid, cutting through the tissues comprising the lid, it was then carried through the parts not involved by the disease—so as to secure the removal of the affected parts—until it was carried to a point which corresponded to the centre of the lower margin of the ulcer, and about an inch below it. A similar incision was made to meet this at an acute angle from the outerside, beginning above, ending below. The portion of the upper lid involved was then detached from the healthy parts, and the triangular portion—containing the ulcer—which lay between these incisions was carefully dissected off. The first incision was two inches in length, the second a little longer. The cut edge of the upper lid was next stitched to that portion of the integument opposite and external to it, being the upper part of the incision, which was carried external to the ulcer. This done, a horizontal incision was carried outward on a line with the outer canthus, extending from the outer incision just named above about two inches and a quarter.

Lastly, this last cut was made to form the upper boundary of a triangular portion of integument, by carrying an incision from its outer extremity so as to meet, if carried far enough, the lower extremity of the second incision made. This latter was not done, but simply carried so far as to leave the space of about half an inch between them, to serve as a base for the flap and also to nourish it. This flap was then dissected off and turned into the place of the portion removed with the ulcer. It was retained in situ by interrupted wire sutures, and the edges of the two last incisions made, were brought together as closely as possible with wire sutures also. Thus only a small extent of bare surface was left to granulate. The length of the first of these last two incisions was two inches and a quarter; of the last, two inches and a half.

The sections of the growth, on microscopical examination, presented some analogy to the epithelial cancer, consisting of flattened layers of cells above, deeper down smaller and less matured ones; while towards the base, connective tissue interwoven with cells, and elastic fibres made up the growth. Towards the centre the growth was more cellular.

July 15th, night after operation.—Pulse 100, nausea and vomiting, the effect of the chloroform. Cold dressing to the part, and bandage to keep the dressing in situ.

July 16th.—Pulse 92, doing well, upper lid slightly swollen, flap looking well.

July 17th and 18th.—Progressing favourably. Pulse 84 and 80 respectively, parts almost healed, feels wonderfully pleased with the result of the operation.

July 19th, 20th and 21st.—All the stitches removed, doing well. Pulse 80.

It is unnecessary to enter into any further details concerning the progress of healing. Suffice it to say that the result was all that could be desired, and she was discharged on July 31st, the wound having healed perfectly. The incisions in part could scarcely be noticed, the repair having been so thoroughly accomplished. I may further state, that in winking and closing the lids the flap partook of the movement, much the same as the old part did, which was a source of great satisfaction to the patient.

CASE 4.—FISSURE OF ANUS.

(Reported by Mr. W. Osler.)

M. B., aged 21, a delicate looking girl, was admitted into Hospital under the care of Dr. MacCallum, on July 1st, with a fissure or rather an ulcer, situated at the side of the anus. It was of a triangular form, half an inch in length, one-eighth of an inch in breadth, being partly within and partly without the bowel. On inquiry into her history it was ascertained that she had been the subject of piles for over a year, and latterly since the fissure occurred, has had shooting pains in the loins and limbs. Ordered a dose of castor oil.

July 2nd.—The bowels having been freely opened by the oil, chloroform was administered, and Dr. MacCallum proceeded to operate by making an incision through the fissure down to the sphincter and extending beyond the margins of the sore. The wound was dressed with lint and simple ointment, and a dose of opuim ordered.

July 3rd.—Had an uneasy night, but the pain and intolerable itching has subsided a little.

July 4th.—Much better, had an easy night, very little pain in it, ordered a dose of castor oil.

July 5th.—Quite easy, had a motion without much distress.

July 6th.—Keeps improving, cut surface is granulating.

July 8th.—Complains of a little pain in it, got up for the first time.

July 10th.—The edges of the wound are cicatrizing freely, the granulations over the rest appear healthy.

July 12th.—Motions now cause little or no pain.

July 14th.—The granulations in the centre were too exuberant, and were treated with nitrate of silver freely.

July 17th.—Only a small surface remains which is rapidly cicatrizing.

July 19th.—Surface completely healed over, no pains in the part.

July 20th.—Discharged from hospital cured.

CASE 5.—ANGINA LUDOVICI.

(Reported by Mr. W. Osler.)

G. B., at 26 was admitted into hospital with the above named disorder, on the 11th of July, under the care of Dr. MacCallum. He stated that for about a fortnight, he has been suffering from a severe cold in the head; and about a week ago, felt at the outer side of the body of the lower jaw a hard painful swelling of small size. It remained stationary for a few days, and then began to extend upwards over the parotid, downwards over the sub-maxillary region, extending nearly as far as the clavicle and backwards, to some extent over the sterno—cleido mastoid muscle. It is very red, firm, and hard, and deglutition is very much interfered with. It has not involved the base of the mouth or tongue to any extent, as speaking is not at all difficult. The constitutional disturbance is very slight, pulse not much accelerated, tongue is coated, and appetite is diminished. Linseed poultices were ordered to be applied to the part.

July 12th.—Not much change, very red and painful, and seems to be extending. Looks as if it were going to point about the angle of the jaw.

July 13th.—Deglutition exceedingly painful, had a bad night, very little sleep.

July 14th.—Distinct fluctuation having been discovered, an opening was made over the angle of the jaw, when about an ounce of thick pus came away which gave him great relief.

July 15th.—Much better, slept well, can swallow without much

pain, all heat and redness have disappeared, but the parts are very much indurated.

July 16th.—Continues to improve. The brawny hardness still remains.

July 18th.—Face reduced to natural size. The induration is confined now to a patch over the side of the lower jaw, quite well otherwise.

July 20th.—Discharged from hospital cured.

CASE 6.—SUPPURATIVE NEPHRITIS.

(Reported by Mr. W. Osler.)

G. C., a discharged soldier, was admitted into Hospital on the 10th of July, under the care of Dr. MacCallum, with general anasarca. Enquiry into his privous history elicited the following facts, viz: that he had been a soldier twenty years, nine of which were spent in India, where he had secondary Syphilis; his general health has always been very good and he has never suffered from any serious disease; has been a steady but not a hard drinker, and has had a gleet for several years. Cannot account for the present attack, did not catch cold, but felt unwell for several weeks before it came on. Exactly a month previous to his admission, the severe symptoms came on suddenly one night with pain in the back, across the lumbar region, and at the lower part of the belly. There was no vomiting or any head symptoms. The pain was very severe, quite preventing sleep. Micturition was hourly, very little being passed at a time, and that of a dark colour. These symptoms continued for a few days, accompanied with fever, when he noticed an enlargement of abdomen, and about the same time a puffiness of the eyelids in the morning, and soon the scrotum began to swell also. In the meanwhile the pain had abated some what, but the constant nocturnal micturition worried him greatly. About ten days from the commencement of the attack the feet and ankles began to swell, and have, with the belly, gone on increasing in size ever since, until now the tension is considerable in both; there being considerable pain in the abdomen especially after eating. The scrotum did not enlarge to any extent, and is now almost normal in size. He has had a slight hacking cough since the attack, and what little sleep he gets, is disturbed by frightful dreams. His general health on admission was very good, though he has a blanched anæmic appearance appetite is excellent, skin dry and cool, and for the last few days he has had a diarrhœa.

July 10th.—Pulse 76 quantity of urine 30 ozs. deposits a sediment of 4 ozs. of a white colour and not glairy, reaction alkaline, sp gravity

1014. Examination of the deposit showed it to consist of nothing but pus corpuscles, exhibiting well the amyloid movements, no traces of renal epithelum or casts. Ordered Quniæ. Sulph. gr. i. Tnct. Ferri. gtt. xv, every four hours and a diet of eggs, mutton-chop, milk and beef-steak.

July 11th.—Feels much better, did not get up as frequently in the night. Abdomen and legs less swollen, ate a good break-fast without the usual pain accompanying it, eyes very puffy, cough not as frequent, diarrhœa continues, urine 48 ozs. with 6 ozs. of sediment of a viscid character; examined again for traces of renal structures with negative results.

July 12th.—Did not sleep so well, disturbed by frightful dreams. Not up as often. Perspired profusely towards, morning; urine 69 ozs. muco-purulent, sediment less.

July 13th.—Slept well, was not up at all through the night. Pains in the abdomen almost gone, anasarca steadily diminishing. Urine ozlx sp. gr. 1015.

July 14th.—Slept pretty well, bad dreams again and was up several times. Has a slight headache, the first since admission. Bowels not quite as free, only twice to day. Urine 95 ozs.; That passed through the night dark in colour, that in the morning quite light and straw coloured. Purulent sediment seems about the same in quantity but is quite changed into a glairy mass a few hours after micturition. The pus corpuscles are much more broken up than formerly. Still no traces of casts.

July 15th.—Abdomen and legs have been steadily decreasing in size and are now almost the natural size. Urine 110 ozs. that of the night dark, the morning pale.

July 16th.—Improving rapidly, his excellent appetite continues. Urine less in quantity 70 ozs. keeping the same distinction between the morning and night.

July 17th.—Still troubled with the nocturnal micturition. Complains of weakness and is not so well to day. Cough and diarrhœa have stopped entirely, urine 80 ozs., and comparatively much less sediment.

July 18th.—Urine 75 ozs., of a much better colour. Got up to day for three or four hours and feels all the better for it, abdomen and legs quite normal in size.

July 19th.—Much better, up all day and is gaining in strength rapidly. Urine 60 ozs., purulent deposit still continues but is diminishing. Examinations still continue to give the same results.

July 20th.—Urine considerably diminished in quantity only 40 ozs. passed. Remains up all day, says he feels quite well and is regaining his colour.

July 21st.—Urine 45 ozs., much less purulent deposit, troubled still with the getting up at night.

July 22nd.—Urine 50 ozs. sp. gr. 1016. General appearance much improved. Works about the wards most of the day.

July 23rd.—Urine 40 ozs. Pus still in some quantity. Has discontinued the Quinine and Iron.

July 24th.—Urine 42 ozs. only passes it four or five times a day complains of nothing and is apparently well.

July 25th.—Urine 50 ozs. sediment very much less, was up several times through the night.

July 26th.—Urine 52 ozs. with very little deposit.

July 27th.—General health excellent. Urine 48 ozs.

July 28th.—Wants to go out, urine quite normal in quantity and the deposit is now trifling.

July 30th.—Keeps well, Micturates only about five times a day, sediment very slight.

August 2nd.—No change for the worse. Continued to gain strength and improve generally until the 10th when he was, discharged apparently cured.

CASE 7.—ACUTE OTITIS.

(Reported by Mr. Wm. R. Nicol.)

August 24.—T. Stewart, aged 19 years, admitted into the Montreal General Hospital, August 24th, under charge of Dr. MacCallum, complained of great pain in and around the ear, great heat and fullness of all parts, and on pressure, the parts corresponding to the tragus and ante-tragus. It first commenced on the morning of the 21st of August, with violent headache, followed by intense acute gradually increasing pain in the ear, and loud or beating noises. Afterwards a sense of burning or distension was experienced in the ear, eyes became injected, countenance anxious, skin hot, pulse frequent, disorder of the bowels and pain continues unabating up to the present date. Pulse 100; Resp. 20; tongue furred, breath foul, bowels constipated.

August 25th.—Pulse 105; Resp. 20. Visited by Dr. MacCallum to-day, found acute inflammation of the Tympanum, lining membrane of meatus swollen, dry, and pinkish, and exceedingly painful on examination, also corresponding side of phanyugeal passage over end of eustarhin tube, exceedingly sensitive to touch.

Ordered—R. Hyds. chl. Mittiis gr. IV followed by a black draught.

Locally—Linseed meal poultices, glycerine and opum to be dropped into the ear.

August 26th.—Pulse 80; Resp. 20. Pain not so severe nor so radiating. There is a slight discharge from the meatus auditrius externis, which is very offensive. Tongue covered with a creamy fur, breath exceedingly offensive. Had four stools.

Ordered—R. Tinct Aconite (Fleming), gtt xvi Lisq. Ammon. Acetatis ℥ii; Aquæ ℥viii one tablespoonful every 4 hours.

August 27th.—Pulse 80; Resp. 19. Pain still continuing to abate, tongue furred, breath foul, had one stool.

August 28th.—Pulse 64; Resp. 18. Slept well last night, slight discharge yet, which is very offensive. Hears much better with affected ear.

August 29th.—Pulse 95; Resp. 26. Tongue clearing.

August 30th.—Pulse 96; Resp. 24. Marked improvement.

August 31st.—Pulse 96; Resp. 24. Very little pains now.

September 1st.—Pulse 96; Resp. 24. All right.

September 2nd.—Discharged.

CASE 8.—MITRAL REGURGITANT DISEASE OF HEART--WITH TRICUSPID REGURGITATION.

ANASARCA—ASCITES—BRONCHITIS.

(*Reported by Mr. Hamilton Allan.*)

Mary L., a widow, aged 49, mother of two children, the younger 11 years old, was admitted into the Montreal General Hospital, July 25th, 1871, suffering from heart disease.

Her history was as follows:—About fourteen years ago she had an attack of Acute Rheumatism. Till last August her health had been tolerably good. About that time, while living in the United States, in the capacity of servant, and doing very hard work, she became subject to distressing palpitation of the heart with frequent attacks of hemoptysis. She soon afterwards removed to Montreal, and has been twice since a patient in the General Hospital, suffering from disease of the heart.

Her condition when admitted: Countenance anxious, lips livid, complexion sallow, great difficulty of breathing, amounting to orthopnœa, being unable to lie down, but compelled to sit up in bed supported by pillows. The lower extremities œdematous from the knees downwards, abdomen distended from ascites, veins of the neck greatly distended, and there is pulsation of the jugulars. A short frequent cough with severe headache. The area of cardiac dullness was increased. On auscultation a well-

marked systolic bruit was heard over the left apex. It was less distinct over the right apex, and diminished in intensity towards the base of the heart. This murmur was transmitted towards and heard at inferior angle of the left scapula. The action of the heart tumultuous, the pulmonic second sound intensified. Dry bronchitic râles heard extensively over both lungs. Pulse small, feeble, 100 and intermittent, breathing very quick, temperature 99°. The urine had a specific gravity of 1·020 acid, and contained no albumen.

The patient was ordered—

Potass. Acetatis ʒii
Sp. Eth. Nitr. ʒss
Infuss. Digitalis ad ʒvi

Sig.—A tablespoonful to be taken three times a day.

It would occupy too much space to give the condition of the patient from day to day, during the time she was in hospital; suffice it to say that under the above treatment all her symptoms rapidly improved. In about a week she was able to lie down in bed, her breathing was easy, the swelling of her feet and legs had entirely disappeared, her headache was less, pulse improved but still irregular, and temperature normal. In about twelve days she was able to go about, the bruit was still heard having the same characters, but the veins of the neck were no longer prominent, her breathing not short, except on exertion, her cough occasionally troublesome, pulse stronger and more regular. On the 18th of August she left the hospital, all the symptoms of mitral regurgitation having disappeared with the exception of the murmur which was still heard over the left apex.

CASE 9.—PLEURO-PNEUMONIA WITH DELIRIUM TREMENS. DEATH. AUTOPSY.

(Reported by Mr. W. Osler.)

Edward C, aged 49, was brought to the hospital on the 15th of July, in a state of extreme prostration, and suffering apparently from the effects of a prolonged drinking bout. He was recognized as an old toper who had previously been in hospital with Syphillis. His breathing was very short, pulse 120, short dry cough, and a pinched haggard look about the face. He had also a bad diarrhœa. Through the night he was very noisy, did not sleep, and the first symptoms of delirium tremens appeared.

July 16th.—Not much better, pulse 128, respiration 36, temp. 102. He continued delirious all day, and at times was so violent,

that it was found necessary to tie his hands down. The usual hallucinations and phantoms peculiar to this disease were present in full force. A thorough examination of the chest was quite impracticable from his restleness and constant chattering, but crepitation was heard over both lungs in front, and a loud friction murmur in the mammary region of the left side. Evening—Pulse 124, respiration 32, temperature 102½. He was ordered stimulants, nourishing diet.

July 17th.—Passed a very bad night, and in the morning was very weak. Pulse 132, temperature 102½, respiration 36. Delirium is less noisy, incessant grinding of the teeth came on and continued through the day. The diarrhœa is still very bad. In the evening he became more delirious, and was given grs. XL of chloral, under the influence of which he slept some time.

July 18th.—Exceedingly weak, and appears sinking rapidly, delirium of low and muttering kind, breathing very short, pulse small and almost beyond counting, and he died comatose at 10.30 in the evening.

Sectio Cadaveris.—Body ill nourished, emaciated, features pinched, and the whole body covered with the scratched bites of the pediculus corporis. Numerous cicatrices existed on the shins and about the prepuce, shewing the situation of the old syphillitic sores.

Pleuræ.—On opening the thorax, recent adhesions, easily torn, were found on the left side, extending along the anterior and lateral portions of the lung. 80 ozs. of clear serous fluid was taken from the left pleural sac, neither adhesions nor fluid occurred on the right side.

Lungs.—Left weight 44 ozs. The leaflet which covers the heart was in this case almost separated by a deep fissure from the rest of the lung, forming a separate lobe. This, together with the major part of the upper lobe, was in a state of purulent infiltration. It was firm to the touch, sank readily in water, and entirely airless. When cut, the section presented a grayish granular appearance, was friable, and on pressure much pus exuded. Microscopical examination of these sections showed the air vesicles completely filled with pus cells, together with much free pus on the slide, and small aggregated masses which looked like casts of the air cells. The lower lobe of this lung was at its upper part red in colour, very firm, airless, and sank in water (red hepatization). The remainder of the lobe was very congested, much viscid, frothy serum of a reddish colour bathing the cut surface, extensive pleuritic effusions covered this lung in front and behind. *Right lung*—Weight 31 ozs., intensely hyperæmic posteriorly, and on section

several spots darker in colour than the surrounding textures and isolated, looked not unlike apoplexy. At the apex there was considerable puckering, and red hepatization extended for some distance down the lobe.

Brain.—On removing the calvarium, the dura mater was seen elevated with effusion, which amounted to 3 ozs. Large clots filled up the longitudinal and transverse sinuses. Surface of the organ anæmic; veins of the pia mater not full. Convolutions seemed in places flattened, and the sulci very shallow. The consistence was good throughout. Puncta vasculosa were scarcely observable. Choroid plexuses pale, and in many places had undergone the hydatidiform degeneration. Only a slight amount of fluid in the ventricles.

Heart.—Weight 11 ozs., with contained clots 16 ozs. All the chambers filled with decolourized clots, some of them strongly interwoven with the valves and chordæ tendinæ. The mitral and tricuspid valves were quite healthy, but the aortic semilunar presented thickened bases, and in one a calcareous plate. The examination of the heart fibre showed it fatty, but not to an extreme degree. The chordæ tendinæ were also fatty. Patches of atheroma covered the ascending aorta and arch.

Spleen.—Weight 4 ozs. firm on section, rather pale, capsule thick.

Liver.—Weight 6lbs. 4oz., firm, shining and of a bright red colour. Hepatic system congested. A curious fissure about four or five inches in length, extended through the right lobe, from about the middle of its upper surface, to the lower margin of the posterior border. Examination of the liver substance showed to be in an advanced state of fatty degeneration, the oil globules predominating over the liver cells. With reference to the fissure above described, it may be stated that these have been referred by some, to destruction of the parenchyma of the liver by syphillitic hepatitis, the substance being replaced by connective tissue; and although in the present instance, the patient had suffered from constitutional syphillis, and the bottom of the sulcus was filled up with condensed fibrous tissue, yet the absence of syphillitic induration or gummata in other organs, as well as the rounded natural appearance of the walls of the fissure, would lead one to suppose that it was congenital.

Kidneys.—Left $8\frac{1}{2}$ ozs. Right $7\frac{1}{2}$ ozs.. The capsules tore off readily, no cysts in either kidney. Medullary portion congested, cortical pale. The renal epithelium was degenerating in many places especially at the cortex, and was slightly fatty. The malpigian bodies appeared normal. The left kidney presented upon

one side, a lesion both interesting and rare, viz.: a spot of hæmorrhagic infarction. It showed externally as a firm white elevation, round, and about half an inch in diameter. On section it presented the usual triangular form, the base directed outwards; the apex inwards towards the hilus. The spot measures about three-quarters of an inch in diameter, and half an inch in depth, surrounded by a dense white capsule, varying in thickness from 3-5 lines. There was no zone of blood vessels about the spot, but the tissues of the kidney abutted directly on it. The cavity was filled with softened material and disintegrating blood clots. Examination of the wall and contents of the cyst proved of interest: the former, from its firm feel and bright white aspect, was thought to be of fibrous structure, but it turned out to be of a cellular nature; in fact, it seems nothing more than the normal textures of the part, condensed, interspersed with fibrous tissue and undergoing fatty degeneration. The contents were made up partly of renal structures, tubuli uriniferi, malpigian bodies, &c., and partly of blood clots, together with numbers of small oval laminated bodies, varying much in size, some irregular in outline, but all agreeing in having a central spot surrounded by concentric laminæ. Some of these were imbedded in the wall of the cyst, and were then encapsulated with fibrous tissue, but in the cavity they were scattered among the disintegrating contents. The exact similarity of these bodies to those figured as corpora amylacia, led at once to the supposition that they were of like nature; but the usual tests for these bodies gave negative results, while the application of sulphuric acid caused rapid effervescence. This proved them to be of mineral origin, and they doubtless come under the same category as "brain sand," the concentric bodies of the prostrate, &c., whose true relation to the corpora amylacia of organic origin is still undermined.

PERISCOPIC DEPARTMENT.

Surgery.

EXCISION OF ELBOW AND KNEE JOINTS.

By John Elliott, A.M., M.B., Waterford.

In June, 1869, I excised the elbow of a young woman, (Mary Costello,) aged 18, who for more than two years had been labouring under strumous disease of the joint which was laid open by

abscess, with abscesses also extending up the humerus. Very high inflammatory action followed the operation, so that I thought it right to keep the parts irrigated for a fortnight or longer by cotton wick leading from a reservoir. Two sinuses leading down to uncovered bone followed, and did not close till twelve months had elapsed.

As the limbs now hang by the side, the humerus forms with the forearm an angle of 123°, but the parts can be flexed on each other through an arc of 31°. Pronation and supination are perfect, and there is complete use of the wrist, thumb, and fingers, in fact of the whole hand. So the limb is still a very useful one, and much more serviceable than an artificial substitute would be.

Margaret Power, aged about 30, and for some years subject to previous rheumatic attacks, began about five years since to suffer from pain in the left knee, which gradually became so severe and continuous as to give her little respite by day or by night, and finally was attended with permanent flexion and rigidity of the joint, aggravated by frequent painful startings.

As she had undergone a variety of treatment both local and constitutional without relief, and her health, strength and spirits were giving way under constant suffering, I was inclined either to amputate above the knee or to excise it in the spring of 1870. Some doubt, however, was thrown on the diagnosis of the case, I was therefore induced to temporise, and tried the actual cautery over and round the joint. This was followed by some alleviation of pain which, however, was slight and not permanent. The summer and autumn wore on with manifest deterioration of her condition, and in the ensuing month of November, it became obvious that unless relief could be procured the case would terminate fatally.

Accordingly, with the concurrence of all whom I had consulted and with the patien't willing consent, on the 15th of that month I undertook the operation of excision, having the co-operation of Dr. Burkitt, my colleague in the Workhouse Hospital, and also the kind assistance of Dr. George Mackesy and Dr. O'Neill of this city.

When the joint had been laid open by the H incision, the synovia which escaped was observed to be not larger in quantity than usual. It was also quite transparent without the smallest purulent admixture. The cartilages on both the femur and tibia were however deeply eroded. When I had cut off the top of the tibia and the condyles of the femur, I was induced from some suspicious appearances on the section of the latter to remove another thin slice.

We then found that the segments of the limb would not lie in a straightly extended position, and so in order to bring them into the desired apposition, I removed another wedge-shaped portion from the end of the femur—the thick end of the wedge looking forward—and thus obtained the required rectification. The patella seemed healthy and therefore was not meddled with, nor were the ham-string tendons divided—two omissions which I had no reason to regret. Lastly, an opening was made with a large trocar through the soft parts towards the outer side of the popliteal space, to provide a ready exit for any possible accumulation of pus, a precaution which in the sequel was happily found to be unnecessary. Little blood was lost, nor did any artery require ligature or torsion. The skin was brought together with nine or ten points of suture, and a piece of wet lint was laid over the wound and covered with waterproof cotton cloth drawn round and under the limb, which was then deposited in a box splint made expressly for the occasion, and so constructed that the sides and foot piece were separately removeable, thus permitting complete inspection and examination, as well as the necessary attention to cleanliness and renewal of the dressings, without causing the slightest displacement or even disturbance of the parts. One opening was made in the back of the splint to receive the point of the heel, and another just under the site of the operation where the parts rested on a small air-pillow, to the equable support of which we probably owed our immunity from bagging or pocketing of pus. The extension necessary to steady the parts was made with a broad strip of adhesive plaister, which passed from the top of the tibia down one side of the leg, under the foot leaving a loop there, and up as far on the other side. That part which passed down the outside of the leg was kept to the front of the lateral mesial line, and that which passed up the inside was kept behind it, so as to obviate the tendency which the foot has to rotate outward on such occasions. Over the adhesive plaister the leg was bandaged from the foot upwards with an elastic roller. This part of the apparatus required neither renewal or re-adjustment till the patient left her bed some three moths afterwards. An elastic tape passed from the loop below the foot to the foot piece. Finally the space between the limb and the sides of the box splint was packed with curled hair—as recommended by Mr. Butcher—which I found very valuable from its firmness and elasticity.

As the operation was performed in the afternoon and had been rather tedious with a proportional large expenditure of chloroform, she remained under its influence in the evening, and no opiate was administered. Next day apparently from the same

cause, there was anorexia with vomiting and a good deal of prostration. I therefore put her on small does of prussic acid combined with tincture of nux vomica, which settled the stomach, and in the course of a day or two completely restored the appetite. During the second day I was also able to procure for her use a large water pillow, which extended from the nates to the neck, and was of the greatest possible benefit, as the comfort it gave alleviated the irksomeness of maintaining the same posture, and prevented restlessness. The night's rest was secured by a hypodermic dose of 1-5th grain of hydrochlorate morphia qualified with 1-100th grain of sulphate atropiæ.

Being now relieved from all pain and taking her meals with a good appetite, as well as a moderate proportion of stimulants, the case went on so favourably that the wound in the soft parts had united before the end of the second week, with the exception of a sinus, at the bottom of which the probe detected a point of bare bone.

During the third week the air unfortunately escaped during the night from the small air-pillow. The displacement thus caused was followed by an access of what the patient called "mad pain." I then found it desirable to supplement the evening hypodermic dose of morphia with gr. xv of hydrate chloral, to be given at 2 and 3 A.M. As the parts became hot and tender, I laid over them a piece of wet spongio-piline, and in view of her constitutional peculiarities, I put her on the use of ioduret potassæ. This pain subsided in the course of a week with no other local bad result than the formation of another sinus below the patella. I then left off the hypodermic dose of morphia and atropine, and substituted for it a double dose of the chloral hydrate, giving 15 gs. at bed hour, and 10 gs. more if found necessary early in the morning. The sinus which then formed, as well as that which more immediately followed the operation, had closed before the end of January, when I discontinued the chloral, as I thought it produced a lowering effect, and she slept well without it.

About the middle of February, finding the parts were tolerant of pressure, I moulded on them at each side a piece of thick gutta percha softened in hot water and enclosed in a double layer of linen, by means of which they could be fastened on. I preferred this apparatus to a starch bandage, because if from an access of pain or tenderness, to which she was at that time still liable, it became irksome, it could be readily removed as well as re-applied. On the 26th February, she left her bed for the first time, after I had further strengthened the limb with a strong but narrow splint

reaching from the trocanter to the heel, and secured to the limb at both places and also at two intervening distances.

From that time she began to move about the ward on crutches, and now she is able to take exercise in the open air.

She has gained flesh and strength since the operation, and her appetite is good, but her convalesence was for some time retarded by anomalous febrile attacks attended with palpitation of the heart, to which she had long been liable. They have now almost entirely ceased.

With respect to the limb as seen from the front, it lies quite straight. viewed laterally the thigh makes with the leg an angle of 168° or 170°, which can be lessened on flexion to about 160°. The patella adheres firmly to the subjacent parts, and she is able easily to raise the limb from the bed as she lies on her back, but it is evident that complete and general bony union has not yet taken place, though consolidation continues to make progress. The shortening is rather more than three and a-half inches.—*Medical Press and Circular.*

PROFESSOR ERICHSEN ON WRIST-DROP IN FRACTURES—PARALYSIS OF THE MUSCULO-SPIRAL NERVE.

A most interesting clinical lecture on the above subject, delivered at the University College Hospital by Professor Erichsen, has been reproduced by *The Lancet.*

Professor Erichsen considers that simple fractures of the long bones are seldom accompanied by serious complications, on account of the interposition of muscles between the vessels and nerves and the bones, by which the ends of the fractured fragments—as a consequence—are prevented from exercising the injurious action on the vessels, &c., they otherwise would in many cases be certain to do. There are two exceptions to this general rule,—one in the upper extremity and one in the lower extremity—viz., in the relation of the musculo-spiral nerve to the shaft of the humerus in the upper extremity, and in the position of the posterior tibial artery and the upper end of the tibia in the lower extremity. The position of the nerve and the vessel in both these exceptions is such as to lead to serious injury in cases of fracture of the contiguous bones.

Injury to the musculo-spiral nerve in cases of simple fracture of the humerus must be of rare occurrence, for no mention is made of it in standard surgical works; nor has Professor Erichsen met, until recently, an instance of it; but there have been under his

care lately three cases in which injury to the musculo-spiral nerve, or its branches, caused complete paralysis of the muscles supplied by that nerve, and this injury was, in each case, attributable to fractures of the humerus.

In complete paralysis of the musculo-spiral nerve both the supinators of the forearm, and all the extensors of the wrist and fingers lose their power; the hand consequently falls into a state of pronation and flexion, and presents the characteristic signs of "wrist-drop." But when the posterior interosseous division of the musculo-spiral nerve only is injured, the loss of supination and of extension is not so complete, and as the supinator longus, and the extensor carpi radialis longior are supplied by branches from the main trunk of the nerve, they are not paralysed; and thus a certain, though a limited, movement in the sense of supination and extension is preserved although the forearm and hand become pronated and flexed.

A girl, aged 29 years, an ironer, was admitted to the University College Hospital on the 16th of December. Ten weeks previously she had had a fall and fractured her humerus about its centre. She had been treated for the injury in the usual manner, and the limb was put upon an angular splint so as to fix the elbow-joint. When the splint was removed she noticed wrist-drop, but thought it was weakness of the part.

On examination it was found she had marked wrist-drop with pronation. She cannot extend the hand. The right forearm, hand and fingers are swollen; the hand feels colder than its kindred one, and occasionally she experiences a feeling of "pins and needles" down the hand and fingers. The thumb and index finger are numb on the dorsal aspect, and there is imperfect sensation in them. The temperature of the affected hand is less than 85°, and of the kindred hand 90·6°. All the muscles supplied by the musculo-spiral nerve are paralyzed. She has no power to extend the wrist, the thumb, nor the fingers from the metacarpo-phalangeal articulations; but when the fingers are completely flexed, she can extend the joints between the first and second, and second and third phalanges; this is accomplished by means of the interossei and lumbricales, which are attached to the expansion of the extensor tendons on the dorsum of the fingers lower down than the metacarpo-phalangeal articulations. On forcing the index finger down, and asking her to try and extend it, the thumb is drawn towards the palm of the hand by the attachment of the first dorsal interosseus to the metacarpal bone of the thumb. Supination can be imperfectly performed, and only when the forearm is flexed. Flexion of the wrist, hand, and fingers is perfect.

She has been galvanized by faradisation regularly, and regains power over the affected muscles, and can extend the wrist and the fingers from their metacarpo-phalangeal articulations.

A patient, aged 30 years, a lace-cleaner, slipped on the right elbow. Fracture of both condyles with supination was clearly diagnosed. There was a small clean cut at the posterior aspect of the arm an inch from the elbow, apparently the result of protrusion of bone at the time of accident. A probe could pass in different directions amongst the tissues. From November 17th till December 21st, the limb was kept on an angular splint on the inner side, and the wound treated in strict accordance with Lister's rules for antiseptic dressing. On November 24th there was much swelling, redness, and tension, it was thought too that fluctuation existed, and an incision of about three-quarters of an inch long was made a little below the elbow-joint. Much serous fluid —but no pus—followed, and continued for a fortnight. The tension disappeared. Passive motion was commenced on 21st December, and the splint was removed on the 23rd of that month. On January 23rd, the patient can bend the elbow to an angle of 45° and can straighten it to about a right angle and a half, can also close the hand to within an inch of the palm, and it can be forcibly closed completely without much pain being experienced. There is a flexing and opposing power in the thumb. And when the hand and forearm are supinated, the wrist is quite straight. When the hand and forearm are pronated, there is complete wrist-drop, and she cannot raise the wrist or fingers, nor move the thumb outwards nor backwards. There is perfect power of supination when the elbow is fixed. When the fingers are completely flexed she is able to extend the joints below the second and third and first and second phalanges by means of the lumbricales and interossei; and as the hand is very thin, the interossei may be seen at work. There is numbness on the back of the thumb and index finger, but no absolute loss of sensation. The temperature of the hand has not fallen.

A patient, aged 7 years, in June fell over a croquet-hoop and fractured the right humerus at its lower part. At the time of the accident it was supposed she had dislocation, and a non-medical gentleman then present, pulled the arm with violence, but subsequently the patient was treated by a qualified practitioner. Splints were applied which reached to the finger-points; the latter were kept expanded, and on the removal of the splints seven weeks afterwards, the fingers became flexed. She can crochet with the right hand, write a letter, and she is able to extend her wrist. Her hand is pronated, and can only be imperfectly supinated. The fin-

gers are flexed and drawn to the palm, and on the wrist being dropped the last two phalanges of the fingers can be extended by the patient. There is no tension of the palmar fascia on forcibly extending the fingers and wrist, but there is great tension of the flexor tendons above the wrist. The hand is congested and cold.

A splint was constructed and applied to permit gradual extension of the fingers, and her arm was faradised daily. The contractility of the extensors and supinators has increased. The index-finger is but little improved; the middle finger is better, and the little and ring-fingers very much so, and are almost straight. The wrist can be extended and the knuckles brought to a level with the back of the forearm. When so extended, the fingers are half shut, but when the wrist is dropped they can be extended by the patient, and, in doing so involuntarily spread out like a fan, owing to the action of the dorsal interossei.

The chief resistance to proper extension is due to the contraction of the flexor carpi radialis, and the flexor tendon of the index finger. Professor Erichsen proposed to divide these subcutaneously, but the patient's friends objected.—*The Doctor.*

Medicine.

DIARRHŒA AND CHOLERA:

THEIR SUCCESSFUL TREATMENT BY MEANS OF THE SPINAL ICE-BAG.

A summary record of Cases and Results. By JOHN CHAPMAN, M.D., M.R.C.P., Physician to the Farringdon Dispensary.

The fundamental principles on which the treatment described and exemplified in the following pages reposes may be stated summarily as follows:—

Negative Principles.

1. That though, in exceptional cases, diarrhœa as well as cholera, may present itself associated with the presence of a blood-poison, neither the one nor the other is, as a general rule, the product of such a poison;* and that there are very strong and very numerous reasons for believing that the hypothetical so-called "cholera-poison," of the existence of which no proofs have ever been adduced, exists only in the imagination of certain pathologists.

* The doctrine that the blood of cholera patients is poisoned, is held by Parkes, Goodeve, Johnson, and a host of other pathologists.

2. That the existence of the so-called "cholera-germs," † which are alleged to be produced and disseminated in terrific abundance from the gastric and intestinal discharges of cholera patients, has never been shown to be probable by even one particle of evidence, and that there are numerous and very strong reasons for believing that they are creations as exclusively hypothetical and subjective as is the imaginary "cholera-poison" itself.

3. That the pathological changes constituting the phenomena of cholera are not referrible, as suggested by Dr. Gull, "to an early and severe depression," or "extreme exhaustion of the great ganglionic nervous centres in the abdomen;" that "the vital energy of the nerves distributed to the respiratory, the circulatory, and the secreting organs, is either uncommonly depressed, or entirely annihilated, is" not "shown by the nature of the characteristic symptoms constituting the malady," as it is affirmed to be by Dr. Copland; and that a vast array of authentic facts disproves the assertion of Dr. Goodeve, that "in the intestines a sort of paralysis of the smaller arteries and capillaries seems to exist, much as occurs in the sections of the sympathetic nerve in the neck in Bernard's experiments."

4. That cholera does not "travel" from place to place, as in almost every history of its manifestations it is said to do; that it can originate *de novo* in any place in which certain definable conditions co-exist; and that it may even be generated afresh, without the aid of "cholera-germs," and without any contact or relation of any kind with cholera patients, by either the stupid conduct or conscious efforts of man himself.

5. That, though in the focus of a cholera epidemic the influence generating the disease is often felt by persons who are not actually attacked by it, and though when that influence tends to render all within the sphere of it liable to attack, the emanations of cholera patients, like any other foul or unwholesome emanations, may operate as exciting causes of the disease, whereas they would not do so under other circumstances; nevertheless, cholera is neither infectious nor contagious; and that the costly and vexatious international regulations, often involving great suffering, by which Governments attempt to resist invasions of the disease, are no defence whatever against the attacks, whereas its development and continuance are, probably, often favoured by the enforcement of the laws of quarantine.

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† The "cholera-germ" theory was held by Dr. Snow, and has been most zealously advocated by Dr. Budd, of Bristol.

Affirmative Principles.

1. That both diarrhœa and cholera, however induced, are essentially and invariably disorders of the nervous system.

2. That the nature of the summer diarrhœa of temperate climates, and that of the diarrhœa which often preludes, and indeed constitutes the initial stage of cholera in tropical climates, are essentially identical.

3. That the summer diarrhœa of temperate climates, the so-called cholerine, English or European cholera, and Asiatic cholera, are also essentially or etiologically one and the same disease—these several kinds of it being only the several expressions of the several degrees of intensity with which the force causative of them operates.

4. That all the phenomena of diarrhœa and cholera are due to hyperæmia, and consequent excessive action of the spinal cord and of the ganglionic or sympathetic nervous system.

5. That all these phenomena are naturally divisible into two classes as follows :—

First-Class.—Active or Positive Phenomena—due to Hyperæmia of the Spinal Cord.

Abnormally copious and pale urine.
Albuminous urine.
Super-abundant secretion of bile.
Super-abundant secretion of pancreatic juice.
Excessive exudation of serous fluid by the serous membranes.
Borborygim.
Excessive activity of the mucous membrane of all the glands of the alimentary canal.
Abnormally high temperature within the rectum.
Excessive activity of the mucous membrane of the gall-ducts and gall-bladder, of the pelves, of the kidney, and of the female genital organs.
Abdominal gripings.
Excessive expulsive activity of the stomach and bowels.
Simultaneous excessive activity of the thoracic and abdominal muscles.
Sweat in all its grades of copiousness and fluidity.
Disorders of sensibility.
Tremors.
Muscular twitchings.
Fixed stony expression of the face.
Tonic hardness of muscles.
Tightness across the lower part of the chest.
Cramps and convulsions.

Extreme contraction of the urinary bladder.

Restlessess and tossing of the limbs to and fro.

Second-Class.—Passive or Negative Phenomena—due to Hyperæmia of the Sympathetic Ganglia.

Slight headache.

Deafness of various grades.

Tinnitus aurium.

Dizziness, slight faintness, syncope.

Drowsiness, sleepiness.

Mental states characteristic of diarrhœa and cholera.

Absence of tears, saliva, bile, and urine.

Short, struggling, and rapid respiration.

Cold breath.

Enfeeblement of the voice, aphonia.

Oppressive and burning pain at præcordia and left epigastric region.

Algide symptoms; Progressive changes in the visage and in the colour, temperature, and general aspect of the skin.

Loss of cutaneous sensibility.

Serous exudation into the intestines.

Epithelial exfoliation of the intestinal villi.

Enfeeblement and death of the voluntary muscles.

Enfeeblement and death of the involuntary muscles, cessation of discharges, secretion still continuing.

6. That the different grades of severity with which the foregoing symptoms present themselves in different cases accurately correspond to and express the different grades of hyperæmia of the spinal cord and sympathetic ganglia which obtain in different cases.

7. That as the comparative strength of the cerebro spinal and of the sympathetic nervous system in relation to each other differs aboriginally in different constitutions, so in cases of diarrhœa and cholera, each of the two groups of morbid phenomena produced by each of those systems will relatively to each other present different degrees of development in different patients. Hence it is that sometimes the copiousness and frequency of the discharges, and sometimes the algide symptoms constitute the predominant features of the malady.

8. That any agent capable of producing general hyperæmia of the spinal cord, and of the sympathetic ganglia, is capable, by doing so, of becoming a cause of both diarrhœa and cholera.

9. That some agents increase the circulation in, and therefore the energy of the whole nervous system simultaneously, and consequently engender diarrhœa and cholera without the operation of

any apparent exciting cause. Such agents are solar heat and atmospheric electricity. Hence it is that while diarrhœa and cholera are only epidemic in temperate climates, and, exceptions apart, are only epidemic in such climates during the summer months, they are more or less endemic in tropical climates throughout the year.

10. That though great and continuous solar heat is pre-eminently powerful as a cause of diarrhœa and cholera, even the great potency of solar heat as a cause of these diseases is immensely augmented, if, while the days are hot the nights are cold. Wide ranges of temperature, when the average temperature remains high, cause the amount of blood in the surface of the body to vary extremely within each 24 hours, and thus by means of the ebb and flow of the blood-currents, as well as by means of the nervous ramifications throughout the surface of the body, exert an oscillating influence on the circulation within the nervous centres themselves, which rendered permanently hyperæmic by the high average temperature, become still more so in the night, owing partly to the influence of sleep, and partly to the fall of the external temperature, which causes the body to become cool, and the surface arteries, therefore, to become contracted. Careful and exact observations, both in India and in England, have demonstrated that when in connexion with a high temperature there is a great range between the degrees of greatest heat and greatest cold within each 24 hours, diarrhœa and cholera are likely to prevail most extensively; and hence it is that in England, as a general rule, September, which is especially notable for its hot days and cold nights, is the month in which those diseases are most prevalent and most fatal.

11. That when a high temperature, with or without great alternations, produces excessive hyperæmia of the nervous centres, the extent of such hyperæmia, and therefore proclivity to diarrhœa or cholera, differs in different persons at the same time, and in the same person at different times, because the constitutional variability of the circulation in the nervous system differs in different perpersons, and in the same person at different times.

12. That when the spinal cord and sympathetic ganglia have become hyperæmic by the influence of great solar heat, but not sufficiently so to enable them to become self-originative of diarrhœa or cholera, various agents, which, without the co-operation of such hyperæmia of solar origin, would be powerless to produce either of those disorders, are capable, with that co-operation, of becoming exciting causes of both of them.

In India *prolonged marches* of soldiers, *pilgrimages*, and *ordinary*

travelling on foot, by bringing into continuous and energetic action the lower segments of the already hyperæmic spinal cord, are notoriously prolific exciting causes of cholera.

Noxious effluvia coming in contact with the great expanse of sensory nerve filaments, spread over the nasal and pulmonary mucous membranes, excite the already hyperæsthetic brain and spinal cord of persons exposed to great solar heat, to an extent which would not be possible at other times, and thus become exciting causes of both diarrhœa and cholera. "In spite of exceptions," says Dr. Goedeve, "the places in which the air is most vitiated from privies, cesspools, drains, decaying animal and vegetable refuse, or overcrowding and concentration of human evacuations, are those in which cholera has generally been most fatal and most widely spread."

Impure water, which in England may be drank during winter with comparative immunity from bowel complaints, quickly induces diarrhœa and even cholera in summer, when, by the action of solar heat, the nervous system is already predisposed to those diseases. Moreover, impure water taken from the same source all the year round is more impure in summer than in winter, because whereas water at 32° Fahr. dissolves scarcely any organic matter, water at temperatures ranging from 60° to 90° Fahr. dissolves it freely.

Bad food and eating to excess are very common exciting causes of cholera in India, where the temperature is always high; generally in temperate climates their morbid influence extends only to the production of diarrhœa; but when, in England, for example, a predisposition to cholera is already established by great heat, they very often become the agents of its development.

Alcoholic fluids are notoriously stimulants of the nervous system, and, assuming the truths of the doctrines above propounded, my readers will expect that persons who drink these fluids freely in a region where cholera is epidemic, will incur special risks of losing their lives by doing so, and such is the fact. It was found by Dr. Farr* that, "on Saturday, Monday, Tuesday, and Wednesday, the deaths from cholera were above, and on Thursday, Friday, and Sunday, below the average. In the whole country Tuesday was the most, Friday the least fatal day of the week." The remarkable increase of deaths on Tuesday is an instructive consequence of the fact that Monday (*Saint Monday*, as it is called by the working classes) is the day especially devoted to idleness and drinking.

Dental Irritation.—Of all the exciting causes of cholera, or if

* "Report on the Mortality of Cholera in England." 1848-49.

the phrase be preferred, of fatal diarrhœa, in temperate climates at least, the process of teething is at once the most extensively operative, the most insidious, and the most deadly. Comparatively few English children are destroyed during each winter by diarrhœa, but the number which it kills every summer is deplorably great, while in those summers which are remarkable for their great heat the number is enormous; and I often marvel how little professional enquiry and reflection are excited by this great infant mortality. How does it come to pass? The answer seems to me easily given: in ordinary summers solar heat acting alone or even in combination with any of the exciting causes already mentioned, does not suffice to induce cholera or fatal diarrhœa; and in English winters the nervous irritation incident to the process of teething rarely induces diarrhœa, and when it does so the disease is rarely fatal; but when the two exciting forces—solar heat and the nervous irritation caused by teething—are combined, their conjoint force produces that excessive hyperæmia of the already extremely vascular nervous centres of children, which originates the great majority of the very numerous cases called in England "infantile diarrhœa," and in America, where the solar heat is greater, and where, consequently, the symptoms of the disease are more pronounced, "cholera infantum."

Purgative Medicines.—Besides the several agents already mentioned, which easily become transformed into exciting causes of diarrhœa and cholera, when heat has already rendered the nervous centres hyperæmic, there are many others which ought to be referred to, but all of which except purgative medicines I must, for the sake of brevity, pass over in silence. That purgative medicines are capable of inducing cholera when the disease is epidemic is proved by an amount of evidence, from the most impartial and authoritative observers, placing the fact wholly beyond question. Testimony to this effect is given by Sir Ranald Martin, Dr. Macpherson, Dr. Laycock, Dr. Mackintosh, Dr. Goodeve, Dr. Twining, Dr. Morehead, and, in short, we find, as Dr. Macpherson says, "the great majority of writers in all countries pronouncing their opinion that when cholera is prevalent, it is not safe to take aperients." The results of the several plans of treatment tabulated by the "Treatment Committee of the Medical Council of the Royal College of Physicians," so as to show the *percentage* of deaths following each plan, proved that the *percentage* following the use of eliminants was greatest of all—viz., 71·7, and that the *percentage* of deaths following the treatment by castor oil, was even greater than that which followed the use of eliminants in general: it was 77·6 per cent.—*Medical Press and Circular.*

Midwifery.

THE TREATMENT OF PROLAPSE OF THE UMBILICAL CORD.

By Dr. Massmann.

Dr. Massmann has collected the histories of no less than four hundred cases, of which upwards of forty came under his own observation, either in private practice or as assistant physician to the hospital at Breslau. It appears that, from the statistics of Scanzoni, the proportion of cases in which prolapse of the umbilical cord occurs is as 1 to 254 births. The author, however, gives a much higher figure, estimating it at 1 to 123. It is absolutely most frequent in head presentations, but only because these are far more common than breech or cross presentations: the frequency of prolapse is *relatively* very much greater in the latter. It is especially liable to occur whenever the lower segment of the uterus is not fully occupied by the presenting portion of the child. Hence it is met with in cases where the head is high in the pelvis, or is directed more or less to one side. It is not the pelvis, but that contraction of the lower segment of the uterus which occurs in normal delivery, that keeps the umbilical cord from prolapse. The statement made by Fried and Schmidt, that a pelvis of great width predisposes to its occurrence, is incorrect, since it is precisely in these cases that the head rarely sinks into the pelvis. According to Michaelis and Hildebrandt, the chief circumstances favoring prolapse are irregularities in the position of the child or head, and all circumstances occasioning great dilatation of the uterus, as hydramnios, twins, &c.; but besides these may be mentioned low attachment of the placenta, great length of the cord, previous prolapse of a small portion, premature birth. The death of the child, which occurs in 54 per cent. of the cases, according to Scanzoni, and in 45 per cent. according to Dr. Massmann, is not the result of cooling of the cord, but of the pressure upon it preventing the passage of the current of the aerated blood from the placenta: the child consequently dies asphyxiated. The accident is most dangerous at the symphysis, on account of the pressure being immediate, severe, and persistent. The treatment of prolapse of the umbilical cord of course consists essentially in protecting or removing it from pressure as quickly as possible. The former indication is fulfilled by the replacement of the cord, the latter by speedy delivery. Formerly the latter mode was always adopted; the former was first recommended to be adopted as a general rule by Michaelis. Inasmuch as the

replacement of the cord involves the introduction of the whole hand, it is necessary that the os should be sufficiently dilated. If this be not the case, and the liquor amnii have not escaped, we must wait, and endeavor by slightly altering the position of the head to bring about spontaneous reposition. Hohl's recommendation is, whilst the head is descending during a pain, to keep two fingers pressed against the loop of the cord. But if it be found that even with unruptured membranes the cord is exposed to dangerous pressure, Hüter proposes that, providing the mouth of the uterus will admit the hand, to replace the cord, then to rupture the membranes and place the head in position. Pursuing this plan in ten cases, the author was fortunate enough to deliver ten living children. In cases, however, where the waters have been discharged, and the cord is prolapsed into the vagina whilst the head is low, the forceps must be at once applied and delivery effected. If, however, the head be still high and moveable on the brim of the pelvis, whilst the os is sufficiently dilated to admit the hand, replacement is indicated, the statistics here being that 73 children out of every 100 survive. If, on the contrary, the expectative treatment be adopted, and the attendant waits till the head is sufficiently low to admit of the application of the forceps, only 49 per cent. of the children are saved. When replacement of the cord is determined upon, it should be accomplished with the whole hand; the right being used when the loop is on the left side, and *vice versâ*. Small loops may be pushed back with the tips of the four fingers, but larger ones cannot be replaced in this way. In such cases the author thinks it is most advisable to collect the whole loop into a mass, supported on the tips of the fingers and hollow of the hand. The hand is then to be slowly passed into the uterus, firmly pressing all the time on the head, and care must be taken to introduce the cord completely over and beyond the head. Before being withdrawn, the hand should be twisted about one-fourth of a circle, so as to extract it through the opposite side of the pelvis. The normal position of the head and the complete occlusion of the lower segment of the uterus are the only means of retaining the replaced cord. Hence the head should, if deplaced, be put into the normal position, and the hand should be retained in the uterus till it is felt that the lower segment of the uterus has firmly contracted, and the occurence of this may be hastened by friction. If an arm present, this must be replaced either by itself or simultaneously with the cord. If a foot and arm present, the foot must be brought down. When the replacement is effected, the case must be left to nature, cramping pains being removed with dose or two of Dover's powder. Often after reposition of the

cord the uterus relaxes, and labor is stopped for several hours; and this is usually without danger to the child. The mere want of pulse in the cord is not a proof of the death of the child, and should not lead to neglect of its replacement.—*Practitioner.*

DIET OF PARTURIENT WOMEN.

Dr. Hugh Miller calls attention to the very vague instructions given by obstetric writers on this subject. Particulars of a case were given, in which careful nourishing diet given during utero-gestation enabled the patient in her last confinement to escape suffering from uterine inertia. From an examination into the physiology of the changes in the uterus and breast, Dr. Miller believed that the fat-cells existing in abundance in the milk during the first few weeks were due to the changes in the womb after parturition; that the disintegrating uterus was broken up into fat-cells, which were absorbed by the blood, and through the circulation were secreted by the mammary glands. Hence, a heat-forming diet was neither necessary nor was indicated, and at times might be positively injurious; whereas a flesh-forming diet, by maintaining the strength, enabled the woman to make up for the waste of tissue during labor, gave her support, and maintained the vigor of her body while the further changes were going on. The author had found great benefit through selecting the parturient woman's diet from as nearly as possible the kind of food which she was in the daily habit of taking, giving it in a liquid form and in diminished quantity. The advantages in adopting a nourishing diet to the mother he believed to be: 1. Maintaining her muscular strength. 2. Avoiding irritation to the mammary glands and enabling her to suckle sooner. 3. Securing a quicker and better recovery.

Dr. Robert Barnes says that he has noticed great mischief brought about by giving nutritious diet too soon after parturition. He did not say that such diet was not necessary: but there was a prevalent tendency to go too far, and to load the stomach before the patient was able to bear it. The system after parturition required repose, and that in consequence of the changes that took place little food was at first required. It was not desirable to give stimulants at all, and certainly not solid food.—*British Medical Journal*, Oct. 1, 1870.

TREATMENT OF UTERINE CATARRH BY INTERNAL APPLICATION OF CARBOLIC ACID.

Dr. W. Playfair, Physician to King's College Hospital (*Lancet*), says: "In a large proportion of old standing cases of uterine catarrh, it is hopeless to expect a permanent cure by any means which do not act directly on the seat of the disease, which is the lining membrane of the cavity of the uterus and cervical canal beyond the external os; accompanied, of course, with secondary morbid states of the body of the uterus and cervix, such as hypertrophy, congestion, etc. Rest, applications to the exterior of the cervix, and general treatment will unquestionably cause a temporary improvement, but on a recurrence to the old habits of life, all the old symptoms return.

"There are serious objections to intra-uterine injections, unless the os is first dilated with laminaria tents, as they are apt to bring on severe uterine colics. By means of fine probes of whalebone or flexible metal, round which a thin film of fine cotton-wool is wrapped, alterative applications can readily be made to the interior of the uterus, without pain or danger. In the very numerous cases in which this plan of treatment has been carried out, in no single instance has anything but the greatest benefit accrued. It is no doubt advisable to select the cases judiciously, and where there is much uterine tenderness, intra-uterine treatment should be postponed until this has been diminished by rest, leeching, etc.; but with proper precautions the treatment is perfectly safe. A concentrated solution of carbolic acid, eighty parts to twenty of water, is used; and it acts so well, that for a long time nothing else has been employed. After the first application the discharge is sometimes increased, but after the second or third, it is generally greatly diminished, and a single application is often sufficient to cure superficial erosions of the cervix. As a rule, there is no difficulty in passing the probe, as in true uterine catarrh the os is invariably patulous. As the case improves, the patulous state of the os diminishes, and this is found to be one of the most certain signs of improvement."

The members of the Paris Academy of Medicine have been ordered to erase the names of their German colleagues of eminence, but nobly refused to do so.

Canada Medical Journal.

MONTREAL, SEPTEMBER, 1871.

THE MEDICINE BOXES FURNISHED TO THE VOLUNTEERS.

We notice in the *Globe*, which is known to be the most unscrupulous sheet published in the Dominion, that an attack is made on the Militia Department, in respect to the medical comforts furnished to the volunteers while in camp—and we determine to publish the list of articles furnished, so that the profession may judge for themselves, as to the correctness of the statements made by the *Globe's* correspondent. Under date Camp Sarnia, September the 21st, 1871, he says:—

"The medical arrangements of the camp are one of the worst features of its organization, and have led to a protest from nearly all the medical men here, and endorsed by the remainder. The stores furnished turn out to contain the worst nostrums heard of in the profession, and lack in almost every requisite for treating diseases of most general occurrence under canvas. Yesterday one surgeon brought his medicine chest on parade in charge of an orderly, to exhibit its defects, and did this effectively by substituting a bottle of stimulating liquors for the whole of the trash furnished him. The substitution was a success."

This bears on the face of it such an amount of ignorance and untruthfulness, that it is scarcely worth noticing. We have ourselves been attached to the Volunteer force of Canada since its first inception in 1853. We are fully alive to the importance of the movement, and also of the importance of medical officers becoming thoroughly up to their work, which does not consist alone in prescribing for the sick of their camp.

It would be vastly more to their credit if, instead of condemning what is a fair beginning, they would endeavour to strengthen the hands of the Militia authorities. The instruction given to medical officers is specific; a careful medical inspection of the men should be made before going into camp, with a view of not permitting any to join the force except those in robust health.

Medical officers should be consulted in the selection of camping ground, and the general sanitary arrangements of the camp should be jealously watched over by the medical staff, as greater credit will be due to those who take medical charge of a camp,

and whose sanitary arrangements are such, that a minimum of disease will be present, than to those who by neglect of such sanitary measures, are troubled by a large number of cases of disease. It is the experience of the British Army while under canvas, that the amount of disease is almost nil, but this is due to the great care adopted by the military medical authorities, who are specially trained at the Army Medical School, Royal Victoria Hospital, Netley, being obliged to attend a course of practical instruction in the duties they will be expected to perform in the public service; and furthermore, to pass an examination on military medicine, military surgery, and sanitary science, before receiving the appointment of assistant surgeon.

We must conclude that the *Globe's* special correspondent is slandering the whole medical staff of the Sarnia Camp, and more especially the surgeon who appeared on parade with his medicine chest in charge of an orderly, and who substituted a "bottle of stimulating liquors (was it Old Rye?) for the whole of the trash furnished him." We say this must be a downright falsehood, or the officer in command on the occasion was very lax in his duty, as the special to the *Globe* does not state that the surgeon was placed under arrest and sent to the guard-room, for appearing drunk on parade, we should imagine no man in his senses could render himself so supremely ridiculous. The Adjutant-General would do well to ascertain whether so gross a breach of military discipline has been committed, and at once signify his dissent of such conduct, by striking the delinquent off the list of officers of the Volunteer force of Canada.

To return to the subject of the medicines furnished, we consider that the box contains nearly all that is required for the service expected of the Volunteers. If any additions are considered necessary, the medical staff will individually have an opportunity of expressing their views on that point, as the Government have issued a Militia General Order, whereby "Medical officers are requested to state what in their opinion are the deficiencies of of the 'Medicine Boxes," and in what particulars they may be improved." The Government are apparently anxious to give satisfaction to all the parties concerned, and we have no doubt would even concede the point of furnishing a bottle of "stimulating liquors" if deemed necessary, at the risk perhaps of being again misrepresented by the *Globe* or any other sheet desirous of throwing dirt.

We regret that any member of the profession, if the above statements are true, should follow this line of conduct, as it is more likely to injure the Volunteer cause and create distrust, when

there should be harmony and unity of action. It ill becomes members of the medical profession to offer frivolous objections, always supposing that the statements made by the *Globe* are reliable.

List of contents of the Medicine Boxes furnished the Canadian Militia :—

Calomel ; Chloroform ; Diarrhœa mixture ; Ether Sulph ; Fuller's earth ; Morph. Acet ; Pil Cathartic Co. ; Pil Coloc Co. ; Pil Opii—1 gr. ; Pil Opii—½ gr. ; Plumbi Acet ; Potass Chlor. ; Potass Nit. ; Pulv. Acacia ; Pulv. Cretæ Co. C. Opio ; Pulv. Ipecac Co. ; Pulv. Jalap Co. ; Spts Ammon. Aromat. ; Tinct. Opii. ; Tinct. Zingib ; Zinci Sulph. ; Calico Bandages ; Flannel Bandages ; Suspensory Bandages ; linen sheeting ; Calico ; Lint ; Gutta-Percha tissue ; Oiled Silk ; cotton wool ; adhesive Plaster ; Sponges ; Needles ; Thread ; Tourniquet ; Tape ; Scissors ; minim measure ; scales and weights ; Spatula ; Enema syringe ; surgeon's tow ; Pins.

Contents of the Medical Field Companion used by the British Army :—

Medicines.—Mixture for Diarrhœa and Cholera, 2 oz. Chloroform, 2 oz. Tinct. Opii, 2 oz. Spirit. Ammoniæ Aromat., 2 oz. Pills.—(Tins.) No. 7. Calomel gr. i. Pulv. Opii gr. i. in each. No. 8. Plumbi Acet. gr. iii. Pulv. Opii gr. i. in each. No. 9. Calomel gr. ii. Pil. Rhei Co. et. Pil. Coloc Co. aa gr. ii. in each. No. 10. Camphor gr. iii. Pulv. Opii gr. ii. et Pulv. Cayenne gr. ½ in each. 4 dozen of each kind. Powders.—No. 1. Morph. Acet. gr. ½. Plumbi Acet. gr. iv. et Pulv. Acacia gr. ii. in each.—24. No. 2. Antim. Tart. gr. i. Pulv. Acacia gr. iii. in each. No. 3. Calomel gr. iii. Pulv. Jacobi gr. v. et Pulv. Ipecac. Co. gr. xv. in each. 12 of each kind. No. 4. Pulv. Kino Co. ℈i. in each.—24. No. 5. Pulv. Cretæ Co. c Opio ℈ii. in each.—12. No. 6. Pulv. Jalapæ Co. ℈ii. in each. — 12. Appliances. — Calico rollers — 2. Suspensory bandages—2. Clavical bandages—2. Strong calico—½ yard. Linen sheeting—½ yard. Lint—¼ lb. Gutta percha tissue—¼ yard. Cotton wool—¼ lb. Isinglass plaster—1 yard. Adbesive plaster ½ yard. Sponges, surgeons—2. Needles, surgeons—25. Whited brown thread—½ oz. Razor in case. Shaving soap—1 roll. Screw field tourniquet. Candle and wax matches. Pins—½ paper ; tape —1 piece. Scissors—1 pair. Minim measure—1. Graduated horn cup—1.

We must admit that the Canadian box is the more complete of the two.

Failure of Condurango.—This remedy for Cancer has been tried at the Middlesex and St. Bartholomew's Hospitals, and has utterly failed in giving relief in this disease. A detailed account of its therapeutic action is being prepared by Mr. Hulke, and a careful examination of its physiological action will be reported on by Dr. Brunton. These reports will be looked for with interest, as they will tend to set at rest the excitement produced by the very scandalous claims which have been set up in its favour. Condurango, like all other cancer cures, has lived out its little day, but we doubt not will be used by the unscrupulous quack to cruelly deceive the unwary.

Cyano-Pancreatine.—This is a new preparation of animal fats and pancreatine, prepared by the Sisters of the Grey Nunnery in Montreal. It appears to be a pleasant preparation, and we believe will agree well with the stomach. We have not had an opportunity of trying its efficacy with any very decided results, but purpose doing so in the course of the next month or two, when we will again refer to its usefulness.

Sir Thomas Watson is revising his Lectures on the Practice of Physic. It is stated by the *British Medical Journal* that the last pages are in the hands of the printer. So that the work may be looked for almost immediately.

Professor Lister of Edinburgh, was recently summoned to Balmoral, to open a small abscess near the arm of Her Majesty the Queen.

Medical News.

Homœopathic Surgery—What is it?—Can any one tell what is meant by homœopathic surgery?—how the law [?] of "similia similibus" can apply to the use of the scalpel, the ecraseur, the ligature? If a man is stabbed, can he be cured by a little more stabbing, in a small way? If he have a ball fired into his corpus, can he be saved by shooting him with diminutive bullets, dynamic or potentized, or what not? If one be bleeding to death from a wounded artery, can similia similibus save his life by cutting another artery? The expression, "homœopathic surgery," is absurd in itself. You may as well talk of homœopathic farming,

or homœopathic mining. A homœopathist may practice surgery, but in doing so he must tread in the footsteps of the regular schools. He can strike out no new course. He cannot apply his favorite "lap" to surgical art. On the contrary it comes in to baulk him at every step; to shake his confidence in himself, and to make his hand tremble. In attempting to practice surgery he enters the camp of his enemies, whom he has always denounced as murderers, and accepts their guidance and employs their weapons. His puny straw of *like to like*, he has left outside.

A "homœopathic surgeon" is a fabulous animal, having no real existence. "Homœopathic blacksmith," "homœopathic cobbler," "homœopathic shoe-black," would be just as appropriate—the last indeed more so, because shoe-blacks do apply the law of similia similibus. Hahnemann had no knowledge of surgery. He ignored it. He scarcely ever mentioned the word; nor did his early followers. They were ashamed to follow the teachings and the practice of the men whom they denounced. They have had half a century of existence, with much increase and success, say they. But not a man among them has ever done anything for surgery. Not a single homœopathist in Europe or America has ever identified himself with it. Not a single name have they given to the history of surgery, in a period effulgent with the splendid achievements of the regular schools.—*Pacific Medical and Surgical Journal.*

At a recent meeting of the Gynæcological Society of Boston, it was stated in speaking of the comparative merits of Ether and Chloroform, that the latter was almost universally employed as an anæsthetic in the South. In Memphis, Ether is never employed, and no accident is known to have ever occurred there from the use of Chloroform.

At the annual meeting of the Maine Medical Association, Dr. Tewksbury reported a case of vesico-vaginal lithotomy in a little girl 7 years old. The stone was the size of an English walnut, and was removed by incision in the vesico-vaginal septum one and one-fourth inches in length. It was immediately closed by six silver sutures, and the patient fully recovered in fifteen days. Dr. Tewksbury made some remarks on the history of the operation, and in closing, said: "That after a careful search in medical literature, this was, as far as he could discover, the first case of vesico-vaginal lithotomy in a girl of this age, followed by immediate closure of the wound.—*Boston Medical and Surgical Journal.*

Dr. Grant's case of Contraction of both Knee Joints.

Appearance of Limbs BEFORE *the operation.*

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Contraction of both Knee Joints, the result of abscesses associated with non-congenital talipes equinus (right foot). By J. A. GRANT, M.D., F.R.C.S., Edin. Read before the Canadian Medical Association.

Césaire Ethier, aged 13 years, of healthy parentage, and no indications of morbid diathesis in any of the family. The history of this case, as far as I have been able to ascertain from the mother, usually the most accurate recorder of facts under such circumstances, is as follows. The boy, from his second to fifth year, walked as well as any healthy child of the same age, until attacked by scarlet fever, followed by inflammation of the ankle, knee and elbow joints, developing the *tertiary action of the poison* to the greatest intensity in both the knee joints, this complication becoming the chief feature of the case. Extensive abscesses formed around the knee joints, followed by periostitis and exfoliation of several small pieces of bone. For a period extending over eighteen months, there were several fistulous openings, and the copious discharge influenced very materially the boy's general health. At the termination of the second year, all the openings closed, there being a marked change for the better as to constitutional symptoms, but the boy remained crippled so as to be utterly unfit for any avocation in life, and presented the following almost unique condition. Both legs flexed, the right to its fullest extent, the posterior part of leg being in close proximity to the posterior aspect of the thigh, and fixed firmly by an extensive fibrous band, extending like a brace between the leg and thigh, and becoming well defined, on the slightest effort to extend the leg. By ordinary extension, the space between the leg and thigh, on right side, was increased only to a moderate degree, and these parts when compressed together, would not more than equal the size of an ordinary leg of a child of the same age.

The left leg was flexed upon the thigh, to an angle of 45°, but firm in that position, and presenting longitudinally through the

popliteal space a fibrous band, which felt not unlike the tendon of a new muscle. On both knee joints there are scars, firmly adherent to the bone, and bearing the impress of once deep-rooted suppuration. The tendons of the flexors in both legs were well defined, and gave the feel of contractile firmness not readily to be overcome. Both legs were exceedingly attenuated, the bony structures being well defined, anteriorly and posteriorly. The right foot only touched the ground by the toes, and the uplifted heel presented a well defined non congenital talipes-equinus, nothing however in particular characterising the trouble, except the extended position of the foot, and retraction of the tendo-achillis, unconnected either with an affection of the spinal cord or its investments, as is most usually the case. In fact the condition of the foot was the result of a *process of accommodation*, extending over several years, during which time volition, in as far as the extensor muscles of the leg were concerned, was in a great measure lost or suspended. The hip joints were perfectly healthy, and he could kneel erect with considerable ease and comfort. Locomotion was accomplished by placing the palm of the right hand on the ground, inclining the body to the right side, resting on the toes of the right foot, and moving forward the left leg as far as possible. thus with the body in a bent condition resting chiefly on the toes of the right foot as a pivot. and the motion imparted by means of the left leg and right arm, he made his way rapidly in tripod style.

In June, 1866, the right thigh was fractured about the centre by accident. Union was speedy, but owing to his restlessness and difficult position, shortening took place, fully an inch and a half, with all the care that Dr. Valade, the family physician, could bestow. On the 19th of April, 1867, in the presence of a number of medical gentlemen of Ottawa, chloroform being administered, the tendons of the semi-membranosus, semi-tendinosus and biceps of either leg, as well as the fibrous popliteal bands were divided subcutaneously, the extremities being immovably fixed in a position directly reverse, as far as possible, to the existing deformity. The wounds were at once closed with small pieces of lint and adhesive plaster, and bound up for five days, when the after-treatment was commenced, as the wounds were perfectly healed. The limbs were now extended as forcibly as the patient would submit to without chloroform, which he most positively refused to inhale. So far considerable extension was accomplished, notwithstanding the adverse circumstances.

Owing to the extensive nature of the deformity, I resolved as far as possible to overcome it after this stage, by daily manual

Dr. Grant's case of Contraction of both Knee Joints.

Appearance of Limbs AFTER *the operation.*

extension and pulleys. With this object in view, the patient was subjected each day to a pully extension from each foot, after the plan adopted by Dr. Buck, of N. Y., in fractures of the thigh. The progress, doubtless, was slow but marked, and the muscular structures developed gradually, in proportion to the extension of the limbs each day brought about. The constitution was well supported with good nourishing diet, beef tea and cod-liver oil in addition, as considerable tissue had to be developed out of the extensive atrophy, induced by disuse, extending over a period of fully six years.

In July, 1867, a second operation was found necessary for the right knee joint, when several fibrous bands on either side were fully divided, and extension continued on the fifth day, as previously, the right heel being relieved at the same time, by division of the *tendo-achillis*.

September 10th.—The legs being now tolerably well drawn out, the right by far the most contracted of the two originally, was restored to the normal position by *brisement forcé*, and lateral metallic splints then applied. In four months from this date he could move about on crutches, with ease and comfort in the erect position as represented in the lithograph. The metallic splints were worn for two years, after which time they were dispensed with, and at present, the young lad having acquired greatly increased muscular power, is employed as a ferry man. The right leg being restored to the straight position, and the left knee joint only slightly removed from that condition also, he was unwilling to submit to *brisement forcé*, in order to complete the treatment of the left knee joint. The right arm was greatly developed from constant use, in the abnormal process of locomotion, and the right hand, from exposure during the winter season, could endure a remarkable degree of cold, and was exceedingly powerful.

At present the contrast in his limbs is not so marked, and he possesses a more uniform distribution of muscular power.

Ottawa, September 11th, 1871.

INEBRIATE ASYLUMS.

In again calling the attention of our readers to this subject, it will not be necessary for us to furnish evidence of the need of such curative institutions in this country. Every day that passes we are reminded of the terrible prevalence of drunkenness. Nor is it, we well know, confined to the lower strata in the social fabric. It has insinuated itself with its fell poison into every part

of the body politic. We find its slaves and victims among the educated and refined, as well as among the ignorant and vulgar—among the wealthy and luxurious, no less than among the destitute and wretched.

No person of right feeling can regard this woeful waste of reason, of health, of life, without thinking of some remedy. And the physician can least of all rest satisfied without devising or discovering some means by which, at least a certain number of these victims of intemperance may be saved from their destroyer. Only some of them—for alas! experience and analogy confirm us in the belief that many are doomed to perish, because, notwithstanding all that may be done on their behalf, they *will* again and again throw themselves headlong into the tide of their passions, till they are at last borne beyond the hope of rescue. But for those who *may be* restored to sanity of will, no effort that can be made ought to be pronounced in vain. It is only of these latter that we desire to speak.

Drunkards may be divided into more classes than even those enumerated by Dr. MacNish in his celebrated "Anatomy." For our present purpose it will be sufficient to mention two—the *habitual* and the *periodical*. These names indicate very different modes of indulgence.

There is this marked difference between these two classes: The habitual tippler has occasionally his awfully lucid moments, and occasionally his deeper debauches, but is during by far the greater part of his time under the influence of stimulant. The periodical drunkard, on the other hand, leads two lives as of two separate individuals: for months he is the soberest of men; then, all at once, almost before he is aware of it himself, he is helplessly in the clutches of his enemy. The cause of the outbreak is sometimes so mysterious as to escape all enquiry. But it is generally found that it has been preceded by an incomprehensible craving, of which neither the *dipsomania* of some medical writers, nor the *alimentativeness* of the phrenologists, gives the faintest idea. *Hungriness of the brain* is perhaps the most correct definition of it. If it be considered how awful a sensation ordinary hunger is, and what it will drive men to do; if it be remembered that ordinary thirst will make the sufferer mad, if it be not assuaged—some notion may be obtained of this hunger of the brain. The immediate temptation which leads a person thus suffering to gratify his appetite, may often be so trivial as naturally to cause persons in health to wonder and to blame, and is inexplicable to the person himself when the fit is over. But it is generally found on examination, that for some time previous the brain has been deprived

of *food* and *rest*. There has been inattention to diet, overwork or excessive vigilance. We are speaking now only of those who do not rush into temptation, but of those who fall in a moment of temporary weakness.

The brain of the habitual drunkard has been, by constant indulgence, reduced to exactly this state of hunger which we have attempted to describe, as the occasional condition of his periodical brother. And the remedy for both is the same. Rest, nutritive food, regular sleep and freedom, as far as possible, from annoying cares—these experience has proved to be the best restoratives to mental and bodily soundness. Along with these restoratives change of scene may be regarded as essential. As long as the poor victim returns from his debauch, weak, nervous and still craving a stimulant, his struggle with his foe is almost invariably a failure: however earnest may be his desire for deliverance, he still remains a slave.

It was the appreciation of this difficulty on the part of the drunkard to overcome his temptation, that first put it into the heart of one of the noblest men that ever lived, Dr. Day, of Binghampton, N.Y., to spend his life in aiding inebriates to reform. Every one has heard of his asylum in Binghampton, and there are hundreds of men, some of whom occupy distinguished stations in commerce, science, art, letters, and even theology, who owe to his care their reasons and their lives. Those of our readers who wish to inform themselves of the success of his efforts, we refer to a little book written by James Parton, on "Drinking and Smoking." The Ticknor & Fields edition may be purchased for thirty-five cents.

This brings us to the point—the necessity for such an establishment in Canada. We do not wish to be considered behind our neighbours in enterprises of benevolence and humanity; and yet with the exception of the private establishment of Mr. Wakeham, near Quebec, there is, as far as we know, no institution for the cure of inebriates. And Mr. Wakeham's "Retreat," notwithstanding the many disadvantages under which it has been conducted, has been the means of effecting a considerable amount of good. There are men and women, too, who, but for the benefits which they derived from its pleasant retirement, would still be grovelling in degrading slavery. We would heartily recommend those who earnestly wish for freedom from temptation, and the opportunity of regaining their strength by rest, to put themselves at once under Mr. Wakeham's care.

The Belmont Retreat, St. Foy Road, near Quebec, is most beautifully situated on a picturesque height, which commands a view of

the valley of the St. Charles, and of the crowding peaks of the Laurentian chain. The scenery of the neighbourhood is among the finest in Canada; and the walks from Belmont in all directions are an ever ready source of pleasure. The house and grounds form a fit centre to such scenic attractions, and without ever leaving the limits it is possible to enjoy abundant exercise, and ample variety of sight and sound dispels monotony.

Mr. Wakeham is not a physician, but two of the leading medical gentlemen of Quebec are in attendance whenever occasion requires their presence. The system pursued is that of entire liberty, honour being the only restraint, and in the great majority of cases, it is successful. Where it fails, other means are used.

In Mrs. Wakeham, the proprietor possesses an excellent assistant in his plans. She is a lady of rare culture and intelligence, and to her admirable management the success of the institution is, in a great measure, due.

Up to the present Mr. Wakeham has received no aid from the Government, although the usefulness of his establishment is generally recognized by those in power. It is to be hoped that he will soon obtain such pecuniary assistance as will enable him to carry out several improvements which he has long contemplated, and to enlarge his accommodation. If this were done, and a greater number of inmates were placed under his treatment, he would be able to undertake their care at less expense than hitherto. The present charge—$8 per week—makes Belmont Retreat accessible only to those who have independent means. Nevertheless, we have no doubt that if the benefits to be derived from a residence there of some months were generally known, there are many persons both in this Province and in Ontario, who would lose no time in taking advantage of them. We hope all those who read this article will bear it in mind. Full particulars may be ascertained on application to the proprietor, Mr. George Wakeham.

But an establishment like Mr. Wakeham's, even if it were made capable of accommodating many more patients than its present dimensions will admit of, is by no means sufficient for the requirements of the country in this unhappy respect. We want institutions on a much more extensive plan, and suitable for all classes of the community. Out of the whole inebriate population, only a comparatively small number would be able to pay at all,—only a very low fraction, indeed, could afford a sojourn at Belmont. By all means let us have Belmont Retreat and other curative establishments like it, adapted for patients of easy circumstances. We believe there is ample room for many such, if properly conducted and widely advertised. But it is not the rich alone who have a claim

on our humanity. Terrible as the evil is to them and to their families and connections, it is far more terrible in its consequences to the poor. We want some means of reforming them if possible; of preventing them from injuring others at all events. The present system of brief imprisonment for open drunkenness is simply a farce. Whoever takes the trouble to read the police reports will see the same names recurring week after week, or perhaps at longer intervals, according to circumstances. Think of the life these wretches lead! They have no chance of regaining their manly freedom, their womanly feeling. And yet some of them *might* be cured. Surely something ought to be done for them.

Now we think that for inebriates of this class—poor persons who have never been committed for any other crime than drunkenness—there ought to be an institution at once penal, industrial, and *curative*. Let them be imprisoned for their own good as well as that of the public; let them be made to work, when they are, on medical verdict, judged capable of working; let their work be useful, paying work; let the proceeds of it be given, in part to the institution, in part to those, if any, who are dependent on them; let them at the same time have such diet, exercise, medicine and recreation, as may be deemed conducive to their recovery; and let them only be discharged when their reformation or restoration is considered perfect. Such an establishment would, of course, be under the direction of a physician—of one, moreover, who had made the treatment of *mania pro potu or ebriositas* his special study; a man of culture and refinement; a man, gentle yet firm, sympathetic without being weak; a man who could tell mere lazy sottishness from disease, congenital or acquired; a man, who like Dr. Day, of Binghampton, had his whole soul in his work. And for this end let him be decently paid, that vulgar pecuniary cares may not distract him from his daily study and never-ceasing experiment.

We are convinced that such an institution would succeed; that it would be an invaluable boon to thousands both living and yet unborn; that it would bring happiness to many households; that it would reduce manifold the number of criminals *of all kinds*; that it would aid greatly in developing our industrial resources; that it would, in fact, bring about a noble revolution.

Is this a chimœra? It is not. It is, in company with the labours of temperance organizations, the best way to decrease drunkenness among the poor. There are at this moment, we believe, many poor wretched victims of intemperance, and martyrs of our present ruinous system of treating them, who, if they were once brought to a normal condition by a course of good diet, proper rest, and

right moral influence, would glory in their recovered freedom and bless for ever the "Good Samaritan" who took pity on them! This is no fancy. At every temperance meeting there are some such persons, who, with tears of gratitude, tell of a similar metamorphosis.

Without such an institution temperance societies are really deprived of much of their influence. To tell a man, whose brain is like a hungry ravenous wolf after alcoholic stimulant, to abstain; to preach to him, when every nerve in his body is afire with thirst, of the blessings of temperance, is like as if a missionary should preach christianity to a Chinaman, at a time when he was starving, and would sell his body and soul for a saucer-full of rice First feed him with normal food, let him have the sweet mercy of sleep, give the burning madness time to cool and dissipate,—and *then*, when he is a reasonable man like yourself, though with will yet weak, preach and teach: and he will listen and learn and thankfully obey.

We have by no means said all that we had to say on this important subject: enough, however, we trust to attract attention to the necessity of some steps being taken, in the direction which we have hopefully indicated, for the cure of drunkenness.

RESURGAM.

Case of Aneurism involving the Arch of the Aorta. By JOHN BELL, A.M., M.D.

The following case is one of Aneurism involving the greater portion of the arch of the aorta, which proved fatal by rupture into the left lung and pleural sac on the 23rd September last. The following are a few notes of the case, some of which were taken at the time, and others are from memory. The patient was a man of about 37 years, English, and of fair complexion.

I saw him a few times in April, 1870, when he was suffering from what appeared to be a rheumatic attack, with pains in his back.

In the beginning of August last, he was following the occupation of night watchman, and thought he caught cold, as he began at that time to suffer from hoarseness, amounting at times almost to aphonia, and from a cough, but no pain anywhere. His physique was good, and there was no evidence of malnutrition. His face, however, wore a peculiar expression, somewhat pale and anxious. I examined the apices of his lungs at the time, and found slight crepitation, particularly on the right side, but the percussion note was resonant, in fact unusually so, and gave no indication of

serious disease of the parts. The rise during inspiration of the upper part of both sides of the chest was full and uniform. I did not detect any aneurismal *bruit*, either because it did not exist, or it was not audible at that time. The chest was large and full. He was prescribed for and advised to change his occupation for day work, which he did. Probably the easy and quiet employment of night watchman obviated the manifestation of much of the distress, from which he might otherwise have suffered. I saw him about once a week. He improved in general health, but with no change in the hoarseness. About a week before his death he called at my office, and a re-examination of his chest revealed no abnormal symptoms, but a scarcely appreciable shade of dulness at the right apex. No *bruit* obtruded itself on my notice, and not suspecting aneurism, I did not look particularly for one.

On Friday, September 22nd, he felt sick all day and vomited several times, suffering from considerable pain across the epigastrium. On resuming work after dinner, on the day following, he coughed up a little blood, and almost immediately after vomited more than a pint. He was taken home where I saw him about 5 o'clock. On examining his lungs, I found the right side quite dull and with a peculiar liquid râle, which did not exist in the rest of the chest. He felt excited and weak from the accident and loss of blood, but complained of no pain. He rested uneasily during the night, and on awaking at about half-past six on Sunday morning, started up in bed, and called out to his wife, who said he went into a kind of fit and died. There was no blood vomited or spat up.

At the autopsy, in removing the sternum, the first cut through the cartilages into the left pleura, was followed by a gush of clear, amber-coloured serum. About half a gallon of it was sponged out, and beneath it lay a huge clot somewhat like the liver in shape and size, filling up the space between the left ribs and partially collapsed lung. Over the lower part of the trachea lay what appeared to be an enlarged glandular structure, but which on the removal of the thoracic viscera, was found to be an immense aneurism of the entire circumference of the whole of the arch of the aorta.

A few thick, strong adhesions fastened the apex of each lung to the pleura, and with these as bases, conical portions were found to be filled with old tubercles, some containing thick pus, and others becoming calcareous. The tissue of both lungs was infiltrated with dark blood, the left lung being almost black, but the air cells seemed to contain a large quantity of air in every part.

As may be seen from the specimen, the aneurism

commenced at the pericardium and extended to the lower portion of the arch of the aorta. The thoracic and abdominal aorta as far as the coeliac axis, was dilated to double its normal diameter; its coats were atheromatously degenerated, and contained brittle plates of calcareous matter. In the aneurism itself the coats of the aorta had gradually become enormously distended. In some parts the serous coat had given way, so that the intervening spaces were composed of fibrous or areolar tissue, and were stained of a reddish or black colour.

At the point of ultimate rupture it had broken through the base of the left lung, completely infiltrating it, and discharging more than a gallon of blood into the left pleura. On opening the larynx no inflammatory or ulcerative disease could be discovered, but the left vocal cords were much less elastic and prominent than those of the opposite side, from paralysis of the motor filaments of the right recurrent laryngeal nerve owing to the pressure of the aneurismal sac, and the left ventricle was shallow and partially filled with adherent mucus.

This case had great interest to me, in that I did not detect any *bruit*, although I examined the man carefully for what I thought to be the matter with him, and must have put my stethoscope several times near the seat of the aneurism. Dr. Bessey also examined him in June, 186[illegible], for admission to a benefit society, and from the record of his examination evidently found no sign of the lesion at that time. Could it therefore be possible that there was no audible *bruit?* The aneurism being large, and having so many large vessels leading immediately from it, might it not have acted as a large reservoir into which the blood flowed noiselessly from the heart—the possibility of a *bruit* being destroyed by the dilatability of the large sac, and the easy escape of the blood by the numerous large and enlarged arteries departing from it?

After writing the above, in looking over Dr. Stoke's treatise on the heart and arteries, I found he mentions a case of aneurism of the transverse portion of the arch which resembled the one under consideration, in that there was no *souffle*, in the change in the voice and in the antecedent pains of a rheumatic character—if those complained of by my patient were caused by the dilated vessel.

Montreal, 1 Belmont Street,
October 15th, 1871.

Hospital Reports.

Montreal General Hospital.—Cases in Medicine and Surgery under the care of Dr. D. C. MacCallum.

CASE 10—EXTENSIVE ULCER TREATED BY SKIN GRAFTING.

(Reported by Mr. A. E. Mallory.)

J. F., aged 12 years, came into the Montreal General Hospital in the early part of the year, with extensive burn extending over the greater part of the right side of the abdomen, and down the thigh nearly half way to the knee.

After having remained in hospital for some time, grafts were implanted, as reported for the *Medical Journal* at the time.

At the present time, July 15th, 1871, there remains a large sore commencing a little below the crest of the ilium, and about two and a half inches wide, which extends down the inner side of the thigh in a triangular shape, about five inches.

The sore is covered with large loose unhealthy granulations, and discharges a considerable quantity of greenish colored pus. Solid nitrate of silver applied to the granulations.

16th.—Sore looking very much better. Red wash kept applied.

18th.—Granulations still a little large. Solid stick again applied. Sore dressed as before.

20th.—Sore looking very healthy. Grafts to be put on to-morrow.

Friday, July 21st.—Six grafts implanted in a row along the outer side of the sore, and fastened on with gelatine plaster; red wash kept applied by means of lint.

22nd.—Grafts can all be seen through the plaster, and of a light colour.

24th.—The three upper grafts seen distinctly, the lower ones scarcely perceptible.

27th.—Plaster removed, the three upper grafts looking well and of a pinkish colour; the three lower ones cannot be seen.

28th.—Only the three upper grafts can be seen; red wash kept applied.

29th.—Grafts looking healthy.

31st.—Only the three visible, and are commencing to extend.

August 1st.—Grafts of a greyish colour.

2nd.—Only two visible.

3rd.—All the grafts have disappeared.

4th.—Three upper grafts visible and extending. Sore healing rapidly from the edges.

6th.—Grafts now about the size of split peas, and extending.

8th.—Extending rapidly towards the outer side of the sore.

9th.—Healing rapidly from the edges of sore, so that the edges and the grafts nearly meet.

10th.—Grafts have united together, forming an island a little to the outer side of the sore.

12th.—The island about the size of a fifty cent piece, and rapidly extending.

13th.—The island has now joined the skin on the outer side of the sore.

14th.—Five more grafts about the size of the head of a small pin placed along the lower border of the sore. The new skin on upper part extending rapidly.

15th.—All the grafts visible.

17th.—Took off the plaster, only the upper two grafts visible. The upper part healing more slowly than before.

18th.—Grafts of a pinkish red colour.

19th.—Commencing to extend.

21st.—Two of last grafts are about the size of split peas.

22nd.—Grafts have united with each other and skin at sides of sore, so as to divide the sore into two, and the new skin extending very rapidly.

23rd.—Sore healing up very rapidly, the new epidermis is very like a thin film of mucus membrane, and of a pinkish colour. Leg put up in a gelatine bandage, and an opening made over the sore.

24th.—Leg very comfortable, sore healing very rapidly.

25th.—Considerable redness and swelling about the sore.

26th.—Redness and swelling have disappeared.

28th.—No unnatural redness and swelling. Sore very nearly healed.

29th.—Sore completely healed, and patient walking about a little.

CASE II—ACUTE DYSENTERY.

(Reported by Mr. A. E. Mallory.)

M. H., aged 25 years. On 3rd August felt very uneasy and complained of pain in the abdomen, headache, thirst and diarrhœa. Stools very liquid and highly offensive, pulse a little faster than normal, tongue covered with a whitish coat and quite dry.

Friday morning, 4th.—Did not sleep well during the night. At 12 o'clock at night the pain in the abdomen became very severe, abdomen quite tender on pressure. Continued this way until 2 o'clock this a.m., when the pains increased in severity. From this time until 8 o'clock a.m., went to stool eight times: at first stools

very offensive and of a serous character, but soon became bloody. Pulse 98; temperature 98 4-5ths, is very restless and cries out with the pain.

Evening.—From 8 o'clock a.m. to 2 p.m. went to stool seven times, motions almost entirely composed of blood. Suffers very great pain while at stool. Is becoming quite weak, has taken no nourishment except one cup of tea, since yesterday.

At 12 o'clock p.m., took min. xx. of tinctura opii.

Half-past 1 o'clock p.m. took of tinctura opii min. xx., and to be repeated in two hours.

4 o'clock p.m., took pulvis ipecac ʒss. in a teaspoonful of water, followed in six hours with pulvis doveri grs. v., and pulvis opii gr. i. Hot linseed meal poultices to the abdomen. Pulse 100; temp. 99 4-5ths°.

Saturday morning, 5th.—Pulse 100; temp. 100 2-5ths. Tongue dry and coated; did not sleep at all during the night; pain very severe. Four and a half hours after taking the ipecac vomited several times, also after first Dovers powder; so that at 12 o'clock took another dose, and at 2 o'clock a.m. chlorodyne min. xx. every two hours for six hours.

Commenced going to stool again at 12 o'clock at night, and went eight times from that till 7 o'clock this a.m. Stools very offensive and mostly bloody.

Pain not quite so severe, but abdomen more tender on pressure. Has taken two cups of tea, half a pint of milk, and three ounces mutton broth.

Evening.—At 11.45 a.m., took morph. mur. gs. ½, turpentine stupes to the abdomen.

At 5.45 o'clock, got pulvis ipecac grs. xv.; and vomited four hours after, and one and half hours after this got morph. mur. gr. ½. Bowels opened three times since noon. Feels quite comfortable. Pulse 100; temp. 99 4-5ths.

Sunday morning, 6th.—Slept very well during the night, bowels moved twice. Feels quite comfortable, but still considerable tormina. Tongue cleaner and more moist. Pulse 98; temp. 99.

Evening.—Pulse 72; temp. 97 4-5ths. Has felt pretty comfortable all day. Bowels opened twice, fæces of an ochre colour and very little blood.

Considerable pain yet. Quite tender on pressure over transverse and descending colon. Has taken about one quart of milk during the day. Tongue a little moist and cleaner. At 10 o'clock p.m. got pulvis ipecac gr. xv., and morph mur gr. ss. in bolus.

7th, morning.—Temp. 97 1-5th; pulse 68. Slept very well during the night. Bowels not opened, nor has he vomited since

the last bolus. Pain in abdomen very much decreased. Abdomen not so tense nor painful on pressure, tongue still coated and quite dry in the centre, but moist at the edges.

Evening.—Pulse 60; temp. 97 2-5ths. Has felt quite easy all day. Went to stool only once, faeces of an ochre colour, and not so offensive. Got chlorodyne min. xx. Has taken considerable nourishment during the day. Tongue moist and much cleaner.

8th, morning.—Pulse 60; temp. 97 1-5th. No stools since last night. Is doing very well, slept pretty well. Tongue cleaner and more moist.

Evening.—Has felt quite comfortable all day. Tongue quite clean and moist. Skin quite moist. Abdomen very slightly tender on pressure.

Discontinue all medicines.

9th, morning.—Slept well during the night. No motion of the bowels since yesterday. Tongue clean and moist. Skin moist. Tenderness over the abdomen very nearly all gone. Is able to be up and go about without much difficulty.

10th, morning.—Is quite convalescent, and feels quite well.

Discharged, being considered sufficiently well to go about his work, which is of a very light character.

CASE 12—ACUTE DYSENTERY.

(Reported by Mr. A. E. Mallory.)

Jane C., aged 38 years, admitted into Montreal General Hospital 25th July, 1871, under care of Dr. MacCallum. Has been sick with looseness of bowels for about three weeks. Had cholera 17 years ago, and about this time every year since has had an attack of diarrhœa, but not so severe as this time. At the commencement of this attack, had very little pain, but went to the stool four or five times per day. Continued this way for a little more than a week, when the stools began to increase in frequency, and be accompanied with very severe pain, motions now became bloody and mixed with faeces and a glairy mucus.

Appetite very much impaired, a good deal of thirst, pulse rapid, tongue coated. Abdomen a little retracted and slightly tender on pressure. Put on milk diet, and one pint beef tea extra.

Ordered—Pulvis doveri grs. v., hydrargyrum cum cretâ grs. v., every four hours; turpentine stupes over the abdomen, followed by warm poultices.

Evening.—Feels much easier since the first powder.

26th, morning.—Feels quite comfortable, does not go to stool so often. Considerable tormina and tenesmus continue.

Evening.—Has been to stool three times during the day, passes very little blood, and pains not nearly so severe.

27th, morning.—Feels quite comfortable, only one motion during the night, which contained a very small amount of blood.

Evening.—Has felt very comfortably all day, went to stool twice, no blood mixed with the faeces. No tenderness over the abdomen. Tongue quite clean. Pulse a little hurried.

28th.—Slept well during the night, and feels quite well. Goes out of hospital to-day, as she has a large family of children to take care of.

CASE 13—ACUTE RHEUMATISM—ALKALINE AND BLISTER TREATMENT.

(Reported by Mr. H. Ross.)

J. B., aged 23, was admitted into the Montreal General Hospital on the 6th September, 1871.

He states that he is a brickmaker, and having to remove earth deposited in the brick-yard during the winter season, he had to stand on the unmelted ice and snow, and consequently his feet were cold and wet for ten hours a day.

Ten days ago he felt pain in his back and limbs, attended with chills and febrile symptoms, since that time the pain is confined to the joints.

Symptoms on admission:

Both feet and ankles, and also the wrist-joints, are very much swollen, hot, and exceedingly painful. He had both feet and hands painted with iodine, before his admission into the hospital.

Tongue red at the tip and edges, and coated with a whitish fur in the centre. Pulse 90; respiration 24; temperature 100. Urine scanty and highly coloured, with considerable deposit of the urates.

The secretions are all acid, and very copious perspiration. Heart sounds normal. Ordered—

℞—Potas Bicarb ʒvi.

Aquæ ℥vi.

A tablespoonful every three hours, also blisters to be applied about three inches above the ankles and wrists.

September 7th.—Pulse 96; resp. 36; temp. 101. Feels much relieved by the effects of the blisters.

September 8th.—Greatly improved. Pulse 96; respiration 28; temperature 99½. Swelling in the joints very much subsided.

September 9th.—Pulse 94; respiration 28; temperature 99.

Perspiration very copious. A slight systolic blood murmur at base of the heart.

September 12th.—Pulse 88; respiration 22; temperature 98⅘. Reaction of the urine and perspiration neutral, feels much better, and is able to turn in bed alone.

September 14th.—Feels well but weak. Ordered—

℞—Quinæ Sulph. grs. xii.
Acid Sulph. dil. ℥ss.
Aquæ ad. ℥vi.

A tablespoonful three times a day.

September 16th.—Feels very well but weak, appetite good, and is able to walk about the wards.

September 24th.—Discharged.

In this case the slight abnormal heart sounds heard on the 9th and 10th, entirely disappeared before his discharge.

CASE 14—PLEURO-PNEUMONIA.

(*Reported by Mr. H. Ross.*)

Mrs. L. B., aged 45, a nurse by occupation, was admitted into the Montreal General Hospital on the 5th September, 1871.

She states that she had a pain in her right side for two weeks previous to her admission to the hospital, which kept gradually getting worse.

Symptoms on her admission :—

A dull sound elicited on percussion over the lower lobe of the right lung—with vocal fremitus increased over same part. On auscultation a friction sound was heard in the right infra-mammary region, and extending to the angle of the ribs—minute crepitation in the infra-mammary and infra-axillary regions. Pulse 116; respiration 36; temperature 102½. Ordered a sinapism to extend from the vertebræ to the median line in front, and

℞—Liq. Ammon. Acet. ℥iii.
Aquæ ad. ℥vi.

A tablespoonful every fourth hour.

September 6th.—Pulse 106; respiration 32; temperature 100 Feels easier, respiration less laboured.

September 7th.—Pulse 92; respiration 32; temperature normal Breathes much more freely, and feels much better.

September 9th.—Pulse 88; respiration 26; temperature normal Tongue coated with a white fur, no motion of the bowels for three days. Ordered an aperient.

September 10th.—Feels well, and no pain on taking a full inspiration.

September 12th.—Pulse 94; respiration 24; temperature 97½. Feels well but weak. Ordered—

℞—Quinæ Sulph. grs. xii.
Aquæ ℥vi.

with extra 4 oz. wine, and 1 pint ale daily.

September 27th.—Slow convalescence the succeeding days; no marked change worthy of note, was discharged to-day.

CASE 15—TETANY OR INTERMITTENT RHEUMATIC CONTRACTIONS.

(Reported by Mr. Wm. R. Nicol.)

H. W., aged 16, was admitted into the Montreal General Hospital, Sept. 20th, under the care of Dr. D. C. MacCallum.

At first sight he appeared to be labouring under an attack of Tetanus, but a careful enquiry into the history, and an examination of the phenomena which the case presented, resulted in a diagnosis of that peculiar condition to which Sousseau has given the name of Tetany. A condition which has been described under the various names of *Intermittent Tetanus; Idiopathic Contraction and Paralysis; Idiopathic Muscular Spasm; Intermittent Rheumatic Contraction, &c., &c.*

When questioned, the patient stated that he had not received a wound or injury of any kind; that he could not account for the attack under which he was labouring; that it had come on gradually and increased in severity, until it had rendered him incapable of doing any kind of work. He further stated that his condition was variable; that when at rest and not excited, he was comparatively easy, but that when nervous and excited, he became much worse—the same effect being produced by forcibly compressing the muscles, or handling him roughly.

He presented the following conditions:—

He had no diarrhœa, on the contrary his bowels seemed to be rather constipated.

His head was bent forward, muscles of the face very much contracted and drawn out of place, opened his mouth with considerable difficulty, mouth puckered, peculiar vacant look about the face, slight convergent strabismus, neck stiff—but the muscles of it not on the stretch—legs very stiff, great rigidity of muscles of the back and abdomen, the latter feeling like a board—when lying

in bed, his back formed quite an arch—could walk with great difficulty, and would sometimes fall in the attempts.

Never complained of pain, excepting severe headache at times. Limbs would remain in any position in which they were placed, for a short time, similar to catalepsy. Pupils dilated and oscillating. Pulse free and strong; respiration natural; appetite unimpaired; considerable difficulty in masticating his food and swallowing it.

Ordered—Pot-Iodidi gr. VIII., three times a day.

Remained pretty much in same condition for about a week, when signs of marked improvement began to manifest themselves.

There was not such great stiffness of the muscles of back, abdomen, and extremities; could walk without falling; no difficulty in swallowing, appetite normal, bowels regular, but still that vacant look about his face. Pulse 80; respiration 19. Continued the same treatment until about the 28th September, when Pot Bromidi grs. x was substituted for the Pot Iodidi. Emplastrum Belladonnae was applied along the spine; under this treatment he made rapid progress, and was able to go about almost quite as well as usual. The muscles at first affected with spasms became relaxed, and his general appearance became much improved. Was discharged October 10th, quite cured.

CASES OCCURRING IN THE PROVINCIAL AND CITY HOSPITAL, HALIFAX, N.S.

(Reported by Dr. T. Venables.)

The two following cases are interesting, as showing the beneficial effects of the bromide of potassium in delirium tremens. In the first case opium was administered in conjunction with the bromide: but when the latter remedy was discontinued, the patient became restless and violent, and on its re-administration he again continued to improve. In the second case no other remedy was given.

J. J., 52, pedlar, admitted May 5th, 1868, under the care of Dr. Hattie. For some years past has been addicted to excessive drinking, and on a previous occasion had an attack of delirium tremens. His friends stated that he had been suffering from delirium for ten days previous to his admission, and had had no sleep for a week. He was excessively nervous and inclined to be violent, and was troubled greatly with vomiting, which had continued at intervals for the past three weeks. Ordered the following mixture:

R—Potass. Bromid ℥ijss.
Aqua ℥iv. M. ft. mist.

To take a tablespoonful every third hour. Beef tea and milk to be given *ad libitum*.

May 6th.—Passed a very restless night. To continue the mixture and take pulv opii gr. ij. at bedtime.

May 7th.—Patient slept for several hours after taking the opiate—ordered pulv opii gr. j. at bedtime. To discontinue the mixture.

May 8th.—Slept for three hours last night, but towards morning became very restless and violent. The mixture to be repeated. From this time till the 16th he continued to take the bromide mixture alone, and was discharged cured on that day.

S. F., 23, labourer, admitted into hospital June 22nd, under the care of Dr. Black. His friends state that he has always enjoyed good health, and has never been addicted to drinking till lately. Had been ailing for nine or ten days, but delirium did not set in until two or three days before he was admitted. At the time of his admission he was very restless and violent—face flushed and pulse very frequent. Ordered—

Potass. Bromidi ʒij.
Aqua ʒiv. M. ft. mist.

To take a tablespoonful every third hour.

June 23rd.—Passed a very restless night, and to-day became so violent as to require confinement in a straight jacket. To continue the mixture.

June 24th.—Slept for a few hours last night, and to-day feels much better. The restleness, to a great extent, has passed off, and he is much calmer. To continue the mixture.

June 27th.—Has been rapidly improving, and now feels quite well.

June 28th.—Discharged, cured.

The following case of gunshot wound of the arm and shoulder, is one of great interest, as a remarkably good example of the beneficial effects of conservative surgery, as well as a good illustration of the antiseptic plan of treatment by means of carbolic acid, so ably advocated by Lister of Glasgow and Adams, of London. The extent of the injury was so great that any attempt at saving the limb would have been looked upon by most surgeons as perfectly useless. Dr. Jennings, however, considered the attempt worth trying, and the result has certainly been most gratifying.

J. G., 26, seaman, admitted April 14th, 1868, under the care of

Dr. Jennings. States that while in the act of getting into a small boat from his vessel, with a loaded gun in his right hand, the trigger caught in the gunwale and the gun was discharged, the charge passing through the right shoulder. Wet cloths and a bandage were immediately applied. Medical aid subsequently arrested the hemorrhage, and he was sent to hospital. On admission the patient was found to be extremely weak, and suffering a good deal of pain in the wound. The soft parts covering the upper and anterior part of the right arm and shoulder were very much torn and bruised, and the upper part of the humerus was broken into fragments. After administering chloroform, Dr. Jennings removed four or five inches of the humerus, leaving the head of the bone in its place; the soft parts were trimmed and the wound dressed with lint, soaked in a mixture composed of one part of pure carbolic acid and six parts of linseed oil. Slight secondary hemorrhage occurred a few days subsequently, but was readily controlled.

May 5th.—The wound has been granulating nicely, and there is a free secretion of healthy pus. Has had a plentiful allowance of beef tea, milk and stimulants. Complains of having a short dry cough, and a feeling of weakness in the chest. Ordered ol. morrhuae ʒj. three times a day. As the head of the bone had necrosed and was lying on the surface of the wound, it was removed.

June 6th.—The wound is filled with healthy granulations. General health very good. The carbolic acid dressing to be discontinued, and ungt. zinci oxyd. substituted. A very peculiar pulsation, about two inches below the right clavicle, was noticed. On examination the subclavian artery was found to run an abnormal course, being situated lower on the chest, and passing in a much straighter line than usual. A distinct bruit was heard.

July 12th.—The wound has quite healed, and the general health is very good.

The following case of fatty tumor of the neck is interesting, on account of its enormous size, weighing at least 31bs., the application of acupressure pins to the bleeding arteries, and the stoppage of secondary hemorrhage by Richardson's Styptic Colloid after Tinct Ferri had failed.

I. J., 69, admitted into hospital May 19th, 186[illegible], under the care of Dr. W. B. Slayter. States that he has always been a temperate, steady man, enjoying tolerably good health. About fourteen years ago first noticed a small hard lump below the lower border of the left parotid gland. It caused neither pain nor inconvenience, but

steadily increased in size, spreading downwards and forwards so as to cover entirely the anterior triangle of the left side, and press upon the larynx and trachea in front. For some little time before admission the tumor has increased so rapidly as to cause a difficulty in breathing.

May 26th.—Dr. Slayter removed the tumor by making elleiptical incisions extending from the lower border of the inferior maxilla to the edge of the sternum, and carefully dissecting the tumor and sheath from the attachment. Acupressure pins were applied to two small arteries, which readily controlled the hemorrhage. Two hours after the operation secondary hemorrhage came on. The wound was immediately opened and all clots removed. No bleeding point could, however, be discovered, there seemed to be a general oozing of blood from the surface of the torn tissues. No blood came from the acupressed arteries. Tinct Ferri Perchlor was freely applied at intervals for ten or fifteen minutes, but the oozing continued. Richardson's Styptic Colloid was then applied, and with the most perfect success, in five minutes all bleeding had ceased. Cold cloths were then applied to the wound, and the patient ordered beef tea, milk and whiskey.

May 28th.—Cold applications to be discontinued, and poultices substituted. Acupressure pins removed, but no return of bleeding.

June 7th.—The patient has been improving since the last date, the wound is now filled with healthy granulations.

July 13th.—The wound is entirely healed over, and the patient's health is quite re-established.

Case of Occlusion of the Vagina—Operation—Death from Peritonitis and Pyœmia.

M. S., 20, a pale, delicate-looking girl, admitted into hospital July 3rd, 1868, under the care of Dr. W. B. Slayter. She states that about two years ago she first noticed symptoms of menstruation, —she suffered severely from pain in the back, loins and head, and had some shivering; from that time to the present she has regularly had all the symptoms of menstruation, but nothing ever made its appearance externally. On examining the vulva, no orrifice in the hymen could be discovered, there seemed to be a complete closed sac. Very little pain was caused by pressure over the abdomen, and no tumor could be felt through its walls. She complained of great constipation, and not being able to evacuate the bowels without extreme pain and difficulty.

On introducing the finger into the rectum an immense tumor was felt projecting backwards towards the sacrum, and almost com-

pletely blocking up that passage; it was hard and inelastic, and did not give a sense of fluctuation to the touch. Assisted by Drs. Cowie and Woodill, Dr. Slayter made an incision through the hymen, and attempted to pass a director into the vagina, but found it impossible to do so as that passage was perfectly occluded. The fore finger was then pushed through the hymen and upwards in the direction of the vagina, care being taken to avoid the rectum. The finger was passed upwards to the extent of about two inches and half, when a second constriction was met with. No opening could be discovered, and the obstacle was so dense as to prevent the finger being pushed through it. A small incision was made and a director passed through it into a large sac above. A bistourie was passed along the groove of the director and the constriction divided backwards towards the rectum. An immense quantity of retained menses immediately escaped, and the tumor in the rectum disappeared. The sac was washed out with warm water and a pledget of lint introduced into the vagina.

July 4th.—Complains of great pain and tenderness in the abdomen increased on pressure, tongue furred and dry, skin hot, and pulse 120. Ordered morphia mur gr. $\frac{1}{4}$ every third hour, hot turpentine fomentations to be applied to the abdomen, and beef tea to be given freely.

July 5th.—The patient feels much better—has very little pain—pulse 100. Ordered the morphia to be given every six hours, fomentations to be continued, and vagina to be washed out with warm water.

July 6th.—Feels very comfortable—no pain—pulse 90. To discontinue the morphia, hot flannels to be constantly applied, and the vagina washed out.

July 10th.—For the past three days has been free from pain, and could bear considerable pressure on the abdomen. Pulse varied from 90 to 100. To-day, however, the pain has returned—pulse 130—skin very hot, and tongue covered with a brownish fur. Ordered morphia, $\frac{1}{4}$ gr. every third hour, and hot fomentations. Beef tea and brandy to be freely given.

July 11th.—Does not complain of much pain—pulse 150—skin cold, and covered with a clammy perspiration—breathing hurried, and abdomen tympanitic. The pain in the abdomen was so severe during the previous night that a large blister was applied, which succeeded in giving the patient ease. To-day she gradually became weaker, the breathing more hurried, and died in the afternoon.

Post-mortem examination thirty-six hours after death, made by Dr. Farrel:—

On opening the abdomen, the omentum and intestines were found greatly inflamed, and covered with lymph; the uterus and ovaries were much enlarged and inflamed; the lower portion of the vagina, to the extent of about three inches, was narrowed above this a large sac formed by the upper part of the vagina and dilated cervix uteri, the internal os was dilated slightly, and the cavity of the uterus was nearly twice the natural size; the mucus membrane lining the vagina and uterus was in a gangrenous condition, and covered with tenacious, jelly-like menses.

The inflammation in this case seems to have come on shortly after the operation, and extended to the uterus, peritoneum and intestines. In a few days pain had ceased entirely, and firm pressure on the abdomen could be borne without inconvenience. The only symptom constantly present, and which would indicate serious mischief going on, was the state of the pulse never falling below 90, and generally varying from 100 to 130. Whether the inflammation of the peritoneum and intestines was caused by direct extension from the vagina and uterus, or whether it was the result of the absorption of the putrescent menses in the sac of the vagina, and consequent pyœmia, is a question very difficult to answer.

Surgery.

CASES OF PARACENTESIS THORACIS.

(Under the care of Dr. Peacock.)

Case 2.—Empyema and Pneumothorax of Left Side in a Young Man—Paracentesis repeated three times—Partial Recovery, but Death some time after Discharge from the Hospital.

G. C. K., aged 22, a clerk, was admitted into the Victoria Park Hospital, on November 6, 1866. He stated that his illness commenced with an attack of quinsy at the end of May. At that time, also, he spat some blood, and he had never since been well, continuing to suffer from cough and expectoration at intervals. About a month or three weeks before his admission he suffered from pain at the left side of the chest, which was, however, relieved by the application of a blister. Since that time he had, on several occasions, after fits of severe coughing, expectorated very copiously for a time, not having much cough or expectoration at other periods. When admitted into the Hospital, he was suffer-

ing much from shortness of breath, and was greatly prostrated. On examining his chest, the left side was found very much expanded, and there was a marked fulness in the mammary region towards the sternum. When in the upright position the whole of the left side was remarkably dull on percussion, and the respiratory sounds were entirely absent, except immediately below and above the clavicle, and at the upper part of the chest and to the left of the spine behind. In the latter situation there was a *souffle* heard with the cough, and towards the lower angle of the scapula the voice was markedly ægophonic. When in the recumbent position the sound on percussion in the mammary region was obviously tympanitic, and the relative positions of the clear and dull portions changed with the variations of the position of the patient. The pulsation of the heart was visible to the right of the sternum, at and about the level of the nipple, and the sounds were there audible, while very indistinct in the normal situation. On the right side of the chest the resonance was clear everywhere except beneath the clavicle, when there was some dullness on percussion, but without any rhonchus; the respiratory sounds were elsewhere loud and compensatory. It was evident that the young man had a considerable effusion on the left side, with some air in the pleura; but the precise nature of the case was not clear. From the occurrence at intervals of severe fits of coughing, followed by copious expectoration, it seemed as if the fluid in the pleural cavity might have made its way through the lungs into the bronchi, and the air might have entered the pleural cavity by the opening so produced; but, on the other hand, the history seemed rather to point to a mere chronic affection of the lung, which, leading to a tuberculous abscess, might have been followed by the pneumothorax and empyema. It was evident that the probability of benefit resulting from the evacuation of the fluid would be much influenced as to which of these views was the correct one. As, however, the patient's breathing was very laboured and difficult, and he was suffering from much constitutional disturbance, and was greatly prostrated, it was decided to attempt his relief by evacuating the fluid from the chest. Accordingly the chest was punctured by Mr. Hilton on November 7, and 84 ounces of a dark-greenish coloured fluid were evacuated, after which the tube was removed and the opening closed. The first effect of the operation was to afford considerable relief; the breathing became much easier, and there was an improvement in the general symptoms, but the amendment was only of short duration.

The following notes were taken on November 24:—The left side is again fuller than it was, but it is not so large as before the oper-

ation. The heart remains displaced to the right side of the sternum. In the upright position there is entire dullness on percussion everywhere except beneath and above the clavicle; but there is a tympanitic sound elicited, when he lies on his back, in the mammary region, and, when lying on the right side, in the axillary region; the respiration being, however, inaudible in the resonant parts. There is scarcely any movement of the left side, and the vocal thrill is there entirely abolished. The right side, on the other hand, moves very freely, and the respiratory sounds are loud and compensatory. He has some cough, but only a little glairy expectoration containing small air-bubbles. The pulse is quick (120) and feeble; the respirations 24 to 28. He takes his food well, the tongue is clean, and his general condition somewhat better since the first puncture.

On the 24th the operation was repeated, and 40 ounces of fluid, similar to that before evacuated, were removed.

The following notes were taken on December 2:—The left side of the chest is still somewhat full, but there is more movement than before. The heart's movements are visible over a large space to the right of the sternum. When in the upright position, there is still entire dullness and absence of respiration on the left side everywhere except beneath and above the clavicle, at the cervical and supra-scapular regions, and to the left of the spine. Decided ægophony is heard towards the lower angle of the scapula, and there is occasional slight pleural crackling audible at the end of a forced inspiration. When he lies down the tympanitic sound on percussion is still detected in the mammary region. The vocal thrill is everywhere abolished on the left side. The cardiac sounds are most distinctly heard to the right of the sternum. The breathing on the right side is loud and compensatory. Pulse 120; resp. 28. Not much cough or expectoration.

12th.—The chest is obviously much fuller than before, and the heart is more displaced to the right side. There is entire dullness on percussion over nearly the whole of the left side, though there is some slight resonance immediately below the clavicle and at the lower cervical region. The vocal thrill is also entirely abolished, and there is occasionally a sense of fluctuation on percussing firmly on the side when he is lying down. The respiratory sounds are inaudible except above and immediately below the clavicle, at the lower cervical region, and to the left of the spine. His general condition has improved since the first operation, but he now only maintains his ground, not gaining flesh or strength. His breathing is better, and his cough is less troublesome; he scarcely expectorates at all; but his pulse remains quick and feeble. On the

14th, the operation was repeated for the third time, an effort being made, by exerting pressure on the thoracic parietes, to empty the cavity to the fullest extent possible. In this way 97 ozs. of fluid of an opaque sero-purulent character were evacuated, after which the tube was again removed and the wound closed.

14th.—The left side of the chest still continues dull on percussion. It is fuller than the right side, but less so than before the last tapping. The heart can still be seen and felt to beat on the right side of the sternum, but the displacement is less than before. The vocal thrill is everywhere abolished, except above and below the clavicle, at the cervical region, and to the left of the spine. The respiratory sounds are more distinctly audible in these situations, and also in the axillary region, than they were. His general condition has improved. He takes his food well, and, though the pulse remains quick, he has almost lost the cough, and has no expectoration.

January 9, 1867.—He has continued to improve since the last notes were taken. There is some contraction at the lower part of the left side of the chest, but the fullness in the mammary region is still very obvious, though it is partly due to swelling of the integuments. There is more movement on the left side. The heart can still be seen to beat to the right of the sternum, but the sounds are most loudly heard to the left of that bone. The respiratory sounds are heard over much wider spaces on the left side at the upper and posterior parts, though still only feebly. The stomachal sound is also elicited by percussion over a considerable space at the lower part. In other situations the dullness remains much as before. On the right side the respiration is loud and compensatory. Upon the whole, he is improved; his appearance is better; he has no expectoration, and, except slightly in the morning, no cough; his breathing is freer, and he has no pain or uneasiness in the chest; but his pulse continues quick, and he does not gain flesh or strength.

30th.—His chest continues to improve, though still very dull on percussion. There is much greater freedom of motion on the left side. It continues in front fuller than the right side; but some of the fullness is obviously integumental. The space over which the respiration is heard above in front, and in the axillary and spinal regions, has considerably extended, though the sounds are feeble, and accompanied by pleural crepitation. Over the larger portion of the chest no respiration can be heard. The heart is still displaced to the right side, its pulsation being visible between the nipple and sternum, and about the level of that body. His general

condition continues better; he has scarcely any cough, no expectoration, and is gaining strength.

February 13.—Left side of the chest dull on percussion everywhere except above, but it moves more freely. There is still considerable fullness, but this is evidently integumental; partly, at least, due to the irritation from the application of iodine, which has been freely used. The extent over which the respiratory sounds can be heard is increasing, though the breathing is still very feeble. The heart occupies the same position as before. He is improving in general condition, and has gained some flesh. When first admitted into the hospital he weighed 9 st. 6 lbs., his height being 5 ft. 8½ in. During the first portion of his residence he lost weight, so that on December 13th, he weighed 10 pounds less than when admitted. He has since recovered the loss, so that his weight is now very slightly greater than when he was first weighed.

The day after these notes were recorded he was discharged from the hospital, at his own request, with the intention of going to the seaside. Up to this point he had certainly improved both in his general condition and in the local symptoms. After his discharge the amendment was not, however, of long duration. An abscess formed in the seat of one of the punctures, which burst, and left a fistulous communication with the pleural cavity, from which a copious, and, after a time, an offensive discharge flowed. Under this he became much exhausted, and died in about a year after his discharge.

While in the hospital he took small and gradually increased doses of iodine of potassium, with spirits of nitric ether, and bark and cod-liver oil, and was allowed a liberal diet, with stimulants. The case was not a favourable one for treatment. There was reason to fear that the left lung was diseased, and that the empyema and pneumothorax were the result of a tuberculous abscess which had burst into the pleural cavity. The precise nature of the case was not, however, clear, and as it was evident that the patient would not long survive if not relieved, it was decided to have recourse to paracentesis. The first effect of the operation was to afford relief, but never to so great an extent as had been hoped; but it may safely be concluded that the patient's life was very much prolonged by the treatment.—*Medical Times and Gazette.*

CALCULI UNDER THE PREPUCE.

Dr. H. W. Nelson read before the Sacramento Society for Medical Improvement, May 16th, 1871, the following article, reprinted in the *Pacific Medidal Journal*:—

I call the attention of the society, this evening, in a few remarks, to a rather novel, and at the same time interesting, case of the formation of calculi under the prepuce, in a traumatic phymosis, which came under my care in 1869, that may be of some value to the surgeon.

Calculi are found, as we all know, in various organs in the body —such as the kidneys, bladder, prostrate gland, and salivary glands.—Those, of course, that are found in the kidneys and bladder are the results of a morbid condition of the urine; those in the salivary glands being deposits from the saliva. I shall not dwell on the causes leading to these formations, as we are familiar with them, but will at once proceed to the case under consideration. The formation in this case, as if in the bladder, must have been a deposit from the urine, in consequence of distention of the prepuce at each time of urination, the opening in the foreskin being so small, that after the expulsive efforts of the bladder were over, there always remained a quantity of urine in the sac, that could not be expelled for want of voluntary contractile power over that part of the organ.

On the 29th of August, 1868, a Chinaman, aged about 35, and to all appearance quite healthy, called on me for advice, and to inquire if I could cure him of his deformity. He could not speak English very well, and it was with some difficulty that I could get at even a partial history of his case, but I gleaned sufficient to make out the true state of things. When a boy, and while playing, he fell from a height, and alighted astride of some hard substance—perhaps a rail or picket, I could not tell which—cutting and lacerating the prepuce extensively, as I could see by the cicatrix. It healed up after their method of treatment, leaving an opening for the urine to pass, surrounded by dense tissue on the upper surface and close to the corona of the gland. The opening was so small that it was with difficulty that I could introduce the point of the smallest silver probe. The foreskin was elongated to the extent of about four inches, and seemed quite thick. Underneath and throughout the whole length, the frœnum was large and thickened, measuring nearly three-fourths of an inch in diameter. He told me that when he urinated, the skin would distend like a bladder to the size of a man's fist, which caused great suffering. He would endeavour to urinate slowly, in order to relieve him of the pain. The stream of urine through the opening in the foreskin was probably the size of a common pin, and ejected perpendicularly. When the bladder was emptied, there remained nearly a gill of urine in the sac, which gradually dribbled away, but not to empty it.

With the assistance of a friend, a dentist, I placed the patient under the influence of chloroform, and made a thorough examination of the parts, but did not detect the calculi then; in fact, did not suspect the existence of any. I proceeded to remove the whole of the foreskin. I made an incision on the anterior surface, extending from the end to the corona of the gland, laying the gland exposed; and, to my surprise, discovered a number of calculi, and removed thirty-eight, in size varying from a No. 6 shot to a buckshot. I then cut away the prepuce with a straight bistoury, commencing at the upper point of first incision; carried the knife downward, cutting through the frœnum; and then upward, on the opposite side, to the point of commencement. Then, with a pair of scissors, I removed a strip of the mucous lining, so that the edges could be easily drawn together. Eight or nine fine sutures were then passed through. The after-treatment consisted merely of water dressing, with loose bandages. In two or three days the parts swelled greatly, and became painful, so that I was obliged to remove some of the sutures where tension was the greatest. About the eigth day, the swelling subsided, and the cut edges commenced to cicatrize, and in a little over two weeks the parts were perfectly healed.

The urethra was very large, and would admit the introduction of the end of my little finger. The distension of the urethra I consider to be caused by the severe pressure of urine against its walls at the time of urinating, as the discharge from the small opening in the prepuce was not sufficiently rapid to keep up with the contractile power of the bladder.

Another singular feature in this case was a depression, or small, smooth cavity, in the gland on the right side. I suppose at the time of each passage of water, the calculi were kept in constant motion, or stirred up as it were, thereby grinding or wearing away this cavity, one of them being kept at that spot by some means.

In three months afterwards I saw the man, when he pronounced himself quite well. He experienced no difficulty in passing his urine, nor had he any symptoms of gravel or stone in the bladder. I have no doubt that these stones were formed in the sac, from a sedimentary deposit in the urine, which could not escape.

WASP STINGS.

Mr. C. D. H. Drury, of Pulham, St. Mary, England, writes to the *British Medical Journal*:—

During the last fortnight or three weeks, I have been called

upon to treat no less than seven cases of illness arising from the stings of wasps.

On August 21st, my cook, while making pastry, was stung in the forefinger of the right hand by a wasp. In less than half an hour she felt exceedingly depressed and weak, and complained of severe headache; and her hand was so swollen that she could not bend her fingers. The eyes were red and bathed in tears; the face puffy, swollen and dusky; and she was completely covered with an urticarious eruption. I could not find any remnant of the sting in the finger, and only with difficulty the place where the sting had entered. I ordered her at once to bed, and gave her fifteen minims of aromatic spirits of ammonia every half hour. She dipped her hand in a strong solution of carbonate of soda, but this only increased the pain; poultices, however, gave immediate relief. The ammonia, too, seemed to do much good; for after two doses the headache abated, the rash began to decline, and she felt much better, although the local pain remained. She scarcely closed her eyes all night, and in the morning I found the arm much swollen as far as the axilla—where she now complained of most pain, although I could not detect that the glands there were increased in size. The lymphatics of the forearm were enlarged and hard. Poultices were continued; the hand was kept in a sling, and an aperient mixture with ammonia given during the next day. By this time the swelling of the arm had subsided, and on the morning of the following day she was sufficiently well to resume her ordinary duties.

Three days afterward, she was again stung—this time at the back of the neck. In a very few minutes she felt so depressed, weak, and faint, that she had to be supported upstairs to bed. In half an hour her face was of a lusky, red colour, and swollen, and her body covered with an eruption, and she suffered from violent headache. I gave her a glass of brandy and hot water, and soon she felt much better. I saw her again in four hours. She then complained of urgent thirst, and was very restless—felt inclined to, but could not sleep. Her throat felt hot and painful; and on examination, I found her tonsils red and swolled. Her pulse was quick and full. I ordered the neck to be bathed frequently, and her throat to be gargled with hot water, and barley-water to be given to drink. I again saw her about five o'clock in the morning. Her throat-symptoms were somewhat relieved, but she was still very restless, and the eruption which remained was of a dusky hue, very like the rash of measles. There was well-marked coryza. In the course of the day she went home; and I heard from her frequently. The eruption lasted for three days and then

began to fade; and now—six days from the date of the sting—she reports herself well, but weak.

On August 25th, my page and housemaid were both stung in the hand. The page had a swollen hand and arm, and much local pain for about twenty-four hours. He found relief from the application of vinegar. The housemaid did not suffer for more than ten minutes, and felt benefit from the application of damp washing soda.

On August 26th, my nurse was stung on the right upper eyelid, and felt immediately much depression, local pain, and severe headache. A little brandy and warm water and the local application of laudanum soon gave relief, but the eyelid remained swollen for two days.

I also visited about this time three patients (females) suffering with swollen arms and hands from wasp stings. The swelling remained in each case about a day. In one, relief was obtained from ammonia liniment; in another, from vinegar; and in the last, from the application of a damp blue-bag, such as is used by washerwomen.

I have either heard it stated, or have read that poisonous matter of the wasp sting has an acid reaction. This I doubt. It may be slightly alkaline, but I think probably neutral. The latter would account for many opposite and different substances giving relief. Many things have been recommended as local applications; for instance, compound camphor liniment, soap liniment, eau-de-Cologne, brandy, whiskey—and, in fact, all the spirits in common use—chalk, vinegar, spirits of sal-volatile, carbonate of soda, spirits of hartshorn, ice, honey, sugar and soap, ipecacuanha, poultices, etc. In this neighbourhood, the old women pin their faith on washing-soda or damp blue-bags.

I would suggest that the treatment be as follows: A careful examination of the wound should be made with a good pocket-lens, and any remnant of the sting removed with a pair of fine-pointed forceps. Laudanum should be applied by means of a cotton-wool swab for at least ten minutes, followed by warm water fomentations. Internally, brandy and hot water should be given at once, and twenty minims of aromatic spirit of ammonia every half hour as long as there is depression. If the mouth or throat be stung, warm flannels should be applied to the neck, and warm inhalations with ether employed. There is sure to be spasm of the rima glottidis in these cases. In no case that I have seen yet would I have given opium internally; I doubt anything but mischief from its use in any of these cases, but I am aware that it has been recommended by medical writers. If local pain be not subdued by

the application of laudanum, then I think I would try the effect of a hyoscyamus poultice or tincture of belladonna sprinkled over a warm damp flannel, and applied to the wound.

I. CASE OF ACUTE GLAUCOMA; IRIDECTOMY; OPERATION AWAKES ACUTE GLAUCOMA IN THE OTHER EYE.

II. CEREBRAL HEMIOPIA OCCURRING ON SIMILAR SIDES, STATIONARY RESULTING FROM AN APOPLECTIC ATTACK.

By Richard H. Derby, M.D., Ophthalmic Surgeon to the Demilt and New York Dispensaries, late Assistant of Professor Von Graefe, in Berlin.

I. Ida K., aged 40, presented herself on the 29th of June, 1870. During the past year she had repeatedly seen rainbow colors about the lights, and latterly she remarked that her reading-glasses were not strong enough. Otherwise, up to the time of her present attack, no trouble with her eyes whatever. Three days ago, while washing, she felt suddenly ill and nauseated, and severe pain in her left eye. Patient went to bed, and leeches were applied to the left temple. The following morning the pain had subsided; toward evening the sight of this eye was somewhat obscured.

Now the tension of the left eye is much increased T † 3. Pupil irregularly dilated. Aqueous humor cloudy. Details of the fundus not discernible. With this eye patient could count fingers when held at a distance of $4\frac{1}{2}$ feet. Vision 1-50. Eccentric vision less certain downwards, inwards, and upwards.

Right eye—Hypermetropia $\frac{1}{8}$. Vision 1.

With the opthalmoscope fundus seen to be normal.

On the 30th of June a broad iridectomy was made on the left eye downwards. On the 6th of July the vision of the left eye had improved to 1-13. Eccentric vision no longer uncertain as before.

8th July.—Until last evening positively no symptom of trouble in the right eye. Then she complained of temporary obscurations of this eye and sense of pressure. This morning patient complains of nausea, severe ciliary neuralgia (right). The right eye presents an exquisite picture of acute glaucoma. Pupil irregularly dilated; tension decidedly increased. On account of the cloudiness of the vitreous, fundus no longer to be seen. Vision 1-5th. No limitation of the visual field. On the 11th of July an iridectomy was made downwards on this eye, and on the 16th the vision was $\frac{1}{3}$.

The observation that in cases of inflammatory glaucoma the operation of iridectomy on the one side may lead to the outbreak of glaucoma on the other eye, was first made by Von Graefe.* Since then Mooren has written to the same effect.† In his last article on the Pathology and Therapeutics of Glaucoma, ‡ Von Graefe finds the outbreak of glaucoma in the second eye, within two weeks after iridectomy on the first, occurs only in cases where an eye afflicted with primary inflammatory glaucoma has been operated on during the period of irritation, and in such eyes as these, where the second eye had already shown signs of the prodomes of glaucoma, this succession was especially frequent. Glaucoma was developed on the second eye within fourteen days after the operation on the first, in more than 30 per cent. of the cases.

II. Mr. C., aged 56, consulted me on the 10th of May, 1871, on account of deranged vision. On either eye the vision was $\frac{2}{3}$, and there was an entirely symmetrical defect in each field of vision. The entire right half of each visual field failed. The remainder of the visual fields was for color as well as for the ordinary test normal.

The ophthalmoscope revealed nothing abnormal in the optic nerve or retina. Hypermetropia 1-36th.

From the history of the case I gathered the following facts. On the 25th December, 1869, patient had an apoplectic seizure, resulting in hemiplegia as well as hemiopia of the right side. The hemiplegia soon passed away, but the condition of the eyes remained the same up to the present time. The hemiopia in this case is evidently to be referred to a paralysis of the left tractus opticus, resulting from apoplexy in the left hemisphere. The prognosis of the case was favorable, at least as far as the danger of total blindness was concerned. According to Von Graefe, entire blindness can supervene on a one-sided apoplectic affection only—

(*a.*) When an apoplectic affection develops itself in the other hemisphere;

(*b.*) When fresh effusions into the hemisphere originally affected cause general cerebral derangement, perhaps through anæmia;

(*c.*) When a basilar disease, directly affecting the trunks of the optic nerves, supervenes;

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* Archiv f. Ophth. viii., 2, p. 55.

† Ueber sympathische Gesichtsstörungen, p. 98.

‡ Archiv f. Ophth., xv., 3, pp. 116, 117.

(*d.*) When a limitation of space in the cranium involves compression of the cavernous sinus, and, in consequence, venous strangulation of the papilla;

(*e.*) When the continued progress of the encephalo-meningitic disease causes a secondary neuritis. ‖

The history of the case made it evident that the original attack was simply one of apoplexy; there had been no evidences of meningeal disease, and the fact that the condition of the eyes had remained the same during so long a period made it extremely improbable that a change for the worse might occur. The patient might, on the other hand, have another apoplectic attack, and such a manner of life as would least conduce to this was recommended to him.—*Medical Record.*

Medicine.

ALCOHOL AND INSANITY.

The question of the ill-influence of alcoholic drinks is now a principal one among those occupying public attention in France, all kinds of evils, whether political, military or social, having been explained of late by their abuse. M. Théophile Roussel, who is member alike of the Academy of Medicine and of the Chamber of Deputies, recently read a long communication before the former body, which, it would almost seem, he must have mistaken for the latter, as it related chiefly to the legislative measures necessary to arrest the course of drinking habits. In all this there is doubtless much exaggeration, for no one can believe the evil of drinking can as yet have exerted the immense influence attributed to it. One of the latest papers on the subject is that of M. Lumier, read at the Academy on the 22nd inst., in which he considers the part which alcoholic drinks have played in the increase of the number of cases of insanity. From the facts which he enumerates, he concludes:—

1. In the North-east of France, the departments which do not cultivate the vine are those which have been first invaded by the alcohols derived from beetroot and grain. There the consumption of wine has remained almost stationary, and that of cider is on the decrease, while the consumption of alcohol has doubled or tripled within the last twenty years.

2. The departments of the same region which do cultivate the

‖ Clinical Lectures on Amblyopia and Amaurosis, translated by Hasket Derby M.D., p. 44.

vine have resorted to alcohols derived from other sources, only at a later period, but even in these the consumption has almost everywhere doubled.

3. In this region insanity arising from drinking has considerably increased in frequency, having attained in some parts the proportion of 41 per cent. among the men, and 21 per cent. among the women. But while in those departments in which the vine is not grown, the increase has occurred chiefly among females, in the others it has scarcely been sensible among them.

4. In the Department of the Orne, which does not produce wine, but where beetroot alcohol is distilled, almost as much spirit as wine is consumed, and almost as much as was consumed twenty years since as now. Consequently, the proportion of cases of insanity from drink, has for a long time been considerable (13 per cent.,) and has not much increased during fifteen years, what increase there has been having taken place exclusively among women.

5. In the East, where more wine is grown than is consumed, and where, some years since, no brandy was known, except that made from the grape in the country itself, the results, in relation to insanity, were nothing alarming; but, since the alcohols of the North have penetrated there, the insanity due to drinking has increased in a very strong proportion.

6. In fine, alcoholism plays a very preponderant part in the increase of the number of cases of insanity, and constitutes, in this relation, as in so many others, a serious danger for society, and especially in the northern and north-eastern departments.

CASE OF CHOLERA IN LONDON.

By James Edmunds, M.D., L.R.C.P., etc., late Senior Physician to the British Lying-in Hospital.

The following report will be of interest at this juncture.

The patient (William C.,) was a respectable married man, 28 years of age, residing at 65 Charlotte Street, Portland Place, and by occupation a storekeeper at a builder's yard, near Regent Street. His occupation kept him so much at the yard, that he took some of his meals there, and was in the habit of using water from a pump to make his tea with. The attack of cholera supervened on the night of Monday, August 14. On that morning he had his breakfast at the yard as usual, and afterwards returned to his home in order to go with an excursion of the Fitzroy Band of Hope, to some grounds connected with *The Green Man*, at Whem-

bley Hill, near Harrow. They went by rail from Euston Square, and arrived at Whembley Hill soon after 11 o'clock a.m. The patient spent the morning with the children, and joined actively in their amusements, including several games of cricket. He made his dinner from food brought from his own home, but he bought a bottle of lemonade at *The Green Man*, and afterwards got, the bottle filled with water twice from the bar. He states that this water was very foul, and so nasty that some of the excursionists spat it out, and others refused to drink it, or disguised it with sherbet powder. He then tried a bottle of ginger beer which he also thought nasty. During the afternoon he was several times dreadfully griped, and had copious watery dejections. Still he played at cricket and skittles very actively all the afternoon, and drank more water. At 5 o'clock he had tea, supplied by *The Green Man*, and probably made from the same water. After tea he was several times griped, but not again purged, and he returned home by train at 8.15 p.m. In the train he felt generally unwell and very sick, but he reached home at 9.30 p.m. without vomiting or dejection. Immediately after reaching home he was dreadfully purged and vomited, the evacuations being discharged "like water from a tap;" this occurred continually, and about 11 p.m. while making his way to the closet he was obliged to stop in the passage and vomit on to the floor. He emitted "fully a quart of fluid quite watery and tasting slightly bitter," after this he got into bed, he then vomited twice into a basin, and about 11.30 he was seized in the left leg with cramp so painful as to make him jump out of bed. While sitting on the side of the bed he vomited again, and reaching towards the basin he fainted and fell over it. His wife got out to help him, and when he recovered he drank a large quantity of cold water and returned into bed. From that time he was excruciated with cramp across the stomach and in the legs. He was also purged from twelve to twenty times more, but being unable to rise the dejections passed under him. The people in the house ran to all the neighbouring practitioners, but unfortunately could get no one to come; about 2 o'clock the father arrived and he called me up. I knew nothing of the patient, and had never attended any of his friends professionally, but hearing that it was a case of cholera, I dressed and went at once. As nearly as practicable I have, up to this point, recited the words of the patient and his friends. They are intelligent and reliable people.

It was about half-past 2 o'clock on Tuesday morning when I saw the patient. The shrunken livid face and the characteristic hoarseness of the voice were so marked that, having seen a great

deal of cholera, I had no need to ask myself the nature of the disease before me, and I addressed myself to investigate the probable origin of the disease, so as to look after the safety of others. The water in the house proved excellent, the cistern was lined with concrete, and having no waste pipe, was exceptionally safe from contamination with sewer gas. The basement also appeared free from bad smells or sanitary defects, and the only points on which I could fix were the pump water at the builder's yard, and the foul water at Whembley Hill. I then examined the patient more minutely. A utensil half full of rice-water vomit stood on a chair by his side, and on lifting up the clothes from the foot of the bed, I saw the body resting in a pool of dejection of a similar character. I dipped out a saucerful of this fluid from between the patient's thighs, and it proved to be characteristic rice-water discharge. There were also the low hoarse voice, the sunken areolæ round the eyes, the pinched livid countenance, the cold whitish ears, and agonising muscular cramps. The case was certainly one of true cholera, and one in which probably a few more discharges would cause hopeless collapse, but I learned that he had joined a Band of Hope at ten years of age, and since then had taken no intoxicating liquors, while his parents were also old abstainers. Of course these antecedents were immensely in his favour, and being a man of small lithe active frame, I thought he would rapidly rally, if the effusion of blood-fluid were stopped. I therefore prescribed the following medicine which I have long relied upon in such cases :—

Spir. chloroformi, ℥j.; acid. sulph. dil. ℥ss., misce.

Take 30 to 60 drops in water every 10 or 15 minutes until the discharges are checked. He was also to suck ice and drink pure cold water *ad libitum*, and though the feather bed was saturated with choleraic dejection, I directed him to be well covered up and to remain where he was, the limbs to be carefully chafed, without exposing him to the cold, and a free current of fresh air to pass through the room. He was to take no other drugs and no alcoholic liquor. At 4 o'clock I saw him again, he had vomited after the first dose of the medicine, but not since, and the dejections were less frequent, and the cramps less distressing. They had carried out the treatment well. The father was to call me up and report progress at 6 o'clock, I learnt that the cramps were still distressing, but otherwise that he was better. To give the drops more largely and drink the iced water very freely, to continue the other treatment and to take no food. At 10.30 I saw the patient again in company with Dr. Buchanan, who having seen the case announced in that morning's *Times*, dropped in at my house after

breakfast to ask how the patient was going, and I induced him to visit the case and investigate the circumstances. The patient was immensely better, and had taken about eleven drachms of the medicine before they stopped it. There had been neither purging nor vomiting for some three hours, and he had kept down a great quantity of water. He had passed no urine. In reference to the question of infection Dr. Buchanan urged that, as soon as the patient could be moved, the bedding should be destroyed, instead of any attempt being made to disinfect it. This point had not yet arisen, but I at once concurred in the suggestion, and the friends undertook to have the bedding destroyed when the time arrived. Dr. Buchanan also advised that the strong white carbolic acid should be used instead of the common article for disinfecting the discharges. This seemed almost an unnecessary precaution, but also was adopted. I ordered the patient to take no more medicine unless the discharges recurred, to lie scrupulously still in bed, and go on as before. But if his stomach continued quiet, to drink cold barley water gradually strengthened with a little good milk. Dr. Thomas Stevenson, Health Officer of St. Pancras, having seen the announcement in the *Times*, also called upon me about 1 o'clock, and I invited him to see the patient and accompanied him to the house. The patient was still better, and his voice was now almost natural. To continue the same treatment. I saw him several times during the after part of the day, he went on well, but had a great deal of rumbling in the bowels and was very prostrate. At night he had that hebetude of countenance and ferrety sclerotic which ushers in the reactionary fever of cholera. He had passed no urine. To continue the barley water and milk, and to go on precisely as before. He slept well that night.

On Wednesday, at 8 a.m., he passed "quite a quart" of urine with some scalding. It was "very dark and thick," it had been carbolised and thrown away, so that I did not see it. On Wednesday night he passed "a pint and a half more dark but clear." He slept badly that night and had much rumbling in the bowels.

On Thursday morning he passed about a pint of urine. The heaviness of features and redness of the eyeballs having pretty well cleared off, he was shifted into another bed in the next room The Marylebone Sanitary Inspector immediately afterwards saw the bedding and took it away to destroy it. The bowels acted of themselves on the fifth day, the motion being described as small tape-like matter. Afterwards the motions became normal. He was kept in bed some days longer, and then gradually got about his room. He was confined rigidly to milk and farinaceous diet

till the eighth day, when broth and vegetables were added, and he was left to return to his ordinary diet gradually, and report progress to me.

On Friday, August 25, he reported himself at my house. It was then the twelfth day of his illness. He was weak and very pale, but going off to Torquay next morning. He has since written to say that he is convalescent.

This patient took no alcoholic liquor during the attack or in his convalescence. It will also be observed that he took no drugs, except during the first four hours of my attendance, when the sulphuric acid and chloroform were energetically administered.

The practical treatment of cholera is a subject to which my attention has been actively called. I saw much of the epidemic in Whitechapel, in 1849. In the autumn of 1853, I was sent by the General Board of Health to Newcastle, and there I had charge of the notorious and filthy district called Sandgate, the focus of an epidemic that killed over 1,000 persons in eleven days. Afterwards I was sent to Dundee on similar duty, and some years later I had charge of cholera wards in Whitechapel. Having also seen a full proportion of cases in private practice; the subject is one in which I have had unusual experience. The following seem to me to be the practical points:—

1. To maintain the warmth of the body by proper clothing, avoidance of exposure, and heated applications if necessary.

2. To economise the muscular power by keeping the patients in bed, and not allowing them to rise for the discharges.

3. To promote the circulation by rubbing the limbs. This must be done carefully, as the patients have little feeling on the surface of the body. I have often seen the skin actually rubbed off their limbs by friends in their anxiety to relieve the excruciating cramps.

4. To restrain "the rapid current of fluid from the blood into the intestinal canal." It may be argued that this current is "a salutary effort of nature" to expel a morbid poison, but certain it is that the patient is too often killed by the effort, and that the drain of fluid produces an abnormal condition of blood, and is followed by stoppage of the circulation at the pulmonary arterioles. Whether this stoppage occur from the blood being too thick to pass, or from the arterioles being tetanised by a hypothetical morbid poison, is much the same as the difference between tweedle-dum and tweedle-dee. Probably the abnormal state of the blood and a tetanised state of the arterioles are both factors in the stoppage. In my hands the dilute sulphuric acid given in full and frequent doses, has proved the best means of checking the osmotic

transudation of liquid, while drinking iced water has been the best means of restoring the fluidity of blood.

5. To relieve the cramps and thus prevent exhaustion, chloroform—the most active and diffusible of the antispasmodics—is the safest and most efficient remedy, and I now never administer any alcoholic liquor, or opium, or any other drugs.

6. While vomiting continues, the administration of food is useless and mischievous, rest is the one thing wanted in addition to the other points.

In the case here reported, the symptoms of collapse followed step by step upon the emission of fluid from the blood, and the symptoms passed away, as these emissions were checked and as fluid was reabsorbed. I believe this fairly represents the history of all cases in which the symptoms are those of pure cholera in a subject of sound constitution, well conditioned tissues, and vigorous age. Under other conditions the pure symptoms of cholera do not develope themselves, and the case is blurred by anomalies, which, though incidental to the attack, are really due to defects of the patient's constitution. Thus, in extreme temperatures, subjects who are aged or weak-hearted, or whose tissues have been damaged by the use of alcohol, often die from syncope, after discharges that would not have seriously disturbed a healthy subject at an age more tenacious of life. Only the night before my patient was attacked, a widow, over 60 years of age, died from cholera close by at 75 George Street, Euston Road. In he same house there was then convalescing from cholera a younger woman, a member of the same family, who had been attacked just as badly a week before, but had survived, doubtless owing to her comparative youthfulness and greater vitality. In the epidemic of 1853, I remember a publican and his wife in the Whitechapel district, who died in the same night after a very few hours' illness from cholera, with comparatively little purging. But the fact was that they were both past middle age, and, though ruddy, and what is called healthy-looking, their tissues were so unsound that they at once broke down under the onset of the disease. Such casualties often throw valuable light upon the disease itself, but they do not furnish the materials for its true theory.—*Medical Press and Circular.*

TREATMENT OF THE SWEATS OF PHTHISICAL PATIENTS.

By M. Peter, Paris.

Sweats should be counted among the most annoying symptoms of phthisical patients. They are met with, in the later stages, of

very various character ; they may indeed be divided into *febrile*, *tuberculous*, and *colliquative* sweats. The first are those which appear on the accession of fever. It is important to recognize them, for if we suppress the febrile attacks by means of quinine, we suppress the sweat also. The colliquative sweats are those which belong to the last period, when the organization succombs ; we can no longer oppose them by drugs.

As to the tuberculous sweats, they might also be called *sleep* sweats, for they occur not only at night, but also during the day when the patient sleeps ; they are connected with that general condition which produces (? Ed.) the tubercle, and not with the state of the lung itself. They are, however, mischievous, and it is necessary to combat them, which can be done both by internal and by external remedies. First among the drugs ranks agaric, the long-known properties of which are still contested by many physicians. Mr. Peter prescribes 20, rarely 30, centigrammes at bed-time, as recommended by Trousseau, and the sweats will be suppressed. Unfortunately the efficacy of the remedy diminishes after a certain time, and it becomes necessary to resort to other means, of which there are many well known : acetate of lead and opium, tannin, etc.

But among the external remedies there is one little known, revolutionizing, (*sic !*) * to which it is important to draw attention. It consists in washing the entire body with vinegar and water. . . . The first patient so treated (at the Pitié), had cough, vomiting, and, above all, profuse sweats. After the very first lotion, the perspiration diminished perceptibly ; after the third night she had no more sweats, and they did not reappear for more than three weeks. It seems that the results obtained by this external medication are far better than those by internal means.—*From Journ. de méd. et de chir. prat.*

Dr. Jacobson, of Copenhagen, records the successful employment of hypodermic injections of *ergotine* in two cases of aneurism. In one case, injections of an aqueos solution of secale were made in the vicinity of the tumour, causing it to disappear in eight days, having existed twenty years. This mode of employing secale for cure of aneurism, is worthy of trial in all suitable cases.—*Georgia Medical Companion.*

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* In Germany, the means under consideration is an old and well-known popular remedy ;—is *it* one of the German notions which are now "revolutionizing" France ?—Ed.

Canada Medical Journal.

MONTREAL, OCTOBER, 1871.

THE FORTY-NINTH ANNUAL REPORT OF THE MONTREAL GENERAL HOSPITAL.

This is in reality the fifty-second year of the existence of this institution.

In the year 1819, Montreal was comparatively a small city with a population of about 18,000. There were at that early period of our history, men possessing all that benevolence and decision of character, which led to the establishment of an institution which has become in our day one of the most important and benevolent charities on this continent. The town of Montreal was at that time increasing in size and importance. Emigration was annually augmenting our numbers, and the Hotel Dieu Hospital, the only hospital in existence at that period in this city, was found to be inadequate to the requirements of the indigent sick. A larger number of emigrants that year sought an asylum and new home in Canada. The western province of Ontario was very sparcely populated, and many of the emigrants who arrived amongst us with a view of going West, were afflicted with fever and other diseases requiring medical treatment and the comforts of a home.

From this increasing necessity a few benevolent gentlemen met together, a subscription was started, and a temporary house leased for the purposes of a hospital. The good effected was so marked during the first year, that it was subsequently decided to secure a site, and erect thereon a building with the intention of a permanent establishment. Ground was purchased, and a sum of £2,200 was raised by public subscription.

"In January, 1821, a special committee appointed for that pur-"pose, entered into a contract for the erection of the edifice "known as the Montreal General Hospital." The building first erected forms the present body of the hospital. It consisted of ten wards, and was calculated to contain about 60 beds. The building was formally opened in May, 1822, and during the first year there were admitted and treated as interns 421 patients,

besides which 397 persons received out-door medical and surgical relief. From this may be estimated the good effected by this institution, and the urgent necessity for an hospital at that early date. It was deemed advisable to set apart an endowment fund, and soon after the establishment of the institution a charter was obtained, by which it was enacted that all subscribers of £25 to the endowment fund, became eligible for election as life governors of the institution.

Now while every credit is due to the citizens for furnishing the means by gratuitous subscription for the support of this institution, we must not forget the medical and surgical staff who performed their share of the work without fee or emolument, nor must we fail to notice that if this hospital has become a source of honest pride to the citizens, that its position and name as an institution at which surgical and medical relief can be obtained, has in the main been effected by the earnest painstaking and honest work of its medical staff. We need not particularize further than by stating that the staff of our hospital has always been selected from the ranks of the foremost men in our profession; in these selections we consider that the governing body have acted wisely, as to-day may be seen the results of such selections, inasmuch as relief is constantly sought by persons non-resident in the city, and who come to Montreal for the express purpose of consulting some one member of the medical or surgical staff of this hospital.

We turn now to the details of the present Annual Report, and we must say that it exhibits the growing interest and pride taken by our citizens generally in the success of this benevolent institution. The broad spirit of liberality and true christian charity are the chief recommendation of this hospital. Not in the spirit of the levite or the priest, but in that of the Good Samaritan, it does good to all. In distributing its benefits it knows no country or creed, it is sufficient to know that a son of Adam is suffering and in want, the Montreal General Hospital is open to his necessity, and is ever ready to bind up his wounds pouring in oil and wine.

On reference to the Report, it will be found that during the year ending 1st May, 1871, 1559 persons were admitted into the hospital as interns. The proportion of Roman Catholics and Protestants of all denominations, was very nearly equal. And of nationalities nearly every country in Europe is represented, besides natives from the United States and East and West Indies. This number is an increase of patients receiving in-door relief of 167 over that of last year. Of out-door patients there were 11,346. This large number will

give some idea of the valuable field for climical observation afforded by this hospital.

On reference to the financial statements, we find that in round numbers the people of Montreal have contributed $10,525, which after all is not so very large a sum when we take into account the benefits derived by the public generally from this hospital. This has been a favourable season so far as the public health is concerned ; but let us suppose that our city had been afflicted with an epidemic, and that we had been scourged by the Almighty hand with disease and death. This amount so liberally contributed would have been insufficient to meet the increased expenditure.

We notice one feature this year among the items of income, viz: the annual collections in the Protestant churches of this city and of Lachine, and we regret that this action is confined to Protestant communions. Our Roman Catholic brethren are not a whit behind the Protestants in liberality and charity. It may be argued that they have a large hospital of their own to support, true, but if by following the roll and having a hospital Sunday, on which occasion all contributions shall be devoted to hospital purposes, the amounts so collected to be equally divided between the two hospitals, we have no doubt that a large sum would be added to the income of both institutions.

The expenditure during the year was some $322 less than the income, besides which some $6,000 was added to the endowment fund. Altogether this report is highly satisfactory, and is a further evidence of the success and usefulness of this institution. We publish below the Medical and Surgical Report :—

MEDICAL AND SURGICAL REPORT OF THE MONTREAL GENERAL HOSPITAL, FOR THE YEAR ENDING 1st MAY, 1871:—

DISEASES, ACCIDENTS, &c., &c., TREATED IN HOSPITAL.

Diseases, &c.	Discharged.	Died.
Abortio	1	..
Abscessus Ac	40	1
" Chr	1	..
Adenitis	3	..
Ambustio	14	..
Amenorrhœa	1	..
Anæmia	14	..
Anasarca	1	..
Anchylosis	2	..
Aneurism Aortic	..	1
" Popliteal	1	..
Anthrax	1	..
Apoplexia	..	2
Arthritis Ch	1	..
Asthma	1	..
Ascites	..	2
Atresia Iridis	2	..
Balanitis	1	..
Bronchitis Ac	25	2
" Ch	10	1
Bubo	8	..
Bursitis	3	..
Calculus Vesicæ	6	1
Carcinoma Hepatis	..	1
" Linguæ	..	1
" Mammæ	2	..
" Recti	1	..
" Thoracis	1	..
" Uteri	1	..
" Vulvæ	1	..
" Var	3	..
Caries Clavic	1	..
" Osscranii	1	..
" Phalangis	4	..
" Tibiæ	1	..
" Vertebrarum	4	1
" Var	3	..
Cataracta	10	..
Cellulitis	4	..
" Pelvic	1	..
Cerebritis Ac	2	3
" Ch	2	1
Cholera Canadens	1	..
" Infautum	..	1
Cicatrix	3	..
Colica	1	
Concussio Cerebri	1	..
Condylomata	1	..
Conjunctivitis	4	..
" Phlycten	1	..
Constipatio	22	..
Contractio Genu	1	..
Contusio	29	1
Cystitis Ac	5	..
Debilitas	21	..
" Postpartum	4	..
" Senilis	5	1
Delirium Tremens	3	..
Dementia	2	..
Diabetes	1	..
Diarrhœa	43	..
Carried forward	326	20

Diseases, &c.	Discharged.	Died.
Brought forward	326	20
Dysenteria Ac	16	1
Dyspepsia	26	..
Ebriostas	1	..
Eclampsia Puerps	..	1
Ecthyma	2	..
Ectropion	1	..
Eczema Ac	4	..
" Ch	1	..
" Capitis	2	..
Emphys. Pulmon	1	..
Empyema	1	4
Endometritis	1	..
Enteritis	3	1
Entropion	5	..
Epilepsia	4	1
Epistaxis	3	..
Epithelioma	2	..
Erysipelas	20	..
Erythema Nodos	3	..
Favus	1	..
Febricula	37	..
Febris a Potu	25	..
" Intermit	14	..
" Post partum	3	..
" Typhoides	52	6
Fistula in Ano	2	..
" Lachrym	1	..
Fractura Clavic	2	..
" Costar	3	..
" Cruris	13	..
" Cruris Co	2	1
" Femoris	10	2
" " un- } un ted }	..	1
" " et hu- } meri }	1	..
" Fibulæ	10	..
" Humeri	4	..
" Maxil Infe	2	
" Metacarpi	1	..
" " Co	2	..
" Metatarsi	3	..
" Oss. Nassi	1	..
" Pelvis	.	1
" Phalang Co	6	..
" Radii	5	.
" " Co	..	1
" " et Ulnæ	2	..
" " Co	.	3
" Tibiæ	1	..
Furunculus	4	..
Gangræna	1	2
Gastrodynia	2	..
Gelatio	15	..
Glaucoma	1	..
Gonorrhœa	18	..
Hæmaturia	1	..
Hæmoptysis	2	1
Hæmorrhoides	6	..
Hepatitis	1	..
Carried forward		

Diseases, &c.	Discharged.	Died.
Brought forward		
Hernia	1	..
" Testis	1	..
Hydatides Uteri	1	..
Hydrocele	4	..
Hydrocephalus Ch	1	..
Hypopion	1	..
Hysteria	14	..
Impetigo	1	..
" Capitis	1	..
Insolatio	1	..
Inversio Uteri	2	..
Iritis	4	..
Ischuria	1	..
Keratitis	8	..
Laryngitis Ac	2	..
" Ch	1	..
Leucoma	2	..
Leucorrhœa	6	..
Lichen Ruber	1	..
Lupus	2	..
Luxatio Humeri	2	..
Mastitis Ac	2	..
Meningitis Ac	..	2
Menorrhagia	5	..
Morbilli	15	..
Morb. Brightii	8	7
" Cordis	13	7
" Coxæ	4	..
" Plumbeus	1	..
Myelitis Ch	3	1
Necrosis	4	..
Nephritis Ac	2	..
Neuralgia	9	..
Onychia	1	..
Ophthalmia Gonor	3	..
" Scrof	1	..
" Tarsi	1	..
Orchitis	7	..
Otorrhœa	2	..
Oxaluria	2	..
Paralysis Part	8	..
Paraphymosis	1	..
Paronchyia	10	..
Parotitis	1	..
Pericarditis	2	..
Periostitis Ac	10	..
Peritonitis	4	1
" Ch	..	1
Petussis	1	..
Phlegmasia Dolens	1	..
Phthisis Ac	..	1
" Ch	28	25
Pleuritis	9	..
Pleurodynia	5	..
Pleuropneumonia	6	..
Pneumonia	14	6
Prolapsus Ani	1	..
" Uteri	2	..
Prostatitis Ac	3	1
" Ch	1	1
Carried forward		

DISEASES, ACCIDENTS, &c., &c., TREATED IN HOSPITAL.—(*Continued.*)

Diseases, &c.	Discharged.	Died.	Diseases, &c.	Discharged.	Died.	Diseases, &c.	Discharged.	Died.
Brought forward			Brought forward			Brought forward		
Prurigo Senilis	1	....	Strictura Recti	3	....	Tumor Fibroid	1	....
Pterygium	1	....	" Urethræ	7	....	" Mammæ	3	....
Pyelitis	1	1	Subluxatio	11	....	" Myeloid	1	....
Rachitis	1	....	Sycosis Menti	1	....	" Oculi	1	....
Retinitis	3	....	Synovitis Ac	9	....	" Ovarii	2	....
Retroflexio Uteri	1	....	" Ch	2	....	" Uteri	2	....
Rheumatism Ac.	48	1	Syphilis Ac	61	....	" Var.	3	....
" Ch	14	....	" Ch	21	1	Ulcus Corneæ	20	....
" Musc	36	....	Tænia Solium	1	....	" Gastric	1	....
Scabies	3	....	Talipes Varus	2	....	" Recti	2	....
Scarlatina	8	4	Tonsillitis	13	....	" Urethræ	1	....
Sciatica	4	....	Torticollis	1	....	" Uteri	5	....
Sclerotitis	2	....	Trachoma	31	....	" Var.	53	2
Sinus	3	....	Tumor Abdom.	1	....	Varicella	1	....
Strabismus	3	....	" Adipose	2	....	Vulnus	21	2
Strictura Esoph.	1	....	" Colli	1	....	" Oculi	2	....
Carried forward			Carried forward			Total	1342	107

MAJOR OPERATIONS.

Amputation of Thigh	2
" " Leg	1
" " Arm	5
" " Foot	2
" " Hand	2
" " Breast	2
Excision of Knee-joint	3
" " Cancerous Tumor	2
" " Fibroid Tumor of Uterus	2
" " Fatty Tumor	1
Carried forward	22
Brought forward	22
Extraction of Cataract	11
Lithotomy	3
Lithotrity	3
Perineal Section	1
Paracentesis Abdominis	1
Operation for ununited Fracture of Femur	1
Extirpation of Eyeball	1
Total	43

MINOR OPERATIONS.

Amputation of Fingers	23
" " Toes	22
Excision of Tumors: Cystic	26
" " Fatty	9
" " Fibroid	4
" " Adenoid	1
" " Conjunctival	1
" " Mammary	1
" Epithelioma	4
Operation for Entropion	11
" " Fistula lachrym	8
" " " in Ano	3
" " Strabismus	3
" " Cicatrix	3
" " Varicocele	1
" " Hydrocele	4
" " Ectropion	2
" " Ununited Fracture	1
" " Hernia Testis	1
" " Harelip	1
Circumcision	8
Ligature of Hæmorrhoids	3
Tenotomy	8
Carried forward	148
Brought forward	148
Iridectomy	8
Removal of Sequestrum	4
" " Foreign body from Eye	3
" " " " " Ear	4
" " " " Esophagus	2
Tapping Hydrocele	10
Evulsion of Nasal Polypus	5
" Nail	6
Parancentesis Thoracis	5
" Oculi	2
Catheterisms	135
" of Nasal Duct	30
Cauterization of Cystic Tumors	5
Reduction of Paraphymosis	4
Abcision of Tonsil	3
Urethrotomy	1
Skin-Grafting	7
Vaccinations	57
Teeth Extracted	248
Incisions Var	292
Wounds dressed	394
Total	1373

FRACTURES TREATED DURING THE YEAR.

IN-DOOR.

Simple	62
Compound	15
Total	77

OUT-DOOR.

Fracture of Acromion	1	Bronght forward	17
" " Clavicle	12	Fracture of Phalanges	1
" " Femur	1	" " " Co	1
" " Fibula	1	" " Radius	15
" " Humerus	1	" " Ribs	2
" " Metacarpal Bone	1	" " Ulna	2
Carried forward	17	Total	42

DISLOCATIONS REDUCED DURING THE YEAR.

In-door: Of Shoulder	2
Out-door: Of Shoulder	7
Total	9

Medical News.

COMPLIMENTARY DINNER TO G. W. CAMPBELL, A.M., M.D., ON HIS RETURN TO CANADA.

It is our pleasing duty to record a complimentary dinner to G. W. Campbell, A.M., M.D., Dean of the Medical Faculty McGill University, given by the Medical profession of our city, and held at the St. Lawrence Hall, on the evening of Tuesday, 10th October instant, on the occasion of his return to Canada after a temporary absence in Europe.

This dinner was confined to members of the Medical profession, and was a slight recognition of the esteem in which Dr. Campbell is held by his confreres. The large majority of those present on the occasion, were old pupils of McGill University, and had received their early professional education in part from their guest. The committee of arrangements received solicitations from many non-professional gentlemen for leave to join in this exhibition of kindly feeling, but it was decided to restrict the meeting to medical men only. At an early hour some forty gentlemen assembled in the parlour of the St. Lawrence Hall, and shortly after seven o'clock dinner was announced.

The chair was taken by William Sutherland, Esq., M.D., having on his right the guest of the evening, and on his left His Worship Mayor Coursol. Dr. Scott, President of the College of Physicians and Surgeons, and Dr. Peltier, President of the Medico Chirurgical Society of Montreal, acted as croupiers. After the usual loyal

toasts the chairman in feeling terms proposed the health of Our Guest. In alluding to the excellent qualities and uniform urbanity of manner of Dr. Campbell, he said it was an old Pagan motto "That silence became a duty, if we could not say anything good of the dead," he would remark that in alluding to the living we should endeavour to speak the truth. There were occasions when even the suppression of truth was a necessity, perhaps a virtue. On this occasion the truth would reveal the sterling qualities of our friend, in fact the honest appreciation of his uniform consistency and professional rectitude, had called forth this ebullition of kindly feeling. Dr. Campbell had always acted the part of a true friend to the junior members of the profession, and in his own experience there had for years subsisted between himself and Dr. Campbell that community of sentiment which was the very essence of true friendship.

In returning thanks, Dr. Campbell observed that he was quite unprepared for such an exhibition of esteem on the part of his professional brethren. That it was more acceptable in being so general, and that he deeply felt the honour conferred by this impromptu meeting. A number of volunteer toasts followed, and a most pleasant evening was spent without one single incident to mar the harmony of the proceedings.

Treatment of Nævus by the Galvanic Cautery.—Dr. Maas, of Breslau, has collected in the *Archiv fur Klinische Chirurgie* (vol. xii.) the histories of 112 cases of nævus treated by the galvanic cautery. The results were as follows: *Capillary Nævus*—cured, 32; improved, 1; result unknown, 1. *Cavernous or venous nævus*—cured, 72; improved, 8; result unknown, 1; died, 3. *Arterial or racemose nævus*—cured, 2; improved, 1. *Nævus combined with other tumours*—cured, 6; improved, 1; result unknown, 2. He derives from the examination of the cases the conclusion that the galvanic cautery is followed by the best results in nævus and is much safer than the injection of perchloride of iron or any other coagulating fluid. It would, however, be wrong to say positively that the remedy is indicated in all cases of nævus. As Virchow has well remarked, the surgeon must take the circumstances of each case into consideration. The battery used in the cases referred to was that of Middeldorpf.—*British Medical Journal*, September 30th, 1871.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Introductory Lecture at the opening of the Medical Session (1871–72) *McGill University.* Delivered October 3rd, 1871. By GEORGE E. FENWICK, M.D., Professor of Clinical Surgery.

GENTLEMEN,—In commencing this the 39th Session of this University by these introductory remarks, I must express my gratification at being selected by my Colleagues to address you, and more especially does this become a pleasing task as it is incumbent upon me in the first place, to welcome the return of our respected Dean, Dr. Campbell, after an absence of a few months in his native country. I feel certain that this sentiment is fully endorsed by every person present. It would be uncalled for to allude more pointedly to our Dean, or to the high position he holds in this country and abroad as a Surgeon of eminence. Suffice it to welcome his return amongst us, and to express a hope that to him may be long spared the vigour of health, to give us all the benefit of his experience and wise counsel. To those of you who return to follow up or complete your studies, I trust that during the recess you have laid in such a stock of health, that with renewed energies both mental and bodily, you will during the present Session exhibit that full measure of talent and industry which has hitherto characterised the Student of McGill University.

To the junior members of the class, and those about to commence your studies—I trust that you have weighed well this most important step in your career, that you have fully considered the responsibilities about to be assumed, and the life of labour, anxiety and unrest, of the Physician and Surgeon, as also the want of sympathy or thankfulness on the part of the public for services which no price can remunerate.

At the outset of your medical studies you will have many things to contend with, many difficulties to overcome, and you may rely upon it that if you neglect the ground

work of the science of Medicine and Surgery comprised in the elementary branches, you will never be able to understand the more practical part of your studies, nor will you be able to comprehend the various operations of nature in the repair of parts diseased or injured, and the means employed by the Physician or Surgeon in husbanding and aiding those various processes. Be therefore industrious, regular and temperate. If you idle away your time you will without doubt be outstripped by your fellows of more industrious habits, and from very shame be inclined to relinquish your studies, thereby disappointing your friends, who perhaps at considerable outlay and inconvenience, have afforded you the advantages of a college course. Endeavour to realize the fact that your time is not at your own disposal. That your duties are as binding and obligatory as though you had entered the counting-house; in a word gentlemen, you are about to qualify yourselves for the earnest duties of life, by which you hope to realize a competence, and make for yourselves a respected name. Acquire therefore habits of industry, regularity, and system, so that at the end of each Session you will experience an amount of satisfaction in having worked honestly and steadily. Thus step by step you will advance, and in the end be prepared to submit with certainty of success to the various tests of your proficiency at the examinations.

Gentlemen, our profession holds out to its votaries no proffers of reward, save those of a conscience void of offence, which is in declining years of more lasting satisfaction than the acquisition of wealth or titled distinction.

The profession of Medicine and Surgery partakes both of an art and a science. We have not to deal with the various contrivances that man has designed for his own aggrandisement or comfort; ours is a far higher and infinitely greater object. It consists in the contemplation and study of the master work of the Almighty hand, of man himself, made in the image of his Creator, which gives us but a faint outline of the perfection of that being in whom we live and move, and without whom we could have no existence. Furthermore, it is the study of the internal works and functions of this wonderful machine, and the laws immutable which guide it in its course, a departure from which leads to derangement or complete arrest of those operations which constitute life and health. The very contemplation of these responsibilities, that you become as it were the ministering servant of Jehovah, that you seek out and try to unravel the laws of health and disease connected with his most perfect work, is in itself enough to elevate the mind and stamp the character, and determine the urgent

necessity of constant and untiring zeal in the pursuit of your profession—but more than this, it points to undeviating rectitude, liberality of mind, unflinching honesty, sympathy with suffering humanity, forbearance with that peevishness and childishness so constantly seen in those who suffer long and severely, and above all, charity towards those foibles which appear unjust to ourselves. The practising Physician and Surgeon is constantly reminded of his own shortsightedness, and is forced to admit his tendency to err in judgment, (how fearful that error when followed by loss of life); with all his labour, with all his success, he will at times painfully experience that there is a limit over which he cannot step, notwithstanding his skill and accurate observation, and that at best he is but a careful and painstaking agent of an all wise and beneficent God. Well may it be called a godlike profession, and the very contemplation of these facts is calculated to elevate the mind, to caution against sloth, want of energy, and neglect of that line of conduct which all should endeavour to follow, and which in the end must lead to success and happiness in life, and of reward in eternity. And now allow me briefly to allude to the work that is before you.

Anatomy is the first subject to engross the attention of the Medical Student; before he attends lectures on this science, or dissects, a familiarity with the bones is deemed necessary, and such knowledge will enable him with greater ease to learn the position, uses, and mode of action of the muscles. To the Surgeon, Anatomy is all important. A knowledge of it guides his hand, and teaches him how and where to cut in the various operative measures which he is called upon to perform. Thus it becomes the very key-stone of his art, the principal part of his superstructure.

The Ancients laboured under great disadvantages in their pursuit of the knowledge of Anatomy. There is no reason for supposing that man's Anatomy has changed, and that it differs to-day from what it was at the Creation. Nevertheless there exists no authentic record on this head, of an earlier date than some five hundred years before the Christian era.

Herophilus is described by Lempriere, as a Greek physician who, lived 570 years before Christ, he was one of the first who dissected human bodies, and is greatly commended in this search for knowledge by Pliny, Cicero, and Plutarch. In regard to the horror which attached to what was in those days considered a desecration of the dead, we cannot but be struck with the zeal, courage, and determination to overcome superstitious prejudices, which must

have actuated the ancients in the study of Anatomy by human dissection.

Galen, one of the earliest writers on Anatomy, and whose works form the basis of modern treatises on that science, received much of his information from the records of Herophilus and Erasistratus, it appears that he never dissected the human body, but contented himself with the inspection of the bodies of animals. The auriculo-ventricular valve of the right side of the heart, received the name "Tricuspid" from Erasistratus, and in the brain we have the Calamus Scriptorius still retained to signify that portion of the floor of the fourth ventricle, supposed to resemble a writer's pen, which name was given to it by Herophilus, as also the name "Ducdenum" to the first portion of the intestines proceeding from the stomach.

Although the study of Anatomy was until modern times, surrounded with unsurmountable difficulties, yet it would appear that the human skeleton was exempted from superstitious dread. The ancient philosophers regarded as essential an intimate knowledge of the bones of the human frame, hence it was the custom of the disciples of the various schools of philosophy to repair to Alexandria for the purpose of studying the human skeleton. Time has not changed the fashion of this method of study, and what was deemed essential to the student 2,000 years ago, still holds good in this nineteenth century.

The study of the bones is freely admitted to be dry and uninteresting, but a thorough knowledge of them is indispensable to Anatomical research. The student cannot at first see the utility of committing to memory the various processes, fossæ, ridges and furrows, designated by unlikely names; but useless and wearisome as these details at first appear, you will find if you examine the subject a little closer, that they present an inexhaustible field of valuable instruction.

Do not be content with the instruction you receive in the class-room, but follow it up by endeavouring to teach yourselves; this can be done to advantage by systematically taking any one bone and ascertaining to what part of the body it belongs, whether it forms a part of the trunk or of the extremities, whether it is of the right or left side, what is its exact position, what duty it has to perform in that situation, how it is adapted to perform its functions, by what means it is attached to other bones, in fact make yourselves thoroughly acquainted with the minutest particular concerning it. But this is not all, you should ascertain its internal structure and conformation, and its mode of development. This method of study cannot but be pleasurable and

interesting, and will be found in after life of practical utility in ascertaining the nature and effects of injuries, and the best methods of proceeding to remedy them.

Again, in studying the bones individually, you become familiar with the means of their articulation with other bones forming joints, and this knowledge will be of essential use in the after contemplation of joint diseases and injuries. This necessarily brings you to the next step in the study of Anatomy, viz.: the description of those agents by which the bones are moved. If you wish to become familiar with these parts you must dissect them, and in doing so, do not hurry over your work, remember "if it is worth doing at all it is worth doing well," dissect slowly and carefully, take sufficient time to clean your dissection, endeavour to expose the parts in situ and retain as much as possible their relations with other parts: in cleaning off your muscles, make out for yourselves their exact point of attachment, take nothing for granted, do not be satisfied with the description of Gray or Wilson, but lay bare the parts, handle them, examine them, and verify in your own minds the truthfulness of the description given in the text books. I will not dwell longer on this part of my subject, except to point out the urgency of acquiring a correct knowledge of the structure and course of other parts, else will you be unable to comprehend the Lectures on Physiology, which are embraced in a first year's course.

In this department you are led to inquire into the minute structure of the several tissues of which the body is made up, also the uses and mode of growth of the organs of the body with the functions they perform in the animal economy. You will follow up the process of development from the mere germinal spot or cell to the full grown foetus, you are led to contemplate the gradual growth of the animal man throughout his career, from the very period of conception to infancy, adolescence, full grown manhood and old age, and even to that period when the functions become so blunted and changed that a stasis or arrest is produced, which is incompatible with the continuance of life. Physiology teaches you the functions of digestion, circulation, nervation; by what means the various parts of the body are nourished or reproduced, and through what means effete and worn out particles, which are no longer of use are eliminated or got rid of. These few remarks are sufficient to show the importance of this study, because you can readily perceive that derangement in function or structure of any of these organs, which are essential to the continuance of life and health, will without doubt lead to disease and death.

In the course of Institutes of Medicine, is included a description

of those changes in the tissues and organs of the body affected by disease, so that the student having had his attention drawn to the appearances of diseased action, is more fitted for observing with profit at the bed-side the phases of disease and their results.

Chemistry and Materia Medica and Botany, are all important to the Medical Student at the outset of his career. As his studies progress, and his sphere of action is transferred from the class-room to the hospital, he will be called upon to observe the effects of drugs on the animal economy, and in certain diseases to test chemically the secretions of the body; hence the necessity of attending to these departments of the science of medicine. But it is not alone here that an acquaintance with chemical laws will be found practically useful; they are all important not only in the investigation of disease, but also in its treatment. Furthermore, in view of the large mineral wealth which is known to exist in this Canada of ours, the knowledge of which is comparatively limited, it becomes a matter of moment for the development of such resources, that men in various sections of the country should possess the means of ascertaining its existence and value. Hitherto this department has been neglected, but during the last three years, this University, fully alive to the importance of this new field for research, has established a science course in connection with the Faculty of Arts, and also a chair of Practical Chemistry in connection with this Faculty, which is imperative. A practical acquaintance with the use of the blow pipe, quantitative as well as qualitative analysis is of the highest importance, not alone in seeking out natural products and ascertaining their nature and value, but is of use in other departments of medical science, more especially in Forensic medicine; the rights of society are occasionally at stake, and the evidence of the Medical Jurist is required to maintain a just and truthful accusation, or to clear up a mystery and thereby relieve the wrongfully accused.

I have thus far gentlemen addressed myself more especially to the junior members of the class, and I have done so purposely, because a student after the first Session will see his way more clearly and learn how with advantage to map out his work.

It will be unnecessary to detain you longer, to call your attention to the more practical departments of our profession—Medicine, Surgery, and Obstetrics, these subjects you will have ample opportunity of hearing discussed at the various classes, and of following up at the bed-side at the hospitals the precepts inculcated. Allow me to advise you in attending hospital practice to keep notes of the cases under observation, some few at least, for these will be of inestimable value in after life. I speak, gentlemen, from my

own experience, as I have in my note-book, the details of many important cases which came under my observation during my pupilage, and which to-day I can refer to with profit and instruction. These notes need not be tediously long, but all important changes should be noticed. In all cases which you decide on recording, make out first an accurate history of the attack, together with the diagnosis. Watch the treatment adopted and its results. Let these notes be short, pithy, but truthful; and do not hesitate to record your own honest conviction, even though you may differ in opinion with your seniors. As I before remarked, take nothing for granted, but submit every assertion made in connection with any given case to the test of time and the ultimate results. By thus watching the progress of disease, and verifying the diagnosis and prognosis which is usually made at the outset of a case, you cannot fail to become familiar with the various phases assumed, and will be better prepared to engage in the active practice of your profession with certainty of success, and personal satisfaction when you leave these halls to enter on your own sphere of action.

The importance of hospital practice cannot be too fully impressed, and this University aware of the indispensableness of this method of instruction, has held out an extra inducement to the Medical Student in the establishment of a Summer Clinique, which is without charge. It is to be regretted that so few members of the class availed themselves of this privilege during the past summer, as the opportunities of witnessing operations of magnitude in the Montreal General Hospital were unusually numerous. I may state that since the 1st of May, excision of the elbow joint has been performed on six different occasions, resection of the knee once, lithotomy four times, besides a large number of other operations of minor account. This will give you some idea of the surgical field which presents itself during the time of recess, and which is lost to those members of the class, who from force of circumstances are obliged to return home.

And now, gentlemen, let me again impress on you the necessity of industry, perseverance, and unswerving honesty. Indulge freely in that independence of action which will make you self-reliant. This is not incompatible with that respect for your teachers which is their due, and which to every right thinking man is commensurate with his own self respect. Do not accept the statements of your teachers as infallible, prove them, analyze them, weigh well whatever instruction you receive, and if any doubt remains on your mind or that you do not thoroughly com-

prehend what you have heard, inquire freely of your teacher who will be always ready to explain what may appear ambiguous.

This is essentially an age of thought and action, of progress and advancement. The world seems hurrying on with rapid strides to that period figuratively mentioned by the prophet, "When the lion shall lie down with the lamb." The observations of Huxley, Tyndall, Lister, and others, must induce thoughtful investigation which cannot but be of practical importance to the future welfare of mankind. The application of views which M. Pasteur enunciated, arrested the disease of the silk worm in France, a disease of the cocoon which created almost a panic as it was at one time, so extensive as to threaten the entire destruction of that insect. May we not hope that the continuance of similar investigations will eventually lead to the arrest of the onward march of such fearful scourges as Cholera, Typhus, Scarlet Fever, or even the more chronic affections, Cancer and Consumption.

Such, gentlemen, is the work, high and honourable which is before you, not alone as students but also as practitioners, and if faithfully and perseveringly followed, there can be no reason why you should not attain the highest rank in your profession, and thereby shed lustre on your *Alma Mater*.

Hospital Reports.

SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL, UNDER THE CARE OF G. E. FENWICK, M.D.

Case 1.—*Case of Excision of the Elbow-Joint for Bony Anchylosis in the Straight Position.*

The subject of the present case consulted me on the 14th of August, 1871, for bony anchylosis of the left elbow-joint in the straight position, of five months duration.

He is of short stature, aged 21 years, strong muscular Canadian lad, the left arm is almost straight, the joint perfectly obliterated, there is no power of flexion or extension, pronation or supination. It appears that some time in March last, he had an attack of Erysipelas, and that in the course of the treatment an incision was made in the vicinity of the joint—there exists at present a cicatrix about half an inch in length, at a point midway between the external condyle and the olecranon. At the time that the arm was lanced no pus appeared, the joint however became inflamed and painful, and after the acute symptoms and swelling had sub-

sided, he noticed that the elbow was stiff and immovable. About three weeks since he applied to a physician, who undertook to flex the limb forcibly under chloroform. This attempt was followed by considerable swelling and pain, but which gradually subsided, leaving the arm still in the straight position and stiff. He applied to me, having heard of a somewhat similar case which was operated on in June last, the details of which will be found in the July No. of the present volume of this Journal. The boy entered the Hospital on Friday, the 25th August, and I decided on operating the following day.

Saturday, 26th August, 1871.—Being placed under chloroform, a longitudinal incision was carried down along the inner side of the back of the joint, of about six inches in length; a second incision was carried outwards, forming somewhat the shape of the letter T. The longitudinal incision was to the outer side of the ulnar nerve, which latter was carefully raised from its bed and held inwards. The tendon of the triceps was divided, and after the soft parts had been cleaned away from the bone, the arm was forcibly flexed, when the epiphysis of the end of the humerus separated without difficulty; the condyles of the humerus were then removed by the saw. I next proceeded to separate the muscular attachments from the upper part of the ulna, and removed the greater part of the olecranon with the head of the radius. On examination it was found that the head of the radius was not entirely removed, and that the two bones were firmly united so that a second slice, including the entire head and part of the neck of the radius was made: this permitted free motion between the lower fragments. One ligature was applied, and two or three small vessels closed by torsion, the wound freely sponged out with carbolic lotion (1 to 40), and all oozing having ceased the edges were brought together with wire sutures. The hand and fore-arm were then bandaged, and the arm supported on a well padded rectangular splint applied on its inner aspect. The wound was left exposed so as to be readily dressed with carbolic lotion and oil silk.

At night the arm was perfectly easy, there had been a little oozing of blood, he felt comfortable and inclined to sleep; pulse 80, full and soft.

Sunday, August 27.—Passed a good night, slept well, he expressed himself as feeling comfortable, the dressings were removed. and the part bathed with warm water.

28th August.—The part was considerably swollen, and a sanious discharge was draining away; to facilitate the escape of this a stitch was removed from the lower edge of the wound. The

dressings were removed and the arm bathed freely with warm water; states that he has no pain, but slight tingling sensation in the little and ring fingers.

29th August.—The wound is discharging freely pus mixed with blood. On the 31st August two more stitches were removed from the transverse incision, this gave exit to a little matter sanious in character, the cavity was syringed out with carbolic lotion which removed several small clots of blood. In all other respects he is doing well, his appetite is improving, and he sits up in bed the greater part of the day.

1st Sept.—Several stitches were removed to-day, the wound has united in the greater portion of its, extent after syringing it out it was fomented well and put up as usual.

On the 3rd of September the splint was removed for the first time, the arm was thoroughly cleansed, the wound syringed out and again put up on the splint, the fore arm supinated so as to place the bones at their upper extremity on the same plane; the discharge has greatly lessened and union is nearly complete, he expressed a wish to leave his bed which was assented to. On the following day the remaining stitches were removed, the discharge of healthy looking pus is small in quantity; the patient was sitting up in a chair, and had been walking about his room.

From this date he steadily improved, the splint was removed on the seventeenth day and left off, the patient being instructed to flex and extend the limb, and also to pronate and supinate the fore arm. He gradually and steadily acquired the power of moving the fore arm without assistance; all discharge ceased, and he left the Hospital on the 5th of October.

Case 2—Excision of the Elbow-Joint for Bony Anchylosis in the Bent Position—The result of Former Injury—Recovery with useful Arm. From Notes furnished by Mr. A. E. Mallory and Mr. G. A. Stark.

W. B., æt 25 years, labourer, was admitted into the Montreal General Hospital on the 11th September, 1871.

He is a healthy robust young Englishman, about 5 ft. 6 in. in height, strongly built and muscular. It appears that in December, 1866, while working a pump, he slipped and fell on the stone, coping and fractured his arm. The arm was set and retained in the splints for two months, at the end of which time the elbow was swollen and painful. An abscess formed over the olecranon process, which was opened and pus discharged, another abscess subsequently

formed on the inner side of the joint. The arm had to be lanced on several occasions. At the end of two months the swelling and pain had subsided and all discharge ceased, but the joint was perfectly stiff and immovable, the position being semi-flexed, the hand considerably pronated.

This seemed a case which offered a reasonable hope of securing a useful limb by the operation of excision, as the man's family history was good, and he himself was in robust health.

The operation was performed under chloroform, on the 25th of September, by a single straight incision of about 7 inches in length, being $3\frac{1}{2}$ inches above the point of the olecranon, and about the same distance down on the posterior aspect of the fore arm. The ulnar nerve was then carefully raised from its bed and drawn inwards. The tendon of the triceps muscle being separated at its insertion, and the bones exposed, an attempt was made to forcibly flex the arm, but this was found impossible from the existing firm bony anchylosis. The soft parts being held aside, the olecranon process was sawn through, after which the remaining attachments readily yielded, and the bones thrown out. The periosteum was carefully raised from the lower end of the humerus, and it was sawn through above the condyles from before backwards. The upper extremities of the radius and ulna were then treated in the same manner, the entire head of the radius and upper exttemity of the ulna being removed. The muscular attachments to the periosteum were preserved; two arteries required the ligature, and several others were treated by torsion. All bleeding having ceased, the wound was sponged out with a solution of carbolic acid (1 to 40) and the edges brought together by eight interrupted wire sutures. A carefully padded rectangular splint was then adjusted to the inner side of the limb, being held in position by broad straps of adhesive plaster. The forearm being previously bandaged was retained midway between pronation and supination, the wound was then covered with a pledget of lint and oil silk wet in carbolic lotion, and the patient removed to bed.

In the evening he complained of pain in the arm, but he was heavy and dull, not having thoroughly recovered from the anæsthetic; pulse 120.

September 26th.—Arm examined to-day, simply by removing the lint, fomenting freely with warm water, a few small clots of blood came away, there was slight oozing, otherwise the wound is looking well. Complains of pain in the arm; pulse 120, and full; tongue furred; wound dressed as before; is taking milk and beef tea freely.

27th.—Much the same as at last report, the oozing however has

ceased, the wound looks well but the part is considerably swollen: complains of pain; pulse 120; bowels not open.

29th.—The arm was re-dressed to-day. On pressure over the side of the wound, a considerable quantity of sanious pus with a few blood clots flowed away; the wound was then syringed out with a weak solution of carbolic acid, and lint applied as before. His general health is improving; bowels acted without medicine; appetite very fair, and tongue cleaning.

30th.—The wound looks very well at the upper part: ligatures came away, and also two stitches removed.

October 3rd.—The discharge from the wound has free exit from two points, these appear to be connected as when the solution is thrown into one opening, it comes out freely from the other. The discharged has however lessened in quantity, the man asked for improved diet, when he was ordered a mutton chop and a pint of ale.

From this date steady improvement followed. On the 7th, all the sutures were removed, the wound being nearly all healed, except at one point which gaped slightly. The same treatment was adopted, the wound was daily syringed out with carbolic acid lotion.

On the 15th the splint was, removed, and passive motion employed, the arm being again supported with the splint.

On the 19th the splint was again removed, and after practising passive motion, a bandage was lightly auplied and the arm supported in a sling, the wound had almost healed, the discharge having diminished very considerably. Motion was practised daily, and the patient was allowed to walk about his ward.

He rapidly improved in general health, the limb gaining strength and more freedom of motion, and he left the Hospital on the 16th November.

Case 3—Stricture of the Urethra of eight years duration—Perineal Section. Reported by Mr. W. L. COPELAND.

This patient has been on several different occasions treated by dilatation, but the stricture has never been entirely cured. Although a large sized instrument has at times passed into the bladder, yet the difficulty invariably returned. At the time of his admission he was suffering not only from the stricture, but from several fistulæ in perinco.

History.—H. V., aged 34, a native of England, has had several attacks of Gonorrhœa, the last about six years since. In 1866, he

contracted chancre near the meatus, which resulted in great narrowing of the opening of the urethra. One year ago he suffered from prostatic abscess, and subsequently was treated for stricture. Internal division was practised, and a large sized instrument was passed into the bladder and retained there for three days. After remaining in hospital some three months he left considerably relieved, and was instructed to pass an instrument into the bladder about twice a week. This he neglected to do, and he returned to the hospital, when he came under Dr. Fenwick's charge October 1st, 1871.

On examination of the case it was found that a No. 3 catheter passed with difficulty, occasioning much pain. In the perineum there was a mass of brawny infiltration from which led several false passages, and there was a constant discharge of urine mixed with pus. The operation of perineal section as practised by Mr. Syme was decided on.

October 7th.—The bowels having been freely evacuated by castor oil and an enema, the patient was to-day brought into the operating theatre and chloroform administered, he was tied in the usual lithotomy position, and a Syme's staff passed through the stricture. This was carefully held by an assistant. Dr. Fenwick then made an incision about two inches in length in front of the bulbous portion of the urethra, the incision was in the raphé immediately behind the scrotum, the urethra being opened the stricture was divided, and the staff passed freely through it and into the bladder. The operator then passed a director from the wound in the perineum into the bladder, and the staff was removed. The next step of the operation consisted in passing a No. 8 silver catheter into the bladder, and tying it in the usual manner by means of tapes.

8th.—Feels comfortable, no pain or uneasiness, the urine was flowing away freely through the instrument; that passed during the night was tinged with blood. This morning it is turbid but not bloody; his pulse is 120; and tongue furred.

9th.—All going on well, complains of slight headache, bowels not moved since the operation; pulse about the same as at last report; and tongue furred; an aperient was ordered.

10th.—Feels relieved; bowels operated freely; pulse 110; tongue much cleaner; in other respects much the same as yesterday.

11th.—Complains of irritation of the catheter, so that it was removed.

12th.—Had a slight rigor, is feverish, and has pain in the

supra-pubic region on deep pressure. Hot fomentations were ordered.

13th.—Had chills to-day, they were slight; the pain is however relieved, the fomentations were repeated; in every other respect he is progressing favourably. The urine passes in part through the wound, but a considerable quantity by the natural passage.

14th.—The patient is progressing favourably, he objected to have the catheter passed to-day, but expressed a wish to put off the operation until to-morrow, when he requested to have chloroform administered, which was assented to.

15th.—Chloroform was administered, and the catheter passed, when a quantity of offensive urine with some pus was drawn off, the instrument was allowed to remain in for two hours.

From this date the man steadily improved in health; he was able to leave his bed and walk about the ward at the end of ten days, but he steadily refused to have an instrument passed unless under chloroform, the wound in the perineum closed, and at the present time a drop or two passes through one of the old fistulæ, but the stream through the urethra is moderately full. He is still in the hospital, but will leave in a few days. In all other respects he is vastly improved.

No. 4.—Case of Stricture of the Urethra with Fistulous openings, resulting from an old attack of Urinary Infiltration. Perineal Section. Cure. Reported by Mr. Robert Howard.

F. R., æt 33, French Canadian, was formerly a brush maker. Was in the United States army for several years, and went through a great deal of hardship and exposure, during that time drank hard, and indulged freely in sexual intercourse. Has had chancre gonorrhœa and gleet, the latter for 14 years; and has suffered from difficulty in passing urine for several years, could not retain his water long, and the stream was small and twisted.

In September, 1870, he suffered from almost complete retention, after much difficulty a No. 2 catheter was passed, and his bladder relieved. This attack was however followed by the formation of a small abscess in the perineum, which on bursting left a urinary fistula; he suffered at this time from great pain across the back and irritation of the bladder.

May 10th, 1871.—Was admitted into the Montreal General Hospital under the care of Dr. Fraser. At this time the stream was small, twisted, he suffered much pain, and a considerable

quantity of the urine passed through the fistula. Gradual mechanical dilatation was decided upon. Towards the end of May, a No. 4 catheter could be passed, and early in June, Holt's dilator was used, followed by the former treatment. This treatment was continued up to the 1st of July, when a No. 10 catheter could be passed. At this time he was transferred to the care of Dr. Drake, who persevered in the treatment, substituting a gum elastic catheter for the silver instrument. The fistulous opening was slit up so as to allow it to granulate from the bottom, and he left the hospital on the 29th of July somewhat improved.

He was again admitted into hospital on the 13th of September, when it was found that the stricture was as bad as ever, but his condition was worse, as there were several fistulous openimgs in the perineum and scrotum, through which the greater part of the urine escaped and gave him much discomfort. The patient came under the care of Dr. Fenwick on October 1st, and he determined to perform Syme's operation of perineal section.

October 9th.—The operation of perineal section was performed to-day. The patient was previously prepared by the administration of a dose of castor oil and an enema, and being brought into the operating theatre he was tied in the usual lithotomy position: he was then put under chloroform, Syme's grooved staff was passed and held in position by an assistant. An incision was then made in the median line, about $2\frac{1}{2}$ inches long, down on the point of the staff, the stricture was freely divided and the staff passed onwards, when a second obstruction was encountered, this was also incised, the staff was then removed and a No. 8 catheter introduced. This readily passed the first stricture, but difficulty was encountered in getting it through the second, so that a deeper incision had to be made, when the catheter was carried into the bladder and tied there. The fistulous openings in the scrotum were slit up, and the patient removed to bed. After his removal to bed, there was considerable hœmorrhage, so that Dr. Fenwick before leaving the hospital, plugged the wound with cotton wool, on which was freely sprinkled Tannic acid, and a compress and bandage were applied, which arrested the flow of blood.

10th.—Did not sleep well, had a rigor during the night; pulse 120; urine passes through the wound and also from the catheter, complains of pain in the loins.

11th.—Did not sleep, had another rigor which lasted 15 minutes, pulse 120; the bandage and plug were removed, the catheter also taken out, a No. 7 was introduced, and a quantity of urine drawn off, when the instrument was removed, the wound was dressed with a lotion of carbolic acid and water.

12th.—Pulse 120; slept better, but had another rigor which lasted some time, passed urine frequently, a considerable quantity through the wound, which gives much pain in passing over the cut surface.

14th.—Had a better night, no rigor; pulse 100; No. 8 was introduced without difficulty, and allowed to remain in the bladder for two hours, pain in the back still continues.

16th.—General symptoms improved; No. 8 was again passed and allowed to remain in for an hour, the wound is granulating and filling up, but some urine still passes through it.

18th.—Had a good night's rest; pulse 94; feels much better, No. 7 catheter was passed and allowed to remain in for an hour.

20th.—The catheter was again introduced and left in, does not complain of the pain in his back, the quantity of urine from the wound has greatly diminished.

23rd.—Does not feel so well, a small abscess has formed in the posterior edge of the scrotum which was freely opened; has passed a good night; the wound is cicatrising rapidly; the catheter was again passed and left in for one hour.

From this date the patient steadily recovered and the wound closed. The same treatment was adopted, viz., passing the instrument every second day, and he left the hospital on the 9th of November, with instructions to return twice a week to have an instrument introduced.

Proceedings of Societies.

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

MEETING HELD 21ST OCTOBER 1871.

The Society met in the rooms of the Natural History.—The President HECTOR PELTIER, ESQ., M.D., ED: in the chair. After preliminary business, DR. KENNEDY read the following paper:

Case of Brain Laceration—the Post-Mortem showing extensive disease of the Kidney, by R. A. KENNEDY, M.D.

Michael Brouder, aged 30, born in Ireland, height 6 ft. 3 in., of well developed form, married two months, a beer driver by occupationn, on Monday evening, August 21st, 1871, at half past eight, received a blow on the head from a stick of firewood in the hands of a man with whom he had been fighting. Accompanied

by Dr. Leprohon, I first saw him about nine o'clock, he was then lying on his back in the lane at the rear of his house, the head to which a wet cloth was applied, being supported by a pillow. On a general examination, it was evident that he had been drinking, judging from the strong odour of his breath. He was sensible, asking me who I was.

The injuries were all upon the head. On examining the head, a scalp wound was observed from which much blood had been lost, but at this time bleeding had almost ceased; this wound was about two and a half inches long, extending from the top of the forehead on the left side directly backwards. On examination with the finger, no depression or evidence of fracture was discovered. There was a considerable tumour over the right eye-brow, with abrasion in the centre; pupils equal and moderately dilated; pulse regular and slightly quickened. With assistance he was able to stand on his feet, walk up-stairs into his house and get into bed. The wound of the scalp was again examined with some opposition on his part, but nothing further was discovered. Dr. Leprohon then left. With some difficulty I dressed the wound with plaster, as he kept continually moving about and wanted to get up, this I ascribed to the liquor he had taken. Afterwards cloths dipped in cold water to which carbolic acid was added, were applied to both the wound and the tumour over the eye-brow. There was also a short scalp wound on the back of the head. Ordered him to be kept perfectly quiet, and not to be questioned.

On returning at half-past ten, found him lying quiet, apparently asleep; he was very easily aroused, pupils equal, moderately dilated; aversion to light, pulse slow and full. To continue directions.

August 22nd, 9 a.m.—Had lain quiet all night, position on back; semi-conscious, easily aroused, and answered when spoken to but confusedly, relapsing again into a semi-conscious condition; surface cool and moist; countenance pale; tongue clean, protruded on asking him to do so; pulse 50, feeble and easily compressed; respiration regular and slow; pupils equal, slightly dilated and sensible to light; muscular power not lost, as he would occasionally lift his hands. The tumour over the right eye-brow was nearly all absorbed. As reaction had not set in, and the depression not very great, I left instructions to keep the body and feet warm, and continue the cold applications to the head. I saw him again at one o'clock, vomiting had occurred at half-past ten, but the reaction was imperfect; he still lay in a semi-conscious condition; surface cool; face pale; pupils unchanged; pulse 50;

respiration deep and slow, but no stertor; urine had been passed in the bed; bowels not moved; there was a tendency to pull at the bed clothes, and occasionally the closed hands would be forcibly extended on the abdomen. The knees were drawn up. Fearing extensive injury to the brain, and that the results might be fatal, I deemed it advisable before subjecting him to any treatment to have a consultation.

Dr. Drake saw him with me at five o'clock. He had just taken the sacrament, and the priest informed me that he was conscious of what he was doing. Pulse 42, soft and compressible; semi-conscious, but could be aroused on loud questioning; face pale; surface cool; pupils normal and sensible to light. Bowels not moved since he received the injury; had passsed more urine in the bed; slight rigidity of muscular system, with occasional spasmodic movements of arms, the right arm being kept much more quiet than left; legs extended and stiff. From the symptoms presented, extensive laceration of brain substance with extravasation was diagnosed.

He was placed on the following treatment:—

℞—Ol. Tiglii. gtt. iss.
Calomelanos gr. v.
To be given immmediately.

Ice to be applied to the head. To the back of the neck a blister of Biniodide of Mercury ʒi to the ℥i of lard. And the following mixture:—

℞—Potas. Bromid. ʒii.
Potas. Icd. ʒi.
Aquæ ℥vi.
Sig.—One tablespoonful every four hours.

Diet—Strong beef tea to be frequently given.

I saw him again at 9 p.m. With difficulty aroused and not sensible; pulse 60, slightly hard; head warm; otherwise symptoms not altered; bowels not moved. The croton oil and calomel were repeated, and sinapisms applied to the legs.

August 23rd, 10.30 a.m.—In company with Dr. Drake. Pulse 72, irregular; pupils sensitive to light and contracted; ecchymosis of conjunctiva of left eye; considerable muscular rigidity alternating with twitching of arms, the right being less moved; there were occasional efforts to bend forwards and to hawk up and spit; tongue retracted in mouth; insensible, could not be aroused; slight stertor; skin moist and warm. The dressing on the wound was removed. There had been no operation from the bowels.

Treatment—An injection to be given immediately, containing—

℥iss Ol Ricini, ℥i Ol Terebinth, in three pints of gruel. Head to be shaved, and 12 leeches to be applied to the temples. The other treatment to be continued.

It was thought advisable to call Dr. Howard in consultation.

3.45 p.m.—Present: Dr. Howard, Dr. Drake and myself. Patient completely insensible, could not be aroused; considerable muscular rigidity alternating with spasm and tendency to epileptiform convulsions; abdominal muscles retracted; surface warm; head hot; pupils equally insensible to light; ecchymosis of left eye increased; pulse 80, irregular and labouring; urine had again been passed. Injection had come away from the bowels, bringing but little feculent matter; some difficulty in swallowing; tongue retracted and curved upwards; leech bites had bled freely. The wound was re-opened, and a thorough exploration made; a slight fissure was discovered extending downward in the frontal bone below the wound, the pericranium not being ruptured. The wound was left open, as it was a question if trephining would not require to be performed at a later time. Dr. Howard concurred in treatment and diagnosis. Treatment to be continued. The croton oil was repeated in a three drop dose, and to re-apply the leeches.

8 p.m.—Pupils contracted and insensible to light; lying very quiet; rigidity and spasm greatly lessened, and more instinctive muscular movements; slight stertor; pulse 85, compressible and very irregular, running occasionally up to 110; skin warm and moist; scalp hot; bowels had not moved since he had taken the last dose of croton oil. As they had not obtained the leeches, I told them to do so at once and apply them. I returned at 9.45. The bowels not having moved, I administered an injection as before; leech bites had bled freely; pulse very irregular and feeble; lying very quiet; no rigidity or spasmodic action; stertor increased. I then left and was informed next morning that he had died at five o'clock.

Previous to death I had examined the urine, it was pale and turbid, there was considerable albumen, and under the microscope, granular and fatty tube casts, its sp. gr. I did not get owing to the small quantity of water obtained.

POST-MORTEM APPEARANCES SIX HOURS AFTER DEATH.

Body in good condition, rigor mortis well marked, this passed off to a great extent before the p.m. was concluded. On the right side of the chest, externally, there are seen some old cicatrices due to operation for pleural empyema, and great hollowing of the right infra-clavicular region. The left eyelid and ocular con-

junctiva are ecchymosed. Pupils moderately dilated and equal. There is a small abrasion immediately over the right superciliary ridge, about the size of a five ct. piece. A little above the left temporal ridge, and extending from a point two inches above the left orbit, is a wound about two and a half inches in length, extending directly backwards; in depth reaching to the pericranium, which latter is not injured. By the finger a fissure is felt below the wound in front, but the bone is not at all depressed. On the vertex is a scalp wound about an inch and a half long, extending transversely. On the temples are the marks of recent leech bites. On removing the scalp, ecchymotic extravasation of blood is met with beneath each of the scalp wounds. Tbe fissure felt previous to death is now seen, but does not extend through the bone. On removing the calvarium, a distinct linear fracture is observed extending upwards through the squamous portion of the temporal to the parietal bone, and beneath the temporal muscle; but there is no depression of the internal table. There is a considerable extravasation of blood, (about two ounces) between the dura mater and the skull, at a spot corresponding to the external wound. The dura mater at this point is slightly discoloured on its under surface, but elsewhere is healthy. The auterior border of the left lobe of the cerebrum is studded with minute points of extravasated blood, elsewhere the membranes do not appear abnormal. On section of the left auterior lobe spots of extravasated blood are noticed in the brain substance, with several points of laceration. At a quarter of an inch deep is a clot occupying a cavity the size of a small almond. In the substance surrounding this part, punctiform extravasations are observed with discoloration and commencing softening. The rest of the brain is apparently healthy.

Chest.—On opening the pericardium the heart is found adherent throughout nearly its whole extent, its surface being covered by a transparent layer of tough lymph, which does not appear to be highly organised. The whole surface of both ventricles immediately beneath the visceral layer of the pericardium is studded with minute points of extravasation. The heart weighs fourteen ounces. On section its tissue is pale, soft, and tears easily, and on microscopical examination was found to be fatty. Cavities: right side empty; left moderately full of dark blood. Valves all healthy. Commencement of the aorta show signs of atheromatous degeneration.

Left Lung firmly adherent to side of chest, detached with difficulty. Weight one pound eleven ounces, everywhere crepitant, slight post-mortem congestion posteriorly.

Right Lung.—Pleural cavity entirely obliterated, and the small remains of the lung very firmly adherent to the upper and back part of the chest; is detached with great difficulty; weight ten ounces; crepitant, floats on water; tubes somewhat dilated; substance very much atrophied, but retaining its divisions into lobes.

Abdomen.—Cavity healthy, the Diaphragm reaching as high as third rib on the right side. Liver and Spleen normal. Stomach and intestines empty. Bladder nearly empty.

Right Kidney—Weight seven and a half ounces; large and congested; feels very firm and tough; capsule somewhat adherent; structure coarse and granular. On section cortical portion is found to be apparently enlarged and encroaching on the medullary.

Left Kidney—Weight four and a half ounces; capsule cannot be separated without tearing its structure which is coarsely granular. But slight distinction between cortical and medullary substance.

At the time I first saw the man, I did not expect that the injury was so serious. I examined the wound carefully, but did not make any exploration beneath the scalp, as I did not feel warranted in so doing. He was quite sensible, but appeared to be a little excited, which I supposed to be due to the liquor he had taken. There was apparently nothing to lead me to expect a fatal result. It was not until the following morning that I observed well marked signs of concussion. It seems surprising to me that the symptoms of concussion should not have been present the previous evening, judging from the injury to the brain as seen at the post-mortem, and whieh must have been present at that time. The reaction was not decided, the symptoms gradually merging into those of laceration and compression, the latter not so perfect at first, but distinct towards the end when stertor was observed. The case is one of interest, not so much from the injury to the brain as to the Bright's disease, and the results of the treatment for pleural empyema. I do not know whether the Bright's disease had been diagnosed during life, beyond my examination of the urine previous to his death. It was found to be extensive, the heart being fatty and enlarged, yet there does not seem to have been any complaint on his part as expressed by his friends. There was no anasarca, the body was well developed and firm, and he followed his usual avocation without any apparent illness; indeed his wife has since informed me, "that he was quite well and strong."

It is true, that in granular kidney, there may be no anasarca, and that probably one-fourth of the cases run their course with-

out it; but here was a condition of organs, which a priori I should think could not exist without anasarca occurring, taking more especially the diminished amount of lung substance into consideration. Chemical evidence proves that the blood like the urine, undergoes very important changes in Bright's disease. The blood in this case, must have in a great measure been so changed, judging from the fatty condition of the heart and the atheroma of the aorta. The blood could not have been healthy, the fibrine among other things was likely altered, being incapable of forming a firm clot, and would take a longer time in coagulating. From the condition of the lungs, there being a diminished amount of lung surface to purify the blood; either an increased amount of work must have been imposed on what remained, or else the blood must have been improperly purified. This latter being likely the case, as the red corpuscles in Bright's disease circulating through the lungs take up but little oxygen, and part with but little carbonic acid with which they may be charged. The oxygen being probably deficient, and the albumen also deficient, being drained from the system by the kidneys, the blood would become highly charged with carbonaceous and fatty matters. The heart struggling to propel forward this impure blood, must have been more or less embarrassed, and consequently as in this case, would become enlarged, the increase not being of healthy tissue; the proper elements of nutrition being replaced by the fatty matters, especially cholesterine, which abounding in the blood are deposited in its tissues.

This change also had occurred or was occurring In the arteries as shown by the atheromatous condition of the commencement of the aorta. That the blood must have been so altered, I think is further shown by the peculiar punctiform extravasations observed beneath the serous covering of the heart's surface. In healthy tissue there is an affinity between the arterial blood and the tissue to be nourished; this affinity must exert an undoubted influence in promoting the circulation through the capillaries and veins, now if the blood is unhealthy, there cannot be that affinity that there should be, consequently the circulation would be delayed, the red corpuscles would accumulate, the capillaries become distended, it would require but very little force to rupture them at points. Either rupture with escape of blood, or else an effusion of serum must occur.

There may have been with this a subacute attack of pericarditis of a late date, if the process was not going on at the time of his death. When he had the attack of pleurisy there had existed also pericarditis, the result being the firmer adhesions which were

found at the post-mortem; but that a later attack had occurred, might be inferred from the lymph found on most of the heart's surface, it tore easily and could be readily detached, and had not that appearance which highly organised lymph presents.

Now if this was the condition of the blood, of which I think there can be no doubt; should there not have been some serious symptoms of derangement during life? And did this have any influence on the injury from which he died? It seems to me that the clot found between the dura mater and the skull, must have been poured out slowly, as the signs of compression were not so decided as I should suppose, had such a large clot been poured out quickly. The blood not being in a condition to plug the vessels, hæmorrhage would go on, and the sign of compression would be progressive, as I think they were in this case from the insensibility gradually deepening, and the slight stertor towards the end, though these symptoms were more or less complicated with the symptoms of laceration. Moreover, if there had been no extravasation, would the laceration of the brain have been sufficient to produce death at so early a stage? It must be remembered that only the anterior lobe of the left hemisphere was injured, and that the nervous centres at the base were not. There are many cases on record which I need not here recite, of extensive injury to the brain followed by recovery, but from the probable condition of the blood could this have occurred.

Before closing, I would also put the query:

Was the empyema the starting point of the Bright's disease? and if so does this not tend to disprove the theory as given by Dr. Dickenson in his work on kidney disease; that long continued suppuration is followed by amyloid degeneration of the kidney, for in this case during the treatment for the pleural empyema, he wore a drainage tube in his side for over a year.

PERISCOPIC DEPARTMENT.

Surgery.

(From the "New York Medical Journal").

REMARKS UPON THE DIAGNOSIS OF OVARIAN TUMOURS FROM FIBRO-CYSTIC TUMOURS OF THE UTERUS.

By Charles C. Lee, M.D., Surgeon to the Charity Hospital, formerly Surgeon to St. Vincent's Hospital, etc.

Within the last ten years the study of ovarian disease has passed from the region of vague conjecture into the light of exact know-

ledge. In no other department of medicine, excepting ophthalmology have the advances been so rapid and the old points of departure so completely swept away. Ovariotomy, which, in 1861, was still experimental, and which ten years before that was derided by the vast mass of the profession, is in 1871 as firmly established as any surgical procedure. Nay, in cases that have been properly discriminated, it is decidedly more successful than most of the so-called major operations of surgery.

But it is, unfortunately, at this initial step—the differentiation, that is, of purely ovarian growths from those connected with the other abdominal viscera—that the great difficulty in the management of such cases occurs; and, as all treatment of necessity hinges upon diagnosis, this obscurity in complicated cases remains to the present day the great bar to the perfect success of ovarian surgery.

An immense amount of labour and ingenuity has been expended in this direction; but that almost insuperable diagnostic difficulties still occur, despite the efforts of Kiwisch, Spencer Wells, Clay, Keith, Kœberlé, Peaslee, and Atlee—names illustrious in the records of ovarian pathology—the cases detailed in this paper will render evident.

What are the leading conditions likely, in a given case, to be confounded with an ovarian cyst? Prof. Thomas, in his admirable chapter upon "Ovarian Tumours," thus enumerates them:*

Fecal accumulation.
Extra-uterine pregnancy.
Normal pregnancy.
Uterine fibroids.
Ascites.
Hydatids.
Distension of uterus by fluids.

In Mr. Baker Brown's work on the "Surgical Diseases of Women,"† they are somewhat more fully classified, as follows:

Retroversion and retroflexion of uterus.
Tumours of uterus; *a*, solid; *b*, fibro-cystic.
Ascites.
Pregnancy.
Pregnancy complicated with ovarian dropsy.
Cystic abdominal tumours.
Distended bladder.
Accumulation of gas, or of fæces, in intestines.

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* "Practical Treatise on the Diseases of Women," first edition, p. 536.

† Second London edition, p. 308.

Enlargement or tumours of spleen, liver and kidneys.
Recto-vaginal hernia, with displacement of ovary.
Pelvic abscess.
Retention of menstrual fluid.
Hydrometra.

The lists given by other systematic writers on the suject agree substantially with the foregoing.

From most of these conditions the differentiation of an ovarian tumour cannot be said to be difficult to a reasonably careful practitioner, for either the history of its development or the physical signs obtained by a conjoined abdominal and uterine examination will nearly always suffice to decide the question.

But one of these affections presents difficulties so immeasurably greater than the rest, that its consideration alone will occupy us at present. We refer to the so-called "fibro-cystic tumour of the uterus," or the uterine fibroid that has undergone cystic degeneration, an exceedingly rare growth and essentially distinct from the ordinary fibroid in whose substance minute fluid collections have formed. The anatomical structure of these formations is minutely described by Dr. C. G. Ritchie,* from dissections of specimens removed by Spencer Wells. Their pathology was first studied by Cruveilhier, who delineates their appearance† and divides them into two classes. One of these consists of irregular cysts with undeveloped walls, due apparently to an œdematous infiltration of the fibroid, the "interlobular spaces" of which gradually dilate and finally give way from the pressure of the interstitial liquid, Anfractus cavities are thus formed, more or less closely resembling true cysts, filled with a limpid serous liquid, generally of a light yellow hue, but sometimes bloody. In the second variety are found perfect cysts of smooth walls, which Kœberlé considers due to the progressive dilatation of the lymphatic vessels.‡ The cavities usually communicate with each other, the larger ones being spherical in shape, while the smaller accessory cavities are flattened or shaped like irregular sinuses. Their liquid contents are yellowish, limpid, fibrinous, and spontaneously coagulable.

Mr. Paget thinks the cysts are due either to a "local softening and liquefaction of part of the tumour, with an effusion of fluid in the affected part; or to an accumulation of fluid in the interspaces of the intersecting bands; and these are the probable

* Wells, "Diseases of the Ovaries," vol. i., p. 259.

† Anat. Pathol., livraison xiii., pl. 4.

‡ Gazette Hebdom., No. 11, 1869, p. 164.

modes of formation of the roughly-bounded cavities that may be found in uterine tumours." §

The following cases, in which fibro-cystic tumours, were excised under the impression that they were ovarian cysts, will illustrate the foregoing remarks:

Case I.—E. B., aged forty-five, single, was admitted to St. Vincent's Hospital, October 23rd, 1869, with the following history: Two and a half yeers ago she observed a swelling of her right foot and leg, and four months afterward noticed that her abdomen was steadily increasing in size. The latter symptom was accompanied by abdominal pain and occasional diarrhœa, which resisted all efforts at treatment.

At this time the existence of an ovarian tumour was suspected by her physician, but no special treatment was directed to it. In July, 1869, while a patient of the Northern Dispensary, she was tapped by Drs. Burrall and Whitehead, surgeons to that institution, and ten and a half quarts of a thin, chocolate-coloured fluid were drawn off. In a fortnight the cyst began to refill, and continued slowly to do so until the date of her admission to the hospital. It appears on this occasion all the physicians present concurred in the opinion that the tumour was ovarian, and the patient was subsequently urged by them to have it removed, but declined.

On entering the hospital she was subjected to careful examination, and the thoracic organs were found healthy, urine non-albuminous and normal, appetite good, and bowels moderately regular. Her complexion was exsanguine and chlorotic, the expression irritable and depressed (*facies uterina*), but the pulse full and very strong.

The circumference at the umbilicus was forty-three inches; from the ensiform cartilage to the umbilicus, eleven inches; from the umbilicus to the symphysis pubis, nine and one-quarter inches, and from the umbilicus to the anterior superior spinous process, on either side, ten and three-quarter inches. The uterus was somewhat elevated, but seemed normal in its relations, admitting a sound to the apparent depth of two and one-half inches; *it was perfectably moveable on the sound, without imparting the slightest motion to the abdominal tumour.*

The abdominal walls were also freely moveable over the tumour in every direction. The menstrual discharge had ceased about a year previously, but, six months before her admission to the hos-

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§ Lectures on Surgical Pathology, third London edition, p. 479.

pital, had re-appeared and recurred scantily every three weeks; no profuse flow had at any time existed.

Upon these data the diagnosis of ovarian cyst, probably unilocular and free from serious anterior adhesions, was made; a consultation confirmed this view of the case, and, after the risks and chances of extirpation were fully explained to the patient, she decided to have the tumour removed. After a few days of preparation the operation was performed, November 2nd, 1869, in presence of the surgical staff of the hospital, and Drs. Elliot, Peaslee, Sayre, Burrall, Weir, Kammerer, and others, of New York, and of Dr. A. N. Dougherty, of Newark, etc. Anæsthesia by chloroform, administered by Dr. Newman.

The cyst was exposed by the usual median incision, and, contrary to expectation, was extensively adherent to the peritonæum in front. These adhesions were easily separated and the contents of the cyst evacuated by Dr. Thomas's modification of Wells's trocar, the umbrella-like slide of this instrument holding the walls of the flaccid cyst with perfect security. About the same quantity of thin, brownish fluid was drawn off as on the previous occasion in July. As the cyst was emptied slight traction was made upon it, when the whole posterior and lower surface was found closely adherent to the mesentery, intestines, and pelvic organs. In fact, no pedicle at all existed.

At this juncture the operation had been carried too far to be abandoned, and no course seemed open but to detach such of the intestines as could be separated, and to cut away the cyst-walls from the uterus and bladder. In the former effort a portion of the small intestine was lacerated by my finger. The torn gut was held by an assistant, while as much more of the cyst was cut away as could be detached. The hæmorrhage from the thickened cyst-wall was arrested by persulphate of iron, silk ligatures (cut short) being applied to the larger vessels; and the wounded intestine was then closed by a fine silk continued suture. The peritoneal cavity was carefully cleaned of all blood and other fluids, and the external wound closed with silver wire, the deep stitches including the peritonæum. A small quantity of brandy and a hypodermic injection of morphia were administered, and the patient carefully removed to her bed, the operation having lasted two hours and twenty minutes.

There was marked exhaustion, but reaction slowly followed, the pulse being 64 at the conclusion of the operation, and 84 with increased volume four hours afterward.

Injections of beef-tea and brandy were given, another hypodermic injection of morphia repeated during the night; the patient

slept about four hours, and in the morning was somewhat better. The same treatment was continued during the ensuing day, and no drawback occurred until evening, when the pulse began to sink and severe abdominal pain appeared for the first time. This was referred mainly to the epigastrium and the left iliac region, where lay the wounded intestine. In this condition the patient sank slowly, and died of exhaustion and incipient peritonitis thirty-one hours after the operation.

The autopsy, made seventeen hours after death, showed general peritonitis in the forming stage, most marked in the left iliac and pelvic regions, inflation of the small intestines, and about six ounces of bloody fluid in the pelvic cavity. The wounded gut was securely closed, but the wound and suture showed no covering of lymph. The pelvic organs were so moulded together that the bladder, uterus, and the uterine attachment, were removed *en masse*. A dissection of these showed that both ovaries, with the broad ligament on either side, were agglutinated to the cyst-wall, *which sprang directly from the posterior part of the fundus of the womb*. The body of the uterus was extremely hypertrophied, measuring full six inches from external os to fundus; and the internal os was so contracted as to resist the passage of the uterine sound, theredy creating the impression that it had passed completely to the fundus.

A semi-solidified cystic mass, probably a secondary fibroid undergoing cystic degeneration, was attached to the fundus of the womb posteriorly, and was included within the walls of the main cyst. A careful histological examination of these structures left no doubt that the main tumour was also a fibro-cystic outgrowth of the uterus. The other abdominal organs seemed to be healthy.

It will be remarked that, in this unfortunate case, the points upon which a diagnosis was made, seemed conclusively in favour of an ovarian cystic growth. In only one respect, namely, the irregular and somewhat profuse catamenia, was suspicion of uterine disease aroused; but this was set at rest by the apparent passage of the uterine sound to the usual depth, by the mobility of the uterus on the sound, and the absence of communicated motion in the tumour. The marked *facies uterina* which the patient presented was, therefore, thought an accidental coincidence, and the irregularity of the menstrual flow attributed to the change of life.

Case II.—An unmarried female, forty-four years of age, was admitted to St. Luke's Hospital, November 11th, 1869, under the care of Dr. James L. Little. The patient had begun to enlarge

four years previously, but the abdominal increase caused no inconvenience until a year before her admission, when she was advised by her physician in the country to seek surgical advice. Upon her arrival she measured forty inches in circumference below the naval.

Fluctuation was distinctly perceptible in the tumour, which was carefully examined by Profs. Thomas and Peaslee, both of whom concurred in the opinion that it was a case of ovarian tumour, and an operation was accordingly advised.

For the sake of better hygienic influences, the patient was transferred from St. Luke's Hospital to a private house, where the operation was performed, November 29th, 1869; present—Drs. Peaslee, Thomas, and Weir.

The incision was made in the usual manner, and a considerable number of adhesions were discovered anteriorly. No distinct pedicle could, however, be detected; the tumour seeming to rise from the pelvis in all directions. It was deemed proper to puncture the sac and reduce its size, in order to discover its attachment with more certainty. After the evacuation of a portion of its contents it was two-thirds of its original size, but no more light was thrown upon the case. A portion of the sac was then pulled through the wound, cut off, the clamp applied, and the wound closed by silver sutures. The patient lingered for about ten days, and died of exhaustion.

Dr. Delafield examined the specimen, and came to the conclusion that it was simply a fibrous tumour of the uterus, springing from the cervix, and undergoing cystic degeneration.*

Case III.—*Cystic Tumour of the Uterus mistaken for Ovarian Cyst; Gastrotomy; Partial Removal of the Uterus; Death in Thirty-six hours.*—A single woman, aged 43, presented herself at the clinic of M. Demarquay,† on the 15th of May, 1868, with a large, smooth, abdominal tumour, of two years' growth. Menstruation had been regular until six months before the tumour appeared, when very abundant menorrhagia occurred. The swelling was first observed in the right iliac region, and after its development the menorrhagia disappeared and dysmenorrhœa took its place.

When examined by M. Demarquay the tumour was "voluminous," smooth, and remarkably mobile; it seemed to have no anterior adhesions, and presented distinct fluctuation. No uterine examination could be made, on account of the "peculiar state of

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* The Medical Record, January 15, 1870, p. 520.

† L'Union Médicale, September 22, 1868, p. 431.

the vagina." Before entering the hospital an exploratory tapping had been tried, when the cyst yielded about a half-gallon of pale-yellow liquid, a little stringy. After the tapping, the cyst, although diminished, did not entirely disappear, and the abdomen partially retained its former dimensions. From the mobility and other symptoms detailed, a presumptive diagnosis of *ovarian cyst* was made, and its extirpation was advised.

Operation June 10, 1868; anæsthesia; cyst exposed in usual manner by a median incision of fifteen centimetres. The walls of the sac were dense and resisted the trocar, which at first yielded a strong jet of blood, followed by about three pints of a dark-yellow liquid, mixed with blood. A careful examination of the tumour now showed that it had no connection with the ovaries, but was continuous with the fundus of the uterus. Ablation of the uterus was at once decided upon. The incision was enlarged, the omentum, which was bleeding, ligatured, and, after passing a provisional ligature through the body of the uterus, the mass was removed by the *écraseur*. Hæmorrhage free, but arrested by actual cautery; wound united by metallic sutures. the deep sutures including the peritonæum. Death from exhaustion in 36 hours. The tumour consisted of one large cyst and several of smaller size, with a solid fibroid base attached to the fundus of the womb; weight nine kilogrammes including liquid; uterus much elongated.

Case IV.—*Fibro-cystic Outgrowth from Uterus supposed to be Ovarian; Removal; Death.**—Patient 53 years of age, unmarried; no history of hereditary disease. Increase of size observed ten years previously, and always a little more marked during catamenial periods. Menses suppressed at 25th year, absence for 10 years, and after reappearance very scanty and painful; no menorrhagia. Tumour discovered six months after first symptoms, increase very gradual until within the last two years. When examined the patient was much emaciated, digestion good, no œdema or varicosity about the legs; girth at umbilicus 45½ inches, from umbilicus to ensiform cartilage 11½ inches, to pubis symphysis 13 inches, to each ilium 14½ inches. Whole abdomen filled with a tumour, obscurely fluctuating, without anterior apparent adhesions or arterial bruit. Uterus high and far back; mobility moderate, os open, cervix full and soft. Depth of cavity not stated.

Operation April 30th, 1863, anæsthesia by chloroform. Incision from one inch above to eight inches below umbilicus: extensive

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* Spencer Wells, "Disease of Ovaries," vol. i., p. 354.

parietal adhesions and still stronger to iliac fossæ; no pedicle found, but thick bands connected tumour with uterus. Womb transfixed below Fallopian tubes, and tumour tied and cut away. Two small fibroids removed from surface of uterus. Hæmorrhage rather free, but readily checked. Wound closed by deep and superficial sutures. Death in three hours, from apparent shock.

At autopsy, peritonæum was found thickened and in some parts almost cartilaginous. About six ounces of blood and serum effused in abdominal cavity. Uterus enlarged to twice its natural size, both ovaries enlarged, the right adherent to outer surface of tumour. The mass removed proved to be a large fibro-cystic outgrowth from the right side of fundus of uterus; weight of solid fibroid 16 pounds, the cyst containing 26 pints of fluid, and four pounds of lumpy masses of decomposed fibrine.

Case V.—*Fibro-cystic uterine Tumour, supposed to be Ovarian; Gastrotomy; Cyst tapped; and found filled with Purulent Fluid; Death on Second Day.*—A married woman, aged 26, of spare habit, dark complexion, a seamstress, was admitted to the Samaritan Free Hospital, under care of Dr. C. H. F. Routh.* The patient had had one miscarriage; no children; abdomen began to enlarge seventeen months before her admission; before this date her health was good, and menstruation regular; *no menorrhagia;* abdominal increase at first slow, but much more rapid within the last five or six months.

On examination the abdomen was found very large, the lumbar regions projecting, especially the left; umbilicus depressed. The tumour extends upward to the edges of the ribs; percussion dull; fluctuation distinct on pressure, but not conveyed from side to side. No souffle heard; apparently two sacs uniting near umbilical region; whole mass freely movable. Vagina not large but long, uterus high up; os reached with difficulty, and lies to right side of tumour. *Sound passes to normal depth,* but to the right side; uterus not very mobile, and *no mobility* conveyed from it to the tumour; whole pelvic cavity occupied by an indurated mass more movable on right side than on left. Diagnosis, multilocular disease of ovary, probably of left side.

Drs. Savage, Greenhalgh, and Sir William Ferguson, all examined the patient separately, and, though differing as to details, agreed in diagnosis of ovarian disease, and advised operation. No preliminary treatment; operation November 16, 1865, anæsthesia

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* Transactions Obstetrical Society of London, vol. viii., p. 121.

by chloroform. The usual median incision was made, adhesions slight, tumour very movable on right side, but fixed on left side; incision enlarged above umbilicus, and two-thirds of tumour extracted. The sac was tapped, and a few ounces of pus came away, followed by a larger quantity of semi-purulent liquid. Hæmorrhage from mesentery controlled by actual cautery, and incision in purulent sac closed by a double ligature, and returned to the abdomen. Wound closed by metallic sutures, and patient put back to bed; much collapse and nausea, diminishing toward evening. Nausea and vomiting returned next day with delirium, and death from exhaustion occurred at end of second day after operation.

In the discussion of this case by the Obstetrical Society several points of interest were elicited: 1. As to diagnosis, all who examined it had failed to recognize that the uterus was the affected organ. 2. As to flooding, Dr. Routh quoted statistics to prove that, while menorrhagia existed in about 70 per cent. of uterine fibroids, and in only 9 per cent. of cases of true ovarian disease, its occurrence was well marked in only three out of eighteen cases of fibro-cystic disease; which, therefore, follows in this respect the analogy of other *extra-uterine* growths. 3. The current opinion, that the uterine cavity is necessarily *lengthened* in these cases, is erroneous; and 4. As to independent *mobility* of the womb, it entirely depends upon the accidental occurrence of adhesions whether this occurs or not.

Case VI.—The following case has been verbally reported to me by Prof. James P. White, M.D., of Buffalo:

An unmarried lady, about 45 years of age, was sent from the country to Dr. White, in the month of September, 1864. She had a large abdominal tumour, which was circumscribed, fluctuating, distinctly movable, and, upon a very thorough examination by all the recognized methods, presented the typical symptoms of an ovarian cyst. The patient had never been tapped, and readily consented to have the tumour removed, which was attempted in the presence of Dr. Minor and a number of other well-known physicians of Buffalo.

Upon opening the abdomen, no serious adhesions were found, and the cyst was tapped; but, on tracing the pedicle of the tumour, it was found to spring from the uterus, being intimately attached to the fundus and left side of the womb. The connections with the uterus were severed and secured with difficulty; the uterus itself was not removed. The abdominal wound was closed with interrupted metallic sutures, the deeper stitches including the peritonæum.

The patient died of apparent exhaustion, a few days after the operation, and at the autopsy the ovaries were found intact; no secondary hæmorrhage had occurred.

Case VII.—A married woman, aged 43, consulted Mr. Lane,* of London, in 1844, for supposed ovarian disease, which had existed eight or nine years. The cyst had spontaneously disappeared five successive times, at intervals of about 12 to 18 months. For the last two years, however, the cyst had not given way, and the patient was tapped three times during this period. The patient had never borne children, but her general health was good. Mr. Lane operated for ovariotomy, February 15, 1844, opening the abdomen to the extent of seven inches; anæsthetics not used. A large cyst was discovered arising from the fundus of the uterus and in no way connected with the ovaries. Temporary ligatures were applied to the pedicle, after severing which six permanent ligatures were applied, each including about an inch of the cut edge of the portion of the cyst left attached to the uterus. The pedicle was then returned to the abdominal cavity, and the wound was closed by seven interrupted sutures, *not* including the peritonæum. Smart fever occurred for two or three days, but the patient recovered in three weeks, and married again three years after the operation. She died a year and a half after this date, of disease of the bladder, which seems to have had no connection with her former maladies.

Case VIII.—*Fibro-cystic Tumour of the Uterus; Ascites; Gastrotomy; Death.*—In June, 1864, Mr. Spencer Wells† was consulted upon a case of supposed ovarian disease in Dublin. The patient was single, aged 45, extremely emaciated, but in good spirits. Ten years previously, two apparently solid tumours had been detected in her abdomen, one above the umbilicus, the other in the right iliac fossa. They were then each about the size of a goose-egg, and the abdomen had increased so slowly that no alteration of dress had been necessary until a year before Mr. Wells saw her; during the past two months increase had been very rapid. When examined, the abdomen was enormously distended, measuring 56 inches at the umbilicus, and was more decidedly prominent on the right side. Above the umbilicus fluctuation was distinct but deep pressure displaced the fluid and revealed a semi-solid

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* Clay's translation of "Kiwisch on Diseases of the Ovaries," London, 1859 Appendix, p. 166.

† "Diseases of the Ovaries," vol. i., p. 356.

tumour underneath; below the umbilicus fluctuation was indistinct, and the tumor seemed to be adherent. Uterus high but central, admitting sound to depth of 3½ inches. Menstruation had been irregular for the last six months, but had never been profuse—patient never tapped.

As the case was urgent, it was decided in consultation to tap above the umbilicus, and, if the tumour proved to be firmly adherent, to do no more; but, if the tumour was not attached, to remove it. Chloroform was accordingly given, and the abdomen tapped above umbilicus, when 30 pints of clear, rather viscid, fluid were removed. No adhesions were discovered within reach of the trocar, and an incision of 6 inches was therefore made below the umbilicus, exposing what seemed to be "two ovarian cysts separated by a deep fissure." The left was tapped, emptied of 10 or 12 pints of bloody serum, and then withdrawn, when two attachments were discovered—one to the opposite tumor, and the other to the uterus. These were transfixed, tied with strong silk, and the tumor cut away, when it became a question what should be done with the tumor on the right side. Its great size, solidity, and evident close connection with the omentum and colon, seemed decisive arguments against its removal. The wound was accordingly closed, and the patient placed in bed; she was extremely feeble, and, although brandy was freely administered, she never rallied or regained consciousness, but died three hours after commencement of operation.

The tumour consisted of fibrous tissues, arranged here and there in concentric lamellæ, and split up by little cavities, filled with serum. It was directly connected with the fundus uteri by a fibrous column, 5 inches long and 3 inches deep. This constituted the pedicle of the tumour which was removed. The other tumour (left *in situ*) was an enormous mass 18 inches long, 16 inches broad, and near the centre fully 7 inches thick. The surface was nodulated by rounded projections of all sizes, some evidently containing fluid, and others hard and of apparently fibrous structure.

In discussing the difficulties of diagnosis of fibro-cystic from ovarian tumours, as illustrated by this case, Mr. Wells says: "Even after an exploratory incision, I know of nothing but a rather darker—less pearly blue—aspect of the tumour which would put the surgeon on his guard. In any doubtful case it would be well to tap the largest cyst and examine the fluid. In both my cases this was peculiar—not the viscid, mucoid fluid of multilocular ovarian cysts, but a thin serum with 5, 10, or 15 per cent. of blood intimately mixed with it, and not separating until after standing for some hours. In this way I have satisfied myself in at least four cases

that tumours, which others considered to be ovarian, were really fibro-cystic uterine growths. If the operation has been commenced, and the dark aspect of the tumour is observed, it would certainly be advisable not to do more than tap one or more of the largest cysts before examining attentively the connection between the uterus and the tumour. If these should prove to be very intimate, it will be the unpleasant duty of the surgeon to desist from any attempt to do more, and to close the wound as soon as possible."

Case IX.—In August, 1865, an unmarried lady, aged 47, consulted Dr. H. R. Storer,* of Boston, for an abdominal tumour, which had appeared five years previously. This had steadily enlarged until the date mentioned, when it had caused much dyspnœa and difficulty in walking; menstruation had been scanty but regular, with little or no dysmenorrhœa, and no tendency to menorrhagia at any time. A careful examination showed that the whole abdomen was filled by a resisting mass, affording localized fluctuation at many points, evident enough to leave no doubt of the existence of fluid; the outline was regular and uniform, save in the right iliac region, where there "was felt a double prominence, more marked upon deep pressure, the two portions distinct from each other." No evidence of the uterine or ovarian origin of the tumour could be elicited by rectal or vaginal examination, which was simply negative; the uterus seemed slightly elongated, and was scarcely movable at all upon the sound. No diagnosis was therefore positively made, although the weight of the evidence indicated a multilocular ovarian cyst, with enlarged but indurated base.

As Dr. Storer was convinced that the tumour would, unremoved, eventually destroy the patient, he decided to remove it, which was done on Seprember 23rd, 1865, the patient being thoroughly anæsthetized. Upon opening the abdomen, the tumor was found of a dark, purplish hue, with extensive anterior and lateral adhesions. When these were broken through, the abdominal mass was found continuous with another of large size and irregular outline completely filling the pelvic cavity; for convenience of manipulation and removal, these were separated with the *écraseur*, when it was discovered that the pelvic tumour was directly connected with the uterus. A clamp was now passed around the broadened cervix, to protect the vaginal septum, and the entire pelvic mass, uterus and all, removed with the *écraseur* just above the clamp. Hæmorrhage

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* American Journal of Medical Sciences, January, 1866, p. 114.

was rather copious, but wire ligatures were placed upon the open vessels; and, after other expedients were tried, without effect, the extensive surface of adhesion were exposed for three hours to give time for the oozing to cease, the patient being all this time kept under the anæsthetic. The incision was closed by the insertion of five wire sutures, including the peritonæum; no dressing of any kind was used, the abdomen being simply protected from the bed-clothes by a wooden frame. Under expectant treatment and rigid diet, the patient recovered without a bad symptom, and returned home on the 37th day after the operation.

A careful dissection of the tumour, which weighed 37 pounds, including 13 pints of fluid, showed that the uterus (excised through the cervix) was elongated and distorted by numerous small fibroids, from two or three lines to four inches in diameter, while the large fluctuating mass, which sprang from the side of these, consisted of two principal tumours, fibrous, quite vascular externally, and containing both cystic formations and serous infiltration. The ovaries and Fallopian tubes were distinctly separate from the diseased mass, the right ovary containing a recent corpus luteum, and several minute cysts. Dr. Storer, rightly, we think, deems this a true case of fibro-cystic disease of the uterus, although some of the experts who examined the mass thought it originated in the broad ligament.

(*To be continued.*)

GONORRHŒAL LYMPHATISM.

Dr. H Illowy, of Cincinnati, gives the following cases in the *Cincinnati Lancet and Observer* :—

I will add the histories of two cases that have latterly come under my observation, and which, in my opinion, are good illustrations of that condition, denominated gonorrhœal "lymph atism."

Case I.—On the 23rd of October, Louisa C. called at my office, complaining that she had been rapidly emaciating, but did not know how long; thought it might be two years perhaps, and that a certain physician of this city, whom she had previously called upon, informed her that she had consumption.

Upon questioning, I elicited a history as follows, (part of which I afterward found incorrect): She was 23 years of age; unmarried; made a living by sewing; emaciating about two years; has night sweats, aud a chill every morning since several months; does not know exactly how long; present weight eighty-one pounds; stature about five feet six inches; has had no cough or expectora-

tion at any time; none at present. The fact that during the whole period of emaciation she had been free from cough and expectoration, aroused my suspicion that the trouble might lie somewhere else, and I accordingly asked whether she had had any severe illness before or during that time. She replied that she had not. Inspecting her chest, I found marked emaciation, also a terrible accumulation of filth. She had an eruption about the shoulders, such as is generally excited by uncleanliness. Not having time to make a thorough physical examination by auscultation and percussion, I took the statement of the physician whose name she mentioned, and prescribed meanwhile some cod liver oil, telling her to come next day, so as to allow me to make a thorough examination. Two days after she presented herself at my office, and upon thoroughly examining her lungs, I found them healthy.

I had had my attention directed some time previous by an article in Schmidt's Jahrbücher, to the fact that uterine ailments at times caused emaciation. I questioned her to that fact, but elicited nothing. Once upon that subject, I questioned her as to how long since she had had sexual intercourse. She replied about four months ago. To the question whether she had noticed anything wrong about her private parts soon after, she answered that a few days after she noticed a vaginal discharge which soon became profuse and offensive. She had also suffered with burning pain on micturition, that she was still suffering that way, and that the discharge was still present. She also stated that soon after the commencement of this trouble her appetite failed her, and she had begun to emaciate (thus contradicting the story about the two years.) I prescribed for the gonorrhœa and urethritis, and a week after the woman came to my office and said that she was much better. She was ordered iron.

I afterward discovered that she was a prostitute.

Case II.—August 5, 1871. N. L., aged 23, a young man of good stature and good physical development; pale; cachectic in appearance; emaciated; looking like an individual after a long debauch; complained that for some time he had been unable to work at his trade, cigar making; when he sits awhile, he snffers severe pain in the lumbar region, about the kidneys; never feels like getting up in the morning; when he arises feels giddy; his head swims; must lay down again and again while dressing; profuse night sweats; complete anorexia; tongue furred yellow. Examination of the chest and about the kidneys revealed nothing. His habits of life were rather irregular; but they had been so

almost the greater part of his life, he having been left to himself since his childhood, but that had never troubled him.

On questioning him closely, he acknowledged that about the end of last summer he had become infected with gonorrhœa; but did not go to a physician, but bought medicines at a drug store and doctored himself. The discharge lasted for several months, and since that time he has not been the same man he was before. I prescribed for him as follows:

℞.—Mass. pill. hydrarg., gr. vj.
Quin. sulph., gr. ijss.
M. Divid. in pill. No. vi.
Sig. i. ter die.

Also, muriated tinct. ferri.. with quinia in Madeira wine, to be taken twice daily. After four days he came to my office, and reported himself somewhat better. The iron was now ordered three times a day; cold baths, or sponging with cold water all over, and to be in bed by 10 P.M. Under this treatment he is rapidly improving, and has to some extent lost that cachectic appearance.

AMPUTATION OF THIGH.

At the Surgical Society of Ireland, Mr. William Stokes described a method of amputation of the thigh, to which he gave the name of supracondyloid amputation. In the amputation, the bone was sawn through at a level from one-half to three-quarters of an inch above the line of the cartilaginous incrustation, the cartilaginous surface of the patella was separated, and there were two flaps—one anterior, oval in shape; and one posterior, one-third of the length of the former. The posterior surface of the patella was brought into apposition with the cut surface of the femur, and underwent anchylosis with it. Mr. Stokes exhibited a series of casts, showing results obtained after this operation. Mr. Jessop, of Leeds, had likewise had a satisfactory recovery in a case where he had performed it. The special advantages to be derived from this method of amputation were described as being the following:—1. The resulting stump was more useful, as pressure could be borne on its extremity. 2. There was a diminished liability to tubular sequestra. 3. The operation was less hazardous to the patient than amputation of the thigh, its situation being more distant from the trunk. 4. It was accompanied by less shock. 5. There was less tendency to the occurrence of suppuration. 6. In the posterior surface of the anterior flap, which was lined with a

natural synovial membrane, no vessels or nerves were included. 7. The preserved portion of the patella acted as an osseous curtain covering the cut surface of the femur, and had never yet been known to slough away. 8. That the attachment of the tendon of the quadriceps extensor muscle to the patella, gave an increased power of extending the thigh in progression, and rendered the formation of a conical stump impossible. 9. In the supracondyloid operation, the vessels were divided at right angles to their continuity, and not obliquely, as in all flap-operations, thus being less exposed to the settiug up of inflammatory action from the extent of the wounds in them.

Midwifery.

OBSTETRICS—DISEASES OF WOMEN.

A "Speedy Method" in Asphyxia of the New-born.

By Harvey L. Byrd, M.D., Prof. Obstetrics in Washington Univ. of Baltimore.

Of the long catalogue of phenomena and accidents, incidental to the lying-in chamber, there are very few indeed of greater moment than the *absence of respiration in the infant at the proper time!*

The child is liable to be asphyxiated from a variety of causes, and the properly qualified obstetrician will weigh well every abnormal state or unusual circumstance occurring during labor, likely to result in this critical and dangerous condition to the infant, and be prepared promptly to meet the emergency should it arise. On the announcement to the profession, some years ago, of Dr. Marshall Hall's "Ready Method" in Asphyxia, and its practical application in one or two cases, the writer thought that there was but little, if any, further addition necessary to the list of remedial agents in the asphyxia of newly-born infants. Later experience, however, with this, and subsequently published "Methods," proved that, occasionally, at least, all the known appliances were futile, and further knowledge required to secure success in this dangerous condition of the infant. The following "method," it is believed will be found a valuable, if not the most important addition to our list of appliances in the asphyxia of children; and probably, also, for the relief of that condition in the adult, when properly applied.

The procedure is easy of accomplishment, requiring no preliminary arrangement or preparation for its application, but may be put into execution the instant the condition of the child may demand it. It is as follows: bring the *ulnar side* of the hands together, with the palmar surfaces looking vertically, then prop

them beneath the back of the infant, so that the extended thumbs may aid as far as possible in sustaining the vertex and inferior extremities. Then *keeping the ulnar* borders of the hands in contact, so as to form a *fulcrum*, the radical borders or sides are simultaneously depressed to as great an extent as practicable—say forty-five degrees—*below* the horizontal line, and then gradually elevated or pronated to as many degrees *above* that line, thus facilitating the escape of air drawn into the lungs during the downward movement of the head and chest. These movements, performed in a regular and gentle manner, and repeated at proper intervals, seldom fail in the establishment of respiration where it is possible of accomplishment. A little cold water dashed upon the epigastrium during the *descent* of the head and chest, will hasten respiration, where the first few movements fail in its establishment. It is important that the head be kept, as far as practicable, from too much *lateral* movement, and not permitted to depart considerably from its *antero-posterior* axis with the vertebral column during the continuance of the process. To this end, in a critical case, the hands of an assistant must be brought into requisition. The importance of these remarks will be apparent to intelligent readers on a moment's reflection. *No impediment* should be *permitted* in the way of *free entrance* of air into the lungs during the *downward* movement of the head, nor is it *scarcely less important* that *obstruction* should oppose the escape of air during the *upward* movement of the head and chest.

A nurse, or other intelligent attendant, can be made to understand the movements, so as to continue them, should the condition of the mother demand the attention of the accoucheur. Would not the above rules apply to the treatment of asphyxiated persons of any age? Could not the body of a drowned person, for example, be placed on its back, transversely, across the trunk of a fallen tree, or other sufficiently elevated substance, and, by the aid of two or three persons, subjected to the movements we have described, with a reasonable hope of resuscitation?—*Baltimore Medical Journal.*

Materia Medica and Chemistry.

THE PROPERTIES OF CHINESE TEA.

Mr. F. Porter Smith, M.B., London, writes to the *Medical Times and Gazette*:—

It follows from the low temperature at which the tea is dried, that no empyreumatic products can be met with in properly pre-

pared tea. And yet there is a degree of austerity produced in the ordinary black tea which causes it to produce nausea, sickness and diarrhœa, when taken in the shape of a strong infusion prepared from the new spring tea just ready for the voyage to Europe. This is especially the case with badly-secured leaf, which may be assumed to have been purposely exposed to a high temperature in order to fit it for the foreign market. All or most of these effects pass off by the time that the tea reaches the foreign consumer. The more staple the tea, the better it will turn out. Any change in the voyage is for the worse, according to the experience of the most competent judges. Thirty pounds of the green leaf produce from eight to ten pounds of the sun-dried leaf. One hundred pounds of the sun-dried leaf lose eight pounds of weight in "firing," and produce ten pounds of stalks, fifteen pounds of tea dust, and the rest good marketable Congou tea.

New tea produces in China laxative effects upon foreigners, as prepared for exportation. This effect is not permanent. As a rule, black tea, under the same circumstances, has a decided diuretic effect, even in hot weather, when perspiration is abundant. It excites in many cases a strong craving for food, and causes a degree of sleeplessness. The narcotic effect of new tea is asserted by Johnston in his "Chemistry of Common Life," but has never been noticed. The large proportion of nitrogen in tea, amounting to nearly 6 per cent., prepares us to find powerful properties in it. That tea is a stimulant there can be no manner of doubt. This probably depends upon the presence of the theine, a soluble crystalline substance, which resists the moderate temperature at which the leaf is dried. The peculiar taste of green tea falsely suggests the presence of more than a usual amount of that astringent principle which, in the shape of tannin, is present in about equal quantity in both the black and green tea. The properties of tea as an astringent are turned to account by the Chinese, who prescribe it in diarrhœa when acidulated with vinegar. Cold tea, to which a small quantity of dilute sulphuric acid has been added, is an excellent diet drink for use in hot weather when there is a tendency to diarrhœa.

That the use of tea, to a large extent, has a peculiar effect upon the nervous systems of both animal and organic life, there can be no doubt. This is the reverse of a sedative influence. Some of the craving of the Chinese for opium is connected with their incessant drinking of tea, especially upon an empty stomach. The effect of tea is to excite, and this property may be turned to excellent effect in cases of opium-smoking and uræmic poisoning. If good, new Congou tea be given in the latter disease, there is

the additional advantage of the diuretic effects of the infusion. In all cases in which coffee is most to be prescribed, tea is much more convenient, accessible, and powerful. It is obvious that the high temperature at which coffee berries are roasted must be fatal to the presence of much caffeine, a principal identical with theine. This latter substance has been recently proposed by Mr. Lewis Thompson (*Medical Times and Gazette* for February 10, 1871,) to be brought into use as a tonic remedy in typhoid diseases, neuralgic affections, and in senile gangrene. Large quantities of weak tea, however, tend to the occurrence of sciatica and other forms of neuralgia. The experiments of Peligot seem to prove that, as might be assumed from the presence of so large a proportion of nitrogen, tea is, as the Frenchman said of the coffee, both "meat and drink."

Old women who boil their tea-leaves are right, for they thereby extract much more of the theine. The antidotal power of tea, so strongly insisted upon by the Chinese, is worth a trial, especially in cases of poisoning by tartar emetic or corrosive sublimate. A statement appeared in an English paper, some few years ago, to the effect that tea is an aphrodisiac, and that its extensive use partly explains the fertility of the Chinese population. It is remarkable that, as the Chinese have made the subject of aphrodisiacs a very profound study, no reference is made to this effect in Chinese medical works. As Liebig has suggested that theine goes to make taurine, a biliary substance, it is possible that the spermatic secretion may be increased by a course of strong tea. Of the effect of tea upon the menstrual secretion, the Chinese have no doubt. It may be that in this way the female population of Great Britain have actually hit upon a perfect cure of their "irregularities," as they are called in quack advertisements.

The use of tea in certain forms of dyspepsia is a common Chinese practice. If taken as a plain drink between meals, it seems to give tone to the stomach. It is obvious that the "tea" of our domestic tables, a compound of milk, sugar, and much water, is not the article intended to be spoken of in these pages. The sooner *infusum theæ* is placed in the British Pharmarcopœia as a recognized article of *Materia Medica*, the more likely are we to place its employment upon a scientific basis, and thus to rescue a very important drug from the contempt of familiarity. A tincture of tea is not a desirable preparation, as theine is only sparingly soluble in cold alcohol. An extract of tea, carefully prepared, would be an excellent preparation for trying the effects of tea in the delirium of fever and the stupor of intoxication.

Canada Medical Journal.

MONTREAL, NOVEMBER, 1871.

THE MASSACHUSETTS MEDICAL SOCIETY AND THE HOMŒOPATHS.

It appears by the *Evening Traveller*, that there is a general row amongst the Medical men of Boston, Mass., there exists a society in that State called the Massachusetts Medical Society, which has peculiar privileges, and is supposed to include amongst its members all medical practitioners in the State; to become a Fellow of that Society, a Physician has to submit his qualifications to examination before a board of censors; and not to belong to the society is to be regarded as an irregular practitioner. A society on so broad a basis, and having Fellows in all parts of the State, must necessarily include some unworthy members, and such in verity is the case.

In consequence however of their association with Homœopathic practitioners, delegates from the Massachusetts Medical Society were refused recognition by the American Medical Association, at their annual meeting in 1870.

The Massachusetts Medical Society have now commenced what they should have long since inaugurated and carried through, viz., they have summoned their recreant "Fellows" of Homœopathic peculiarities, and have determined to try them and expel them from their body. The Americans are a peculiar people, and we are much amused at interviewing of the doctors by the press men. The idea of a reporter walking into a private gentleman's house, and simply pumping him dry on his own personal matters, he willingly consenting to such treatment, is to us an anomaly.

But we must admit that the reporter of the *Evening Traveller* did not get much out of the regular side of the house. And we doubt not, but that he travelled far and wearily without receiving much information. The Homœopaths on the other hand, volunteered information, were rejoiced to be interviewed, one man giving quite a learned disquisition on the superior qualities of Homœpathy, of its greater success than the old worn out and threadbare allopathy, and of its taking so well with the public, who

are the best judges in matters of this kind. If there is anything in this line of argument, it only proves "the rank is but the guinea stamp," that in the nature of things man will in spite of his intelligence, be dazzled by the glitter of tinsel, and in matters even of his own health, comfort, and life—will prefer the vilest nostrum which has been advertised, to seeking the honest advice of his physician.

The Homœopathists appear determined to maintain their connexion with the Society, and even hint at testing the legality of their expulsion should such an event occur. We should imagine that under the present constitution, the society has no legal power of removing their names from their list of Fellows, but such powers will we have no doubt, be sought for and obtained from the State Legislature.

There can be nothing in common between members of legitimate medicine, and those of any exclusive or special dogma, nor can we see what advantage is to be gained by the Homœopaths by continuing their connexion with a society whose aims, objects, and methods of teaching, are at variance with their own. It remains to be seen what results will follow, the trial, for such it is called, being at present in course of proceeding with closed doors.

We notice that a Bill was introduced before the Quebec Legislature by Dr. Lafontaine, being as we suppose an amendment to the present existing Anatomy Act, passed by United Canada, in 1844.

The provisions of that Act are all that are required in this connexion, but what we do demand is faithfully carrying out those provisions. If such were the case, there would then be no need of seeking awkward amendments to an already comprehensive Act. It has always been a matter of difficulty to deal with the supplying of material for dissection; and, although occasionally bodies are obtained from a distance, yet the difficulties, expense, and risk, are such as to oblige college authorities to seek for some other source of supply. Without particularizing, we may observe that in all Canadian towns where a supply of such material is required, there exist large hospitals and other charities, at which numbers of the poor die annually, and who have neither friend nor relative who care whether their bodies are dissected or not. It was the intention of the Anatomy Act, that all such should be delivered over for purposes of dissection, through a properly appointed officer, whose duties not alone consist in equally proportioning the material, and pocketing the fee, but in seeing that the provisions of the Act are faithfully carried out.

All public Hospitals and Charities receiving Government aid, are required by the Act to notify the Inspector of Anatomy, and to deliver up the bodies for the purposes of Anatomy, of persons dying in their institution, who remain unclaimed by *bonâ-fide* friends after the expiration of the usual period for interment.

Let this be done fearlessly and honestly, and we will guarantee that in this city at least, with three schools of Anatomy, there will be no lack of material, and that the violation of the graves of the dead will become a thing of the past.

It is with a feeling of sadness that we give insertion to the following appeal to the Alumni of Rush Medical College. It will be observed that the college buildings, with their entire contents were burnt during the late terrible conflagration which destroyed the City of Chicago.

CHICAGO, November 1st, 1871.

TO WHOM IT MAY CONCERN:

This is to certify, that the resident Alumni of Rush Medical College, of the City of Chicago, at a meeting held at the house of E. Ingals, M.D., on the eve of October 17, 1871, appointed the following Alumni an Executive Committee, to draft and present an appeal to the Alumni and friends of the College, for aid to rebuild and refurnish the College Building, viz.:— T. D. Fitch, M.D., Chairman; H. A. Johnson, M.D., V. L. Hurlbut, M.D., C. T. Parkes, M.D., Ben C. Miller, M.D., and F. A. Emmons, M.D.

E. INGALS, M.D., Chairman.
CURTIS T. FENN, M,D., Secretary.

An Appeal to the Alumni and Friends of the Rush Medical College. recently destroyed by fire, for aid to assist in its rebuilding:

This College s among the oldest institutions in the Northwest, having been in operation since 1843, at which time the region now tributary to Chicago was but sparsely populated, and had little wealth. During this time it has supplied a pressing need of this new country. It has educated a large number of young me., who are scattered through our whole country, worthily filling places of great usefulness and responsibility; and for this, both themselves and the public are indebted, in a great measure, to the school in which they received their instruction. A large proportion of its students have been possessed of little, save youth, hope, intelligence, and determination. Many of these, having been generously aided by the College, have taken rank among the most substantial members of the profession. The Faculty at all times, since its organization, has been moved by an earnest desire to promote the best interests of the profession and the College. For this its members have labored faithfully and earnestly; they have met the pecuniary burden of the School from its first foundation, and four years since they erected from their own resources, at an expense of $70,000, the most ample and best appointed college building on this continent, and filled it with every necessary appliance for successful teaching, and the influence and usefulness of the School has steadily increased from year to year. But in a day, the College Building, with all its contents, was swept away, along with a large part of the city, in which it stood a peer among many other noble institutions of learning. The pecuniary loss of the Faculty, in the destruction of the College, is light

when weighed against others they have sustained. A number have lost nearly everything, and all have suffered much. The College must be rebuilt. Its past history, its future promise for good, demand no less. Under the circumstances, it is unreasonable to expect the Faculty to do this unaided. The College is now in a position to justify an appeal to its Alumni, and to society, for some return for the favors it has conferred upon both. There is, perhaps, no field of benevolence, that offers a richer return than to provide adequate and easy opportunities for instruction to those who desire to become learned in the best means for assuaging pain and healing the sick.

All donations may be remitted to Charles T. Parkes, M.D., 462 Elston Avenue, Chicago, who has been elected treasurer for the fund. They will be thankfully acknowledged, and faithfully devoted to the rebuilding of the College.

MEETING AND ORGANIZATION OF THE COMMITTEE.

At an appointed meeting of the Executive Committee, held at Cook County Hospital, October 26th, 1871, all the members being present, Dr. T. D. Fitch in the chair, the Committee organized by the election of the following officers,—F. A. Emmons, M.D., Secretary; Ben C. Miller, M.D., Assistant Secretary; C. T. Parkes, M.D., Treasurer, who was required to give good and satisfactory bonds in the sum of thirty thousand ($30,000) dollars, for the faithful performance of his trust, which bond has been furnished and duly accepted.

T. D. Fitch. M.D., Chairman.
F. A. Emmons, M.D., Secretary.

The Trustees of Rush Medical College to its Alumni, Greeting:

The last terrible conflagration which devastated so large and fair a portion of Chicago, swept out of existence nearly all of the material part of your Alma Mater. Rush Medical College exists to-day only in its legal organization, the lot on which the College building stood, the energy of its Trustees and Faculty, and the love and fidelity of its Alumni.

The College edifice, so recently and expensively erected, the chemical and physiological laboratories, the museum, and all the appliances of teaching are gone and a sad material ruin replaces them.

The Trustees are, however, cheered and encouraged by the expressions of sympathy and offers of pecuniary assistance which have come to them from many of the Alumni, in different parts of the country. The Alumni in Chicago have appointed a committee, to appeal to their brethren, in behalf of their Alma Mater. This appeal the Trustees most heartily approve and endorse; and while all sums which may be offered will be most thankfully received, they are confident that fortune has smiled upon very many of the sons of "Old Rush," and that among these favoured ones, there are generous hearts which will prompt to munificent donations. To such they make the following offer:—

For every donation of five hundred dollars, the Trustees will establish a perpetual free scholarship, which shall bear the name of the donor, and which shall be conspicuously emblazoned on the wall of the lecture room. A certificate of this scholarship, engrossed on parchment, will be issued to the donor; which certificate shall secure to the bearer, free tuition, and when found qualified, free graduation. This certificate shall be perpetual in its operation; and thus the donor will have endowed for one student each year a Free Medical College.

Wm. B. Ogden, Chairman.
Grant Goodrich, Secretary.

Medical News.

COMPLIMENTARY DINNER.

A much esteemed professional friend, as well as a valued correspondent, and well wisher of this Journal, Dr. David Leslie Philip, has just removed from Plattsville, Ontario, to the flourishing town of Brantford, where relieved from the long night rides incident to a country practice, he hopes to recuperate a somewhat shattered constitution. Previous to his leaving Plattsville, his professional brethren entertained him at a public dinner, which was given in the Town Hall, and at which many of the leading men of the county, were the guests of the medical fraternity. After a very pleasant evening had been passed, his medical friends presented him with a handsome surgical case, accompanied by an address, expressing regret at his departure; and the high esteem in which he was held by all his professional brethren. We sincerely hope that the change to a town practice—never so arduous as that in the country—may have the desired effect, and that in his new sphere he may meet with that success, which as a painstaking and careful physician we consider him entitled to.

Nucleated Blood-cells in Leucæmia of Infants.—(*Archiv der Heilk.*, 71, xii., 1871.)—While all previous data on the existence of nucleated blood-cells in the blood of leucæmic patients have been derived from blood from the dead body, Dr. Neuman has assured himself of the presence of nucleated blood-cells during life, by puncturing with a needle for a drop of blood. Besides numerous colorless granular cells of 0.005-0.012 mm. in diameter, which under healthy circumstances present no nuclei, there were found single homogeneous, pale-yellow cells of 0.006-8 mm. in diameter, with a colorless round or spindle-shaped nucleus, or with numerous granules (remains of nuclei.) By the addition of acetic acid, these latter cells lost their color, and within their contour, which appeared as a fine circular line, the somewhat yellowish tinged nuclei and granules stood out with a sort of fatty glitter. Dr. Neuman is inclined to regard the presence of these transition orms between colorless and colored blood-cells, which are pro-

duced by the diseased marrow of the bones, as a diagnostic sign of the disease of the marrow in leucæmia, since in a normal state they are found only in the marrow, and there is no evidence that in leucæmia they occur also in other organs, provided they are not carried into the same. In proof of this, he asserts that he has found nucleated cells in the general circulation of newly-born infants at term, and not alone, (as has already been made known) in the pancreas, spleen, liver, and bony marrow. How long they remain after birth is not certain; they were absent in a child which died of peritonitis, sixteen days after birth.

Lady Students in Moscow.—Ladies are now to be admitted to the lectures on medicine at the University of Moscow, and to graduate, provided they can pass the usual examinations. It has been found impossible, as at first intended, to institute separate lecture and class-rooms, so that both sexes will meet in the general class-rooms. The Council of the University have fully confirmed the action of the School of Medicine in this matter, and the ladies may therefore expect to enjoy their privileges undisturbed by doubts or fears.

Divided Medicines.—A very neat and exact method of preparing many remedies for administration, has been adopted by Frederick Kraus, a pharmaceutist of Cincinnati. It consists in spreading the medicines on a thin sheet of gelatine, which is marked with lines for division, according to the quantity of the medicine required. The portability of medicines thus prepared is very evident from the specimens sent us for examination.

Niemeyer's Successor.—It is announced that Professor Leibermeister, of Zurich, has been appointed to the chair left vacant by the death of Niemeyer.

The *Wein. Med. Presse* says that Cundurango has long been known to botanists, as reported by Dr. Scherzer, as from the family Synatheria. It is used, in Guaco, in infusion or extract of the leaves, for snake-bites, hydrophobia and cholera.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

The Glue Bandage as a primary setting for Fractured Limbs. By George Ross, A.M., M.D., House Surgeon, Montreal General Hospital.

The use of the *Glue Bandage* as a primary setting for fractured limbs, has been introduced into this hospital by Dr. McCallum, within the past three months for the first time here, and as far as I am aware, for the first time also in this country. It may therefore be of interest to shortly record the following cases which were amongst the first so treated.

The method of applying the bandage being the same in all, one description of the general procedure will apply to all and avoid repetition. First then, it is necessary to procure some good suitable glue—the best for the purpose is Cooper's No. 1 white English glue, or else some of the finer sorts in thin sheets, which are manufactured in this country; it is prepared by first soaking in water for an hour or two, and then melting in a common carpenter's glue-pot; also some fine sheet-wadding, and several rollers made of thin cambric or old worn cotton, (new cotton is objectionable for it will not soak up the glue so thoroughly, and will make a less firm bandage.) The limb is then entirely swathed in a thin layer of wadding made by splitting the ordinary sheet in the middle to avoid unnecessary bulk, and then whilst carefully held in position by an assistant, the first roller is applied in the ordinary way; this done, it is smeared all over by a brush, or better still by the hand, with a good layer of the melted glue to which one-fifth part of alcohol has been added to accelerate the evaporation. The second roller is then applied, and in like manner coated thickly with glue. Some strips of bandage 10 or 12 inches in length, are then thoroughly soaked in the glue and placed over the seat of fracture, some vertically and others diagonally, so as still further to strengthen this part. The third roller is finally secured over the whole and covered with a thick coating of glue.

It is necessary now to sling the limb so that the air may have equal access on all sides to dry it. I have found that the outside coating will become quite dry in from 3 to 5 hours, when the sling may be removed, but the entire thickness of the bandage will not be found entirely consolidated for about 48 to 60 hours. After the lapse of this time, the leg is found to be encased in a perfectly-fitting boot, more solid than the thickest sole-leather, and can be moved in any direction without pain. In none of the cases has there been any complaint of pain from the swelling that we might expect to find occur shortly after a fracture had been sustained. On the contrary, the patients have all expressed themselves as feeling extremely comfortable. As soon then as the bandage has completely consolidated, it becomes necessary to split it down the front from one end to the other. Owing to the extreme hardness of the splint, this is a matter of some difficulty, except in the event of one's possessing a pair of powerful properly-constructed bandage-pliers: failing this however, the simplest plan is to slip a very thin piece of wood beneath it, and then cut on this with a sharp strong knife. Having thus split the bandage from end to end, a number of holes are bored on either side with a brad-awl, and a long tape being passed alternately through these, it is laced up like a lady's corset. The apparatus is then entirely complete, and may remain without being touched until union is perfect. The above description might lead some to suppose that the process was long and tedious, and in consequence objectionable, but our small experience with it in this hospital is such as to make us believe that by reason of its increased comfort to the patient, and of the facts that patients can sooner get up with safety with this than any other form of splint, and that it will never get out of order, and consequently never require re-adjustment, the advantages secured by its employment greatly counterbalance any slight trouble that it is necessary to take to ensure its proper application at first.

At this hospital, the above-described method has been put into practice in several cases of simple and compound fracture of the leg, and in all with most satisfactory results. In the majority of cases, the patients were permitted to get up on crutches on the third day from the receipt of the accident. In two, it was thought advisable to make use of a box splint for a few days previous to the application of the bandage on account of considerable swelling and rapid vesication.

The following short notes give an account of four of the cases so treated:—

Antoine M., aged 30, transverse fracture of both bones of the

leg, from a weight falling upon it, admitted 6th September, 1871. Glue bandage immediately applied, was allowed crutches, and to get up with the leg slung from his neck on the third day. Suffered no pain, and there was no swelling. Was discharged at his own desire on the 23rd September. The bandage was removed after six weeks, when a good, firm, straight union was found.

Severe P., aged 26, oblique fracture of both bones of the leg from a fall, admitted 5th September, 1871. Glue bandage immediately applied. Got up on the fourth day and walked on crutches from that time until the completion of the cure without any detriment to the limb. He was discharged on the 10th October, well.

Donald McL., aged 55, transverse fracture of both bones of the leg, about 2½ or 3 inches above the ancle joint, from a heavy fall from a load of hay, was admitted on the 1st October, 1871. In this case there was considerable swelling about the joint and parts above it, and consequently it was thought advisable to make use of a box-splint until this should have subsided. This form of apparatus was therefore kept applied during one week, at the end of which time a glue-bandage was arranged on the limb in the ordinary way. On the second day subsequently, he was allowed to get up and move about. The bandage was retained for the space of six weeks, at the expiration of which time the fracture was found quite firmly united, and in a few days he was able to walk with a stick only.

Benjamin S., aged 16, was thrown from a horse on the 7th October, 1871, and sustained a fracture of both bones of the leg, just above the ancle joint. On admission a few hours after the occurrence of the accident, it was found that there was but little swelling, and consequently it was determined to apply the glue bandage immediately. This was done, and after it had been slit and laced in the manner already described he was was able to get up on crutches on the third day. Although this patient was a very restless and careless lad, and very soon took great liberties with his limb, yet at the end of four weeks, on the removal of the apparatus, it was found that an admirable union had been effected, and after a few days longer he could walk without any assistance whatever.

It is needless to multiply examples; the above will amply serve to show what results may be obtained by the use of this form of apparatus, which I am sure needs only to be more used to be more fully appreciated.

Hospital Reports.

Surgical Cases Occurring in the Practice of the Montreal General Hospital, under the care of G. E. Fenwick, M.D.

Case 5—Wound of the Anterior Interosseous artery of the Right Arm, formation of a traumatic Aneurism, and subsequent ligature of the vessel at the point of injury. Reported by Mr. G. A. Stark.

C. P., æt 40 years, a native of Canada, was admitted into the Montreal General Hospital on the 25th September, 1871, under the care of Dr. Fenwick.

On examination it was found that his right arm and hand were tightly bandanged, and a compress of lint situated in the centre of the front of the fore arm, these on being removed showed the hand and fore-arm uniformly swelled from the tips of the fingers to the elbow. The swelling was hard and firm, no fluctuation was apparent, and the radial pulse could not be felt. Near the middle of the fore-arm, (palmar aspect) three inches above the wrist joint, there existed a transverse wound about an inch in length, the edges of the cut looked as if blocked up with lymph, and the surrounding parts were red and angry. On the posterior aspect at a point five inches above the wrist-joint, there was a small flattened elevation resembling a boil, from which there was a slight discharge of pus. Says he does not think that the knife which inflicted the wound transfixed his arm. The patient was confined to his bed, the arm bandaged, but not as tightly as before, the limb was suspended, ice water applied, and a tourniquet was loosely applied over the brachial artery, with instructions to tighten it should bleeding set in.

History—He is by trade a butcher, and resides some few miles from the city of Montreal. It appears that on the morning of Tuesday, 12th September, while in the act of dividing a side of lamb at the back of his cart, his horse became restive and moved off, he ran the knife through the side of lamb and started to restrain his horse; on his return to complete his work, he did not notice that the point of the knife was directed towards him, at this moment the horse backed up and the knife came with some force against his arm and inflicted the wound referred to. Blood spurted out with considerable force and in jets, but it gradually slackened, and at the end of half an hour when the doctor of the village saw him, the hæmorrhage had ceased, but the man felt faint and weak. The wound was dressed, restoratives given, and absolute rest enjoined.

Two days afterwards the arm began to bleed again, the limb was somewhat swollen, the hæmorrhage was considerable, sufficient to make an impression on his system, and he felt faint. The doctor when he arrived at the house applied a bandage from the hand up to the axilla, and a tourniquet over the brachial artery, this had the desired effect of stopping the bleeding. He could not bear the pressure of the tourniquet very long, so that it had to be removed, this was followed by fresh bleeding after the lapse of some hours, which was again controlled by the tourniquet. This state of things was allowed to continue, successive bleedings occurring, and the man fearing the loss of his arm determined to apply for further advice and treatment, and came to the Montreal General Hospital.

September 24th—Passed a good night, rested well, complains of numbness in the fore-arm and hand, no pain nor bleeding, the limb is still suspended above the level of his body, he is confined to bed, and ice water constantly applied. The tourniquet is loosely retained over the situation of the brachial artery.

27th.—The patient is very comfortable, no pain, the numbness continues, no return of the hæmorrhage, no change was made in the treatment.

28th—This morning early while turning in bed he experienced a sensation of warmth about the arm, and noticed that he was bleeding freely, the tourniquet was at once tightened, which arrested further loss of blood. Dr. Fenwick received early intimamation of this circumstance, and came to the hospital before the hour of visit, when he decided on cutting down and ligaturing the bleeding vessel at the point of injury.

The patient was removed to the operating theatre and placed under the influence of chloroform. The tourniquet was removed and also the bandage; the brachial artery was given to an assistant with instructions to exert pressure if necessary, and the operator commenced his incision from below upwards, bisecting the original wound, the incision extending from one inch above the wrist, and seven inches upwards, rather inclining to the ulnar side, and on slitting up the fascia, the palmaris longus muscle was observed to have been divided by the original wound. The finger of the operator was then introduced through the wound in the muscular structures, and he found that he entered a well defined aneurismal sac having a lining membrane, and the direction of which led upwards between the superficial and deep layers of muscles. To reach this and the interosseous space, the flexor sublimis digitorum was separated from the flexor carpi ulnaris, this was effected with the finger, the loose intermuscular septum yielding

readily, and the former muscle was drawn to the radial side. The aneurismal sac was then opened, and all clots of blood turned out, and at the lower edge of the aneurismal tumour, the interosseous artery was felt pulsating, and on removing with the finger the fibrine which had formed around, two bleeding points were observed, which were readily secured and ligatured, all clots were removed, the parts sponged out with a lotion of carbolic acid, and the integument brought together at its upper and lower end. Three interrupted wire sutures were inserted above and one at the lower part, the central portion of the wound being left gaping, so as to permit of free discharge, a piece of lint dipped in carbolic acid lotion was applied aud covered with oiled silk, and the patient removed to bed.

Evening—Is comfortable, does not complain of any pain, pulse 120; no oozing of blood, says he does not know from present feelings that any operation had been performed.

29th—Passed a good night, slept comfortably, no oozing, pulse 112; the wound looks well, says he feels no pain nor uneasiness.

30th—Slept well, no pain in the arm of any account, pulse 100: bowels acted without medicine, his appetite is improving, and he relishes his food, slight discharge of pus from the wound, the same treatment of the wound to be continued.

October 1st—Progressing favourably, there is very little pus escaping, but what is secreted has free exit, pulse 92.

3rd—The ligature at the distal extremity of the artery separated and came away this morning, and three sutures were removed. The discharge which is small, has free exit, the part was ordered to be washed out by injection with a syringe with a lotion of carbolic acid (1 to 40) the general symptoms are improving, he asked for more to eat, and a mutton chop was ordered with a pint of ale.

4th—The ligature from the proximal extremity of the artery separated and was removed, the edges of the wound were brought together with adhesive straps; he is gaining strength, and expresses a desire to leave his bed.

5th—Was allowed to sit up, the arm being supported in a leather sling, the wound looks well and is granulating, the pus which is small in quantity is healthy, cicatrization is advancing, and he can move the fingers without much pain or uneasiness.

7th—The wound is smaller, the upper part nearly united, very little suppuration, he expressed a desire to leave the hospital and return home, which was assented to, instructions being given to continue the dressings, and commence passive motions of the hand and wrist. Discharged.

Case 6—Penetrating wound of the Chest, with wound of the Right Lung.

Reported by Mr. Austin Pegg.

Felix Barré, a powerfully built Canadian, aged 22, bargeman, was admitted at 2 a.m., on the 23rd November, 1871.

The following is the account given by him of the manner in which he met with the accident. He had been drinking with some friends in a tavern, and just as he was leaving, about 10.30 p.m., he was struck a violent blow on the stomach from a large stone thrown by one of two unknown men, who had been apparently lying in wait for him; enraged at this, he gave chase, caught one of his assailants and threw him to the ground; then whilst he was engaged in the tussle with the one, the other came up behind him and dealt him a blow from a knife in the back. He immediately fainted, and was carried by his friends to the barge to which they belonged, when he vomited freely, and is said to have spat up some blood. The hæmorrhage from the wound up to this time had been very considerable. On his admission it was found that there existed a wound about $1\frac{1}{4}$ inches in length, running in a vertical direction, and situated midway between the scapula and the vertebral column, opposite the 6th and 7th dorsal spinous processes. There was then no hæmorrhage. No exploration of the wound was made at the time, as it was deemed unadvisable. There was pretty extensive emphysema of the back of the right chest, extending as high as the top of the right shoulder, down to the edges of the ribs and to a considerable extent round the side. Percussion gave a decided amphoric note over the lower lobe of this lung, and the breathing was extremely weak and distant. By reason of these symptoms the diagnosis was that of perforation of the lung with pneumothorax. His general condition was good; pulse 90; respiration 22; does not complain of much pain in the affected side.

Patient was put to bed and water dressing applied.

November 24th—Slept pretty well for a few hours. Complains of some pain on right side, slight cough, no expectoration, pulse strong and hard, 72 per minute, and respiration 28. Physical signs similar to what was found at the original examination.

25th—Considerable pain and distress, especially on lying down, which has continued through the night, cough troublesome and painful, no expectoration, the emphysema persists; pulse 62; respiration 25.

26th—Passed a restless night, somewhat feverish to-day, tongue thickly coated; pulse 82, full and incompressible; respiration 29; inspiration is still accompanied by considerable pain in the side. The emphysema is less. The percussion note seems less of a

tympanitic character, and the respiratory murmur is beginning to be heard much more distinctly, no friction sound.

27th—Rather more feverish, tongue thickly coated; pulse 90, hard and somewhat irregular; respiration 34, and chiefly abdominal; breathing more jerking and laboured than before; countenance anxious; complains of pain extending from the base of the lung, past the wound up to the right shoulder; emphysema nearly gone; wound suppurating. To relieve the distress exhibited in the chest, he was bled from the arm to about 15 ozs., the blood was taken from a large opening in the vein, whilst he was in the sitting posture, and continued until syncope was threatening.

28th—Rested well last night; pulse 75, and regular; respiration 28, and more thoracic; small quantity of healthy pus coming from the wound; pain is completely relieved since the bleeding, cough disappearing, and now unaccompanied by pain; slight emphysema still perceptible.

29th—Feels much better, free from pain, emphysema all disappeared except in the immediate neighbourhood of the wound itself.

30th—No cough, no pain, pulse 70; respiration 25. The Edinburgh red wash was substituted for the previous dressing, wound granulating well.

December 1st—Pulse 63; respiration 23; feels well and appetite returning. The abnormal resonance of the chest has nearly disappeared, and the right side expands now nearly equally with the left.

He was allowed up on the 5th December, and was discharged on the 7th December quite well.

Case 7.—*Cancerous Tumor of Groin of large size.—Removal by Excision.—Pyœmia.—Death.*—Reported by Mr. D. C. Cram.

Thomas B., a tall spare man of decidedly sallow and unhealty aspect, aged 58, was admitted into the Montreal General Hospital on the 2nd December 1871, suffering from a large tumor situated in the left groin, occupying the whole of the lower half of Scarpa's Triangle and overlying the Saphenous opening. It is seen as a projecting mass, measuring 9 inches in its vertical diameter and 7 inches in its transverse diameter, its surface generally is smooth but irregular, presenting several nodular elevations which give a most distinct simulation of the feeling of fluctuation. The appearance of the integument is unaltered, except at the lower extremity of the tumor where it presents a dark red color: at this point also, for a space of about 1½ inch in diameter it seems

to be somewhat adherent. The tumor seems freely movable in all directions, the firmest point of attachment being at the extreme upper part. The growth was first noticed as a small painless lump three years ago; it increased in size but very slowly until last spring at which time it was about the size of large hen's egg; up to this period also he had experienced no pain in it; from this date, however, the tumor grew rapidly and pain in it began also to be felt—this was of a lancinating or shooting character and paroxysmal. About two months ago he felt considerable heat and soreness in the lower part of the lump, which was accompanied by redness. He applied then for the first time to a medical man who, believing it to be an abscess, made an incision into it; no matter was found, but it bled rather profusely. About one week after, hæmorrhage from the small wound again ensued and was with difficulty checked. Three days before admission into hospital severe bleeding had also been experienced. After consultation, the opinion generally held was that the tumor was of a malignant nature but had not yet involved the surrounding structures, while some believed that the nature of the tumor was probably fibro-cystic, in support of which view was advanced the distinctness of the fluctuation in the nodules before mentioned and the slow growth of the tumor at first. The advisability of its immediate removal was agreed upon by all.

Accordingly, on the 4th December, with the patient fully under chloroform, Dr. Fenwick proceeded to its excision in the following manner. In order to preserve as much integument as possible and at the same time to remove all the skin which might be involved in the growth, an incision was first made in a circular direction, completely surrounding the reddish portion of skin which has been mentioned as occupying the apex of the tumor, from the upper margin of this, a second incision was carried vertically upwards in a straight line for a distance of about 4 inches. The flaps thus mapped out were then dissected up and the whole tumor was exposed; it was then found that it lay entirely upon the fascia lata, and the deeper parts of the tumor were rapidly separated by the fingers and the removal was completed. One small vessel only required ligature; the large saphena vein was exposed for a distance of three or four inches in the course of the dissection and was carefully separated from the tumor without sustaining any injury; a branch of the vein, however, was cut across, which it was thought advisable to secure as it bled pretty smartly and his strength had been already severely taxed by the previous bleedings; it was therefore fastened by an acupressure needle, the method by the quarter twist being made

use of. The wound was then washed out with solution of carbolic acid 1 to 40 and closed by means of metallic sutures, there being ample integument to cover the whole surface—dressings of the same solution were applied over all.

5th December.—Rested well after an opiate but has had considerable pain in the wound from which there is a slight sanious discharge; dressings were renewed. Pulse 100. Tongue furred and some thirst.

6th December.—Restless during the night. Wound discharging considerable amount of sanious pus. Three or four sutures were removed and the whole was thoroughly syringed with the solution of carbolic acid. Pulse 120. Tongue rather dry in centre.

7th December.—Passed a bad night. Wound looks unhealthy and discharges profusely a thin ill-smelling fluid, the thigh is considerably swollen and a slight red streak is perceptible running down the line of the lymphatics on the inner side. His appearance is anxious and depressed. Pulse 130. Tongue dry and brown. Temperature 104½. It was noticed to-day that the urine had become of very dark olive-green color, in fact almost black. This condition being doubtless due to the free use of the carbolic acid, plain water was substituted for the previous lotion. Ordered an extra quantity of beef-tea and 6 oz. wine.

8th December.—Is quite sallow-looking and greatly depressed. Wound sloughy-looking; lymphaties red and prominent as far as the inner ankle, thigh greatly swollen. Pulse 140. Tongue very dry and brown. Temperature 104. Black urine persists. Yesterday afternoon had a severe rigor which was followed by high fever and sweating. He complains to-day of soreness in the backs of both hands; these points present a red appearance and are tender to the touch, abscesses evidently threatening to form. Ordered: Poultices to the wound—4 oz. Brandy—and the following. R. Potass; Chlorat. ʒii. Tr. Ferri Mur. ʒiv. Quinæ Disulph gr. xii., Aquæ ad. ℥viii. M. To take one table-spoonful every 4 hours.

9th December.—From the time of last report he rapidly sank, pyæmic deposits being distinctly perceptible on the backs of both hands by 8 p. m. yesterday, and tenderness and pain having been developed in both elbows and both shoulders. He died at 10 a. m., this day. No post mortem examination was permitted.

Description of Tumour.—Upon examination the tumour was found to be entirely encapsulated, so that in its removal very little difficulty was experienced. Its weight was 1 lb. 13½ozs., and it presented on its surface several nodules, which were perfectly

diffluent, and gave the impression of the presence of fluid contents. Those on the surface of the tumour appeared to be distinct, as though they were separate cysts.

On cutting into the mass it resembled somewhat the structure of brain, only firmer in consistance. The nodules before referred to, extended through the mass and were separated by strong septa.

A considerable number of small vessels existed in the centre of the tumour, and which appeared to be in direct communication with the wound which had been made with the lancet of his former medical attendant. When scraped or pressed upon, a thickish juice exuded. The microscopic examination yielded the characteristic features of soft cancer.

Correspondence.

DEATH FROM HYPODERMIC INJECTION OF MORPHIA.

To the Editor of the Canada Medical Journal.

Sir,—I send the following paragraph, containing a statement of the death of the late Dr. Stanton, of New Brighton, Penn., from effects of Hypodermic Injection of Morphia, deeming it of sufficient interest to the profession at large to be inserted in the Canada Medical Journal.

DR. DAVID STANTON.

Cause of the Death of the Auditor-elect of Pennsylvania.

A letter from Mr. D. McKinney, junr., and Mr. J. E. Jackson, friends of Dr. Stanton, and who were with him at the time of his death, gives the following interesting particulars:—

The lamentable death of our friend Dr. Stanton has been so variously explained, that it is due to his memory that a truthful statement of the case should be given to the public.

About six weeks ago Dr. Stanton made two post-mortem examinations, in doing which he had to handle for over an hour decomposing tissues, and inhale the impure air from the opened bodies.

No immediate bad result was noticed, but two weeks ago he spoke to his professional friends about it, and said he believed his system had been slightly poisoned, as he had not felt perfectly well since the examinations. Last Friday a small erysipelas inflammation appeared on his left cheek, accompanied by a slight chill; on Saturday, at five p.m., the erysipelas involved the whole of the cheek and one-half of the nose. There was also a slight fever. The portion of the face involved in the disease was exceedingly tender, and he said the burning in it gave him no rest.

As his physician was leaving him he remarked that he had lost so much sleep for several nights, that he seemed to have got past his rest, and thought it best to take a small injection of morphia to enable him to pass the night comfortably. His physician offered to give him the injection, but he said he would administer it himself, as he did not wish to take it until near bed-time. At this time Dr. Stanton was cheerful, but

manifested no excitement. He was not confined to bed, and he walked about the room with almost his usual vigor.

Dr. Stanton took the morphia between seven and eight p.m., inserting it deeply into the inner part of the arm near its junction with the shoulder; the dose was about one grain. For a while afterwards he conversed pleasantly with his family, and then went to sleep. About half-past nine p.m. his wife became alarmed at the character of his breathing, and finding it impossible to awake him, sent for neighboring physicians. Medical attendance reached him by ten p.m. His breathing was then stertorous, his heart's action feeble and irregular, his pupils greatly contracted, his extremities cold, and his stupor profound. Every remedy and appliance known to science were promptly used for his relief but without avail. He continued to sink until half-past one o'clock on Sunday morning, when he expired. In the opinion of those physicians who witnessed this sad death scene, Dr. Stanton's death was caused by the unusually prompt and complete absortion of the morphia, prostrating a system already struggling with cadaveric poisoning. Thus perished one of the brightest ornaments of the medical profession; a victim to his professional devotion, and to the remedy he had so often successfully used to relieve the sufferings of his fellow-men.

From the above statement of the unfortunate result attending Hypodermic injection of Morphia, it would be well for the medical profession to be warned against its indiscriminate use, especially in all cases where symptoms indicate a tendency to cerebral congestion, as in all probability was the case of the late Dr. Stanton; the fatal effects of which, was more certainly produced by the morphia being inserted in the proximity of so important and numerous vessels as surround the Axillary Plexus.

The unfortunate result of the late Dr. Stanton's case should be a warning to the medical profession, to be guarded in their post-mortem examinations, as well as to diagnosis with much care the the cases coming under their supervision, whether Hypodermic operations can be safely performed, and upon what parts morphia can be inserted with least danger of fatal results. "Have you any statistics showing whether any, and how many fatal cases there have been from Hypodermic injections of Morphia and what remedies, if any, have been used to counteract its effects?"

In cases where there is restlessness and loss of sleep, would not Chloral Hydrat be preferable to Hypodermic injection, especially where any possible doubts existed as to the use of the latter. I should be glad of your opinion and also of any remarks that might throw light upon this subject, with a view of eliciting further inquiry and discussion amongst the profession at large. It is very much to be regretted that the medical gentlemen who attended Dr. Stanton, did not hold a post-mortem, and give results for the benefit of the profession throughout the land.

I may remark in conclusion, that Dr. Stanton was a relative of the late Honble. Mr. Stanton, Secretary at War of the United States, during their recent civil war, and had by his many years experience and observation in the army, director in hospitals, and

in private practice, become one of the most distinguished medical men in the vicinity of New Brighton, Penn. In fact he held so distinguished a position, that he had been recently elected as Auditor General of the State of Pennsylvania. His untimely death has caused a deep feeling of regret by a large circle of friends, as well as by his confreres in the vicinity of New Brighton and other tracts of Pennsylvania. *Requiescat in pace.*

FRELIGHSBURG, 1st December, 1871.

J. CHAMBERLIN, M.D.
Ex-President of Col. Phy. and Surgs., Lower Canada.

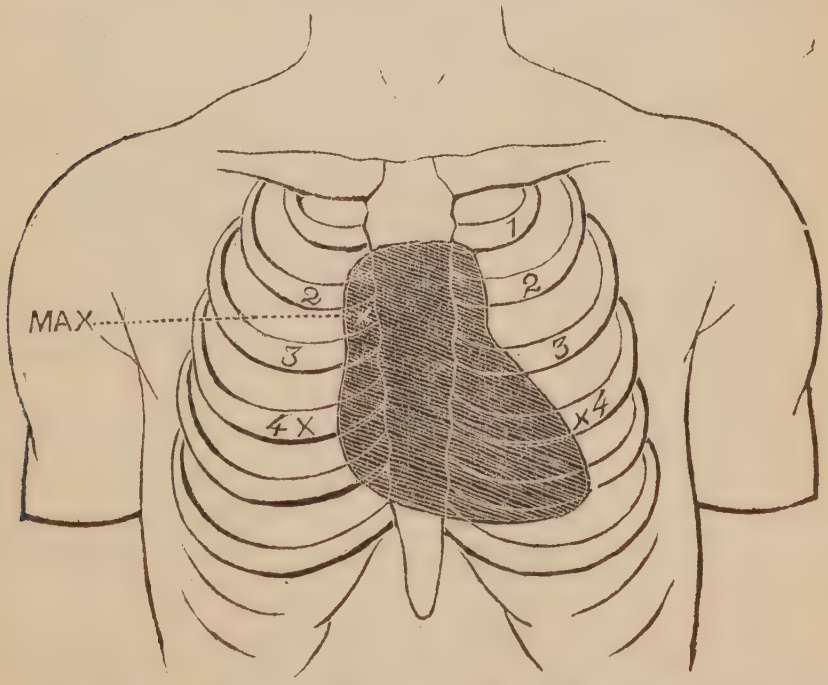
Proceedings of Societies.

Proceedings of the Medico-Chirurgical Society of Montreal, 4th November, 1871.

The Society met at the rooms of the Natural History Society. The President, HECTOR PELTIER, Esq., M.D., Edin. in the chair. After preliminary business, R. P. Howard, Esq., M.D., read the following interesting paper on Thoracic Aneurism:

MR. PRESIDENT,—Having lately met with two cases of Thoracic Aneurism in private practice, and had an opportunity of inspecting the bodies after death, I thought a record of their chief features, and an analysis of some of their more important symptoms might interest the Society this evening.

CASE No. 1.—On the 17th June, 1871, a powerful French carter



of about 38 years of age, called upon me for examination of his chest, and informed me that Dr. Hingston had sent him.

I was rather pressed for time, but made the accompanying diagram of the physical condition of the chest, with the following note of the more important physical signs.

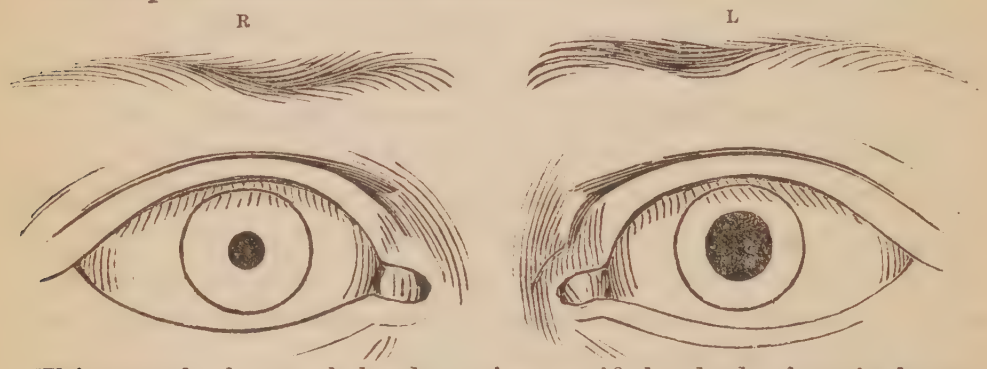
Visible pulsation between 2nd and 3rd right ribs along border of sternum, and dullness on percussion at same point.

Double murmur of maximum force over this spot; transmitted up side of neck and down lower sternal region, and feebler at xyphoid, and at 4th right cartilage than at 3rd; this especially true of the diastolic murmur. Only a systolic murmur audible at left nipple. No murmur on left side of neck. No dullness over course of arteria innominata, nor across upper part of sternum above level of 1st inter-costal space.

Right pupil smaller than left :—R. o L. O

Slight internal strabismus of right eye.

Visible pulsation of radial arteries."



This man had a weak husky voice as if he had chronic laryngitis, and there were signs of hypertrophy of the heart, the impulse of which was heaving and powerful. He was subject also to dyspnœa. After the examination I sent him back to Dr. Hingston, with this diagnosis written. "Aneurism of ascending portion of aortic arch not involving the innonyma, but implicating the recurrent laryngeal nerve," or words to that effect.

The man returned twice subsequently, to show himself to me, and in the month of July or August following, his brother-in-law called to say that he had died suddenly, and that he (the messenser) had just been at Dr. Hingston's to inform him of it, but learned that the Doctor was from home.

I begged an examination of the body, and not being able to be present, wrote to Dr. Ross to make the inspection for me, and repeated the above diagnosis in my note to him. As you will see, thanks to Dr. Ross, the post-mortem dissection confirmed the anti-mortem opinion to the letter.

The ascending aorta is greatly dilated from its origin to about the giving off of the innominate artery. The dilatation presents a moderate pouch or lateral dilatation in the cavity of the arch,

about the point of union of its ascending and transverse divisions. A much larger pouch occupies the posterior aspect of the ascending portion. The circumference of the vessel at this pouch is nine inches. The great vessels arising from the arch are normal; as are the aortic valves. The heart is affected with considerable eccentric hypertrophy.

The notes of Case No. 2, I will read as they were taken.

Case No. 2.—Aged 63, a tall man 6ft. 1in. in height, was examined by me some time ago (10 or 12 years ago he says,) and pronounced to have disease of the heart, and warned not to over-exert or otherwise expose himself.

Last night, October 17, 1871, about 10 o'clock, while sitting and conversing, he was suddenly seized with violent pain at mid-sternum, extending to inter-scapular region, and soon down both arms; he felt faint and unable to breathe, and thought himself about to die. The pain in a milder degree continued most of the night, and about 5 a.m. of the 18th, his daughter called upon me to relate the above.

I visited him at 1.30 p.m. on that day, and found him in bed and relieved of the pain, although soreness remained. The external jugulars on both sides much distended and large; not pulsating—the visible area of cardiac pulsation not increased, indeed cardiac pulsation not marked; and apex beat not easily felt—it falls within vertical line of left nipple—impulse not strong.

Dullness on percussion marked along upper sternal region from 4th rib upwards, and for a full inch to right of sternum from the base of the heart to first right inter-costal space—does not extend to left of sternum. Indistinct systolic, but no diastolic murmur audible from xyphoid cartilage up to level of 4th inter-costal space. Here systolic murmur is rather louder, muffling the 1st sound, and ending in a short 2nd sound which is free from murmur.

The systolic murmur is single to the level of 3rd right cartilage, and then it is replaced by a double murmur which is audible chiefly along right border, and to outside of that border of sternum, from 3rd rib to upper border of 2nd, its point of maximum loudness being at level of 2nd interspace, and just outside right border of sternum. No pulsation to be felt over the centre of dullness, and double bruit. The murmur is peculiar, somewhat sharp and high pitched, both parts somewhat alike, but sufficiently unlike to be differentiated.

Murmur not transmitted up innonyma or carotids. Episternal pit allows finger to become conscious of pressure of aortic arch.

Pupils alike, and of medium size, radials calcareous and equal in rythm. Detect no difference in respiration in corresponding regions of front of chest, a few sputa lately expectorated contain blood.

Query? Is there aneurism of ascending aortic arch or dilatation of same part of aorta?

7 P.M.—Daughter had called to say the pain had returned severely within an hour, and was worst in left arm, of which he appeared to have lost power.

19th.—No double murmur audible to-day at base of heart, or right edge of sternum, the systolic basic murmur too is very feeble. He feels very much better. The cervical veins are quite as turgid; no traces of disease in lungs, except a little remote blowing respiration at root of right lung. Says that the weakness of left arm has been present from the outset of the attack, although he did not mention it to me before. Has perfect feeling in it, but wants muscular power very much. Can't grasp my hand. Left leg and left side of face unaffected. Pulse about 80.

20th.—Pain returned suddenly at 2 a.m., when his daughter held him up in bed; he said the pain began in back, and then was instantly felt at mid-sternum. The veins of neck appeared to be bursting; he did not cough, but lay back off his daughter's arm and was dead.

Autopsy.—On raising the sternum found a thin layer of coagulated blood infiltrating the anterior mediastinum—over a pint of blood in left, and in right pleura respectively.

Lungs—healthy. Pericardium contained somewhat over a pint of blood, most of which formed a soft coagulum about the heart; no signs of pericarditis present. The aortic arch is dilated uniformly from its origin at the heart, to where the innonyma is given off, and blood is extravasated between its coats, chiefly about its concavity.

Liver normal. Both kidneys granular.

Heart slightly enlarged. Aortic orifice admits thumb readily. Two semilunar segments united together, and the seat of thick deposit of calcareous matter; these by their union and thickening seriously obstruct the orifice. The other segment tolerably healthy, and when down almost closes the orifice, but may admit a slight regurgitant stream. The dilatation of the aorta begins immediately above the aortic valve, and involves the vessel tolerably uniformly, although the coats bulge a little upon the convexity of the ascending portion; the width of the vessel an inch above its origin, is six inches. On slitting up the vessel, a T

shaped rent is found in its coats, occupying the concavity of the arch. The transverse rent is two inches long, and runs directly across the vessel, and involves the internal and middle coats ; the vertical rent corresponds with the axis of the vessel, is about an inch long and somewhat jagged and irregular, as compared with the transverse slit, which is clean as if cut with a knife. Blood is extravasated for some two inches between the vessel and its sheath. The edges of the vertical rent appear to have been ulcerated along their internal surface : the coats at this point present the opacity indicative of degeneration. This vertical slit corresponds with a vertical rent three-quarters of an inch long in the external coat, and serous covering of the arch upon the posterior aspect of its concavity.

The first question which would occur to the physician after having examined the two patients, whose clinical histories have been given, would be : Are they the subjects of Aneurism or of true Intra-Thoracic tumour ?

I inferred the former on the following grounds :—1st. Aneurism is very much more frequent than intra-thoracic tumour. 2nd. The ascending portion of the aorta is particularly obnoxious to sacculation and dilatation ; and the visible and tangible pulsation, dullness on percussion, and maximum of double murmur in No. 1 ; the dullness on percussion and maximum of double murmur in No. 2, corresponded in site to the situation of the ascending aorta, viz. : From the base of the heart to the second rib, coasting along the right border of the sternum. This accurate localization of the ordinary physical signs of aneurism in the anatomical situation of the ascending aorta is (I am almost inclined to say) infallible evidence of aneurism of that portion of the vessel.

But 3rd intra-thoracic tumour could scarcely by any possibility correspond in exact site with the course of the ascending aorta, and if it did, it would be very unlikely to develop a double murmur of maximum intensity in the second intercostal space near the right border of the sternum. 4th. The most frequent variety of intra-thoracic non-aneurismal tumour is cancer, and is apt to coexist with tumours elsewhere, and to give rise to varicose enlargement of the veins of the front of the chest, base of the neck and arm, conditions that did not obtain in these patients, and do not occur in aneurism.

These two specimens of aneurism affecting the same portion of the aortic arch are interesting in many respects, and amongst others as illustrating to some but not marked extent, the two varieties of that disease, to which this portion of the aorta is especially liable viz. lateral or sacculating and peripheric (or

dilating) aneurism. Some of the most reliable points in my estimation of distinction in the diagnosis between these two forms of aortic aneurism, are well brought out in the cases just read.

In the Sacculated No. 1.	In the Dilated No. 2.
Distinctly localized pulsation perceptible to the eye and hand, over ascending portion of aortic arch.	Absence of pulsation—or if present, not so localized—but diffused and frequently more perceptible above the clavicles than over the arch.
Inequality of the pupils and impairment of the voice — implying compression or stretching of certain nerves.	Absence of those signs indicating intra-thoracic pressure.

However, the most distinctive sign of sacculated aortic aneurism, a pulsating prominence in the course of the vessel, was absent in No. 1 (sacculated,) and a sign rarely witnessed I believe in dilated aneurism, viz.: great distension of the cervical veins on both sides (suggesting intra-thoracic pressure) was present in No. 2 (dilated.)

Another sign existed in this example of dilatation of the arch, which according to Walshe, ought not to have been present. That author says the murmur heard is "systolic only," it was however systolic and diastolic. The cause of this double murmur merits a passing notice. It was not due to a rough and calcareous condition of the lining membrane, that was smooth and free from calcareous degeneration; nor to the diseased state of the aortic valves, for it was not heard at the base of the heart. I incline to refer it to the laceration in the coats of the vessel. The systolic murmur was probably the result of the friction of the blood, projected by the systole of the ventricle against the edges of and through the rent in the vessel, and the diastolic murmur, the effect of the blood wave forced against those edges by the systole of the aorta.

I presume the inaudibility of the double murmur on the 19th, the day after its discovery, was owing to increasing feebleness of the heart, consequent upon a further escape of blood into the pericardium, and perhaps pleurae. It will be remembered that the systolic basic murmur likewise had become very feeble on that day.

The great distension of the external jugulars in connexion with a dilated ascending aorta, is an interesting feature of one of those cases—and although it may be explained on the supposition that the dilated aorta may have compressed the ascending cava, I incline to the opinion that the compression was really effected by the large quantity of blood extravasated into the pericardium.

Amongst the more characteristic signs of intra-thoracic aneurisms and other intra-thoracic tumours, not the least are those arising out of the compression, stretching or irritation of various nerves, and the cases now under examination afford illustrations of three or four well marked and distinct signs thus induced.

In case No. 1, the patient suffered from weakness and huskiness of the voice, not owing to any disease of the larynx, but to compression or stretching of the left recurrent laryngeal nerve by the aneurism.

It may not be known to all present, that as long ago as 1850, our colleague and fellow citizen, Dr. R. L. MacDonnell, noticed the coexistence of contraction of the pupil and intra-thoracic tumours, and correctly explained the relation existing between them, viz.: compression by the tumour of the sympathetic nerve, which supplies the dilator pupillæ fibres. This valuable sign existed in the first case, not in the second. The Frenchman's right pupil was smaller—about one-half—than the left. In his case there was also an accompanying sign that I do not remember to have seen before, or to have read of in thoracic aneurism, viz.: a slight convergent squint of the same eye.

May the convergance of the optic axis in this case be thus explained, if it were really caused by the aneurism?

The paralysis of the sympathetic nerve, and through it of the dilator pupillæ fibres permitted the sphincter fibres of the pupil supplied by the third nerve to contract and diminish the pupil—and the functional activity of the branch of the third nerve, supplying the iris, extended to the branch of that nerve which supplies the internal rectus, and hence the internal squint. The objection to this is that the external rectus supplied by the sixth nerve, ought not to have permitted the internal rectus to overcome it.

Or was the convergence an associated movement? We know that when looking at an object held close to the eye, the pupil contracts, and the optic axis is made to converge. Now may not the paralysis of the sympathetic nerve caused by the pressure of the aneurism, have been followed not only by contraction of the pupil, but by convergence of the optic axis in obedience to this law or habit of associated movement?

Patient No. 2 suffered from three or four seizures resembling and apparently identical with Angina pectoris. A sudden and violent pain starting from mid-sternum, extended to the interscapular regions, and thence down both arms, attended with a sense of impending death.

The occurrence of Angina pectoris in thoracic aneurism, particularly if Dr. Gairdner's opinion prove to be correct, that it is "almost confined to aneurisms of the ascending aorta, especially in the immediate neighbourhood of the heart," tends to corroborate the view which refers Angina to an affection of the cardiac plexus of nerves—for those nerves surround the roots of the aorta and pulmonary artery, and give branches to the heart, some of which communicate with the cardiac ganglia.

In this instance, as the Angina was not experienced till within three days of death, and appears to have coincided with the rupture of the vessel, it may be inferred either that some of the filaments of the cardiac plexus were torn or stretched when the arterial coats gave way, or that they were irritated by the pressure of the blood extravasated iuto the pericardium.

There are many other circumstances clinical and pathological connected with these two examples of aortic aneurism deserving of analysis, but as you must have already thought me tedious, I will conclude with an allusion to a symptom which I do not remember to have seen recorded in similar cases.

From the moment of the first seizure with Angina, No. 2 suffered almost complete loss of *motor* power in the left arm. The corresponding side of the face and the lower extremity on that sidc, were unaffected. What was the cause of this local paralysis?

It was not, in my opinion, due to obstruction of the subclavian or axillary artery by a fragment of fibrin washed from the rent in the aorta, because the radial pulse was good at the wrist, and the hand was not colder than its fellow. Nor to an embolus in a branch of the internal carotid—otherwise the los of power would have involved the left side of the face and the left leg, as well as the left arm. It appears to me that the doctrine of *inhibitory* nerve influence taught by Pflüger and Lister, will satisfactorily explain the paralysis upon physiological principles. Lister's statement of the doctrine is, "that one and the same afferent nerve may, according as it is operating mildly or energetically, either exalt or depress the function of the nervous centre on which it acts."

In this case then I infer that the afferent nerves, which were the seat of e ıch agonizing pain during the attack of Angina, acted so energetically as to depress the function of the nervous centre from

which the brachial nerves obtain their motor force; and that the so called "inhibitory" paralysis resulted. I cannot conceal my doubt however, that the so-called inhibitory influence is anything more than exhaustion of the centres from over excitement.

I am aware that Brown-Sequard's views as to the mechanism by which "reflex" paralysis is induced, may be applied in explanation of this case, but for reasons which time will not allow me to give, I prefer the above view. I conclude by thanking the Society for the patience with which it has listened to my observations.

MEETING HELD NOVEMBER 18th, 1871.

The President HECTOR PELTIER, Esq., M.D., Ed., in the chair.

COLIN C. SEWELL, M.D., Ed., L.R.C.S.E., read the following paper on

ANEURISM.

As a commentary on the very interesting paper, showing the perfection of diagnosis, read by Dr. Howard at the last meeting of this Society, I propose reading to you this evening the report of a case showing the difficulties sometimes experienced in arriving at a correct opinion, though the presence of an aneurism be suspected and carefully looked for.

Mr. C., æt 34, consulted me about four years ago, giving the following history: He had enjoyed good health up to the year 1861, when he contracted chancre, and consulted an irregular practitioner, under whose care he remained for three weeks without deriving any benefit. He then went to Dr. Lizars, of Toronto, who prescribed mercury internally, applied caustic to the sores, and reported him cured in about six weeks. He now enjoyed good health till 1865, a period of three years, when he had a bad attack of intermittent fever, which, though it quickly yielded to quinine, was immediately followed by the appearance of the rash of secondary syphilis, accompanied by ulcers in the throat, and other symptoms of this disease. He consulted a medical man here, under whose care he continued for twelve months, during which time frequent crops of ulcerating sores appeared on the chin, buttocks, &c. He then gave up all drugs till 1867, when he came to me to get advice about the remains of a secondary syphilitic eruption on the back. I ordered him mercurial baths, with Iod. Pot. and cod liver oil internally, and under this plan of treatment the rash entirely disappeared.

Mr. C. did not again consult me till the autumn of 1869, when

he returned complaining of a pain across the loins. He stated that about a week ago while witnessing a lacrosse match, he felt a sharp pain, without any warning, in the small of the back; it, however, soon passed off, and he remained to the end of the match. From that day he has had a constant soreness in the lumbar region, with occasionally a severe paroxysm, when the pain would extend into the left groin and testicle. On examination, no tender points in the spinal column, or other sign of disease could be found; auscultation and percussion elicited normal sounds over the whole abdomen and thorax; pulse 80, and of natural strength; urine healthy in quantity and quality; bowels regular; in fact there was a total absence of symptoms, except the neuralgic pain and a slight retraction of the left testicle. Iodide of potassium and Quinine were prescribed, the latter greatly relieving the pain, to use the patient's own words "it acted like a charm," cutting short the severe paroxysms, but not entirely eradicating the soreness across the loins.

I did not see Mr. C. again professionally, till the winter of 1870, when he came to me, again complaining of the pain in the lumbar region, which he stated had never entirely left him, was again recurring in paroxisms, and extended as before into the left groin and left testicle. On examination the patient was found much in the same condition as he was fifteen months ago, except that the exacerbations of pain were more regular and more severe, and intense dyspeptic symptoms had now declared themselves. Antiperiodic and antineuralgic remedies were tried without affording more than a temporary relief. He was afterwards seen by Drs. Campbell, Craik and Howard, the latter making careful examinations, on several different occasions, with the special view of discovering aneurism, should one exist, but without success. The pain had now shifted to the hepatic region, and presented this important feature, namely, that the patient gained instant relief from it by assuming a bending posture, resting upon his hands and knees. Nevertheless, concluding from the periodical exacerbaof the pain and the history of the case, that the trouble was due in some measure, at least, to the intermittent fever, quinine was again ordered. Upon this treatment our patient's health improved, He gained flesh to a slight extent, became more cheerful, and in every way did well for a short time, when the paroxysms of pain and other adverse symptoms returned. Our former plan of treatment was again tried, but this time without effect. He then forsook us to try homœopathy, under which treatment he continued till his death.

An examination after death was made by my friend Dr. Ross

and myself, in the presence of Dr. Howard. On inspection, the body was found much emaciated, but still presenting the well developed muscular system of an athlete.

N.B.—I omitted to mention in my synopsis of the case, that Mr. C. had been fond of gymnastic exercises, and had been accustomed to work two and three hours daily at them.

On attempting to cut through the thoracic walls, we found the cartilages to a considerable extent ossified, and on raising the sternum we noticed an absence of adipose tissue in the auterior mediastinum. The thoracic organs were in their natural position and healthy. On continuing our dissection, and opening into the abdominal cavity, we found all the organs apparently in their proper positions, but on raising the peritoneum and the intestines, a mass of coagulated blood was seen occupying a portion of the right hypocondiac and lumbar regions, and extending into the right iliac fossa, showing the immediate cause of death to have been internal hemorrhage. On further examination we found the ruptured sac of a small sacculated aneurism springing from the abdominal aorta, and lying across the 1st and 2nd lumbar vertebræ, between the crura of the diaphragm; these vertebræ were deeply eroded, and formed the posterior wall of the aneurismal sac.

My case, Vide specimen, is interesting in so far that it shows the difficulties sometimes experienced in arriving at a correct diagnosis, for, though we were led from the neuralgic character of the pain, the peculiar posture assumed by the patient with relief, and by the "gristly" feel of the radial artery, to suspect the existence of an aneurism, the absence of a pulsating or other tumour, our inability to discover any abnormal sounds in the course of the abdominal aorta, and the undeniable relief gained from the use of antiperiodic and antineuralgic remedies, all tended to make it difficult indeed, almost impossible to arrive at a correct diagnosis.

Dr. Howard—As one of the gentlemen who had failed to make a correct diagnosis of the case just related by Dr. Sewell, he would be expected to make some observations, if not enter upon his defence. At the first consultation in which he saw the patient, the attending physician raised the question of hepatalgia. But as that is probably a very rare disease, even the existence of which has been called in question by experienced pathologists, he examined carefully for abdominal aneurism—but failed to discover tumour, pulsation, or bruit, in the course of the abdominal aorta—nor was a bruit to be heard along the dorsal or lumbar vertebræ. He (Dr. H.) then suggested that the neuralgic-like pain might be either due to malaria, as the patient had had intermittent fever, or to some syphilitic affection either of the nerves or spinal mem-

branes, and it was interesting to note that under five grain doses of quinine, the symptoms were markedly relieved. The Iodide of potassium, which the patient had been taking, was continued, owing to the doubt respecting constitutional syphillis. When Dr. Sewell informed the speaker of the sudden death of the patient, Dr. H. at once said "then it has been either an abdominal aneurism near the diaphragm, or a gastric ulcer which has proved fatal by perforation."

Judging from his own experience, abdominal aneurisms were more frequently obscure than thoracic, as well as much less common. In the light of this case he was disposed to regard the symptoms of abdominal aneurism mentioned by Dr. Stokes, viz.: relief of the pain by lying on the face, as highly suggestive of that disease; in this case even when sleeping under the hypodermic dose of morphia, the patient preserved that posture. He never had seen the symptom so marked in any case of simple ulcer of the posterior wall of the stomach.

Reviews and Notices of Books.

PHYSICIANS VISITING LIST.

We are in receipt through the kindness of its publishers, Messrs. Lindsay & Blakerton, of a copy of their "Physicians Visiting List," for the year 1872. It is beyond all doubt, the most complete, and yet the simplest Visiting List which is published. In our opinion it is invaluable to the Practitioner in busy practice, and besides saving him a great deal of trouble, will prevent his loosing a considerable sum of money during the year, by neglecting through forgetfulness, to enter visits made. Those who have made use of this Visiting List, would not be without it for thrice its price. We therefore know, we are doing our readers a good turn, when we strongly recommend it to their attention. It can be had from our publishers, Messrs. Dawson Brothers, St. James Street.

A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A.M., M.D., L.L.D., Professor of the Practice of Surgery with operations, in Bellevue Hospital Medical College, &c., &c., &c. Fourth edition. Revised and enlarged. Illustrated with three hundred and twenty-two wood-cuts. 8vo: pp. 789. Philadelphia: Henry C. Lea, 1871.

This work is so well known to the profession, that it is unneces-

sary to say more than that the author has issued this the fourth edition. Every man who wishes to be posted in Fractures and Dislocations, cannot avoid procuring a copy of Dr. Hamilton's standard work, it is the only one on the subject on which it treats in the English language, if we except Sir Astley Coopor's work on the same subject, which is out of print, and very difficult to procure, and which does not give to the surgeon the amount of practical information as regards treatment, which will be found in Dr. Hamilton's treatise.

The author has long enjoyed the reputation of being an authority on the subjects of Fractures and Dislocations.

The author has enriched this edition by adding an increased number of wood-cuts, much new matter has been incorporated, and to preserve the size of the volume he has omitted discussions on disputed points, which in former editions occupied much space. The publishers have done their work in the usual creditable manner, and have given us a handsome volume well impressed, and clearly printed on excellent paper. To be had of Dawson Bros., St. James Street.

PERISCOPIC DEPARTMENT.

Surgery.

(*From the "New York Medical Journal"*).

REMARKS UPON THE DIAGNOSIS OF OVARIAN TUMOURS FROM FIBRO-CYSTIC TUMOURS OF THE UTERUS.

By Charles C. Lee, M.D., Surgeon to the Charity Hospital, formerly Surgeon to St. Vincent's Hospital, etc.

(*Concluded.*)

Case X.—A case, in many respects analogous to this, was reported to the New York Pathological Society in 1865, by Prof. H. B. Sands,* who excised the uterus and uterine appendages on account of a tumour which he suspected to be of uterine origin, although "certain facts in the patient's history and in her physical condition pointed strongly to the existence of ovarian disease."

The enlargement had begun seven years before, in the left iliac fossa, the growth being at first gradual, but in a year's time very rapid. Menstruation had sometimes been suspended, but no men-

* New York Medical Journal, December, 1865, p. 188.

orrhagia of any kind had existed; the patient was single, 45 years old, and of healthy parentage. Examination of the abdomen, which was rendered more difficult by ascites and a large umbilical hernia, revealed the outlines of two or three swellings, with obscure fluctuation. The uterus was very high, to the left of median line, and admitted the sound to the depth of four inches. It was immovable on the sound, except in conjunction with the tumour, which was very mobile; and this conjoined mobility of uterus and tumour was the feature that led Dr. Sands to suspect it was of uterine origin. A formal consultation determined the propriety of an operation, which was performed June 12, 1865. The abdominal cavity was reached with ease, and, when the tumour was brought into view, its nature was still so uncertain that it was tapped, but no fluid was obtained. No serious adhesions existed above, but in the pelvic cavity they were extensive and formidable. The tumour being found inseparable from uterus, Dr. Sands, whose brilliancy as an operator is well known, determined, with the concurrence of those present, to remove the whole *en masse*, which was accordingly done above the line of implantation of the vagina into the cervix uteri. Alarming hæmorrhage ensued, chiefly from a rent in the common iliac vein, but the bleeding points were secured as rapidly as possible. The operation had lasted for an hour and a half, and, in spite of active stimulation, the patient sank and died a few minutes after its completion. Death was attributed to exhaustion from hæmorrhage, which Dr. Storer* thinks was due to the use of the knife instead of the *écraseur*. The mass removed, which weighed about twenty pounds, was composed of the uterus and three large outgrowing fibroids, which were in many parts so soft as to resemble œdematous connective tissue, and the largest tumour containing a number of cysts filled with serum. The womb was greatly hypertrophied, measuring 9 inches in its longest diameter, and admitting the sound through 7 inches of a somewhat tortuous route.

Case XI.—In December, 1847, a single woman, aged 27, was admitted to the Massachusetts General Hospital, under care of Dr. Samuel Parkman† for the relief of an abdominal tumour, which was first noticed a year before this date. General health good; no menorrhagia or dysmenorrhœa; abdomen about as large as at seventh month of pregnancy, the tumour occupying hypogastric, right and left iliac, umbilical, and left lumbar regions. The mass was well defined, with rounded edges, very movable, not distinctly

* *Loc. cit.*, pp. 123, 127.

† American Journal of Medical Sciences, April, 1848, p. 371, *et seq.*

fluctuating, but "giving the sensation of being composed chiefly of an elastic texture containing cysts scattered through its substance." Vaginal and uterine examination negative. The absence of distinct fluctuation was thought the only lacking symptom of its ovarian character, and the diagnosis of probable (but not certain) multilocular ovarian cyst was thereupon given. The patient had previously been tapped by another surgeon, who obtained no fluid. As the woman urgently demanded an operation, gastrotomy was performed by Dr. Parkman, January 8, 1848; anæsthesia by chloroform. When the tumour was exposed its nature was still doubtful, and it was tapped in two places, without effect; it was then lifted gently out of the pelvis, when its uterine nature was first detected. No serious adhesions existed, nor had the tumour any pedicle, but the womb "appeared to expand itself and grow gradually into the enormous mass." A strong double ligature was passed through the body of the uterus, which was firmly ligated, and the whole mass above that point removed by the knife. No bleeding occurred, and the pelvis was therefore sponged clean, and the abdominal wound closed by sutures and adhesive strips. The patient rallied quickly, and did well until evening, when she suddenly began to sink, and died of secondary hæmorrhage from the uterine incision 12 hours after the operation. A careful examination of the tumour, and of the parts left in the pelvis, showed that it sprang from the left side of the uterine fundus, involving the left Fallopian tube, and immediately expanded into an ovoid mass, with triple lobes, between 8 and 9 pounds in weight. It presented none of the hard, grisly character of true fibrous tumour, but was soft and compressible like sponge, "presenting large meshes, containing considerable quantities of clear, serous fluid, which leaked from its incised surfaces." All the physicians who saw the case concurred in Dr. Parkman's diagnosis.

Case XII.—In 1855, Dr. E. R. Peaslee reported * the case of a widow aged 35, who consulted him in August, 1853, for a pelvic and abdominal tumour, which had appeared 21 months previously, after a tedious and difficult confinement. It extended nearly to the umbilicus, was firm and smooth, freely movable, not sensitive, but productive of much distress by pressure on the bladder and rectum. When examined *per rectum et vaginam*, it was only perceptible on the right side, and involved the right ovarian region—uterus very movable in all directions except to the left, and quite independently of tumour; sound passed to depth of $3\frac{1}{2}$ inches.

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* American Journal of Medical Sciences, April, 1855, p. 394, *et seq.*

Fluctuation not marked, growth steady and rapid: patient pale and emaciated. The tumour was judged by Dr. Peaslee to have "commenced in the right ovary and not yet adherent to any other part or organ, except to the uterus, by its natural but enlarged attachments." Its removal was decided upon if the patient's general health could be improved; and, in six weeks' time, this was so much better that gastrotomy was performed, September 21, 1853. At this time another careful examination was made of the tumour, which had manifestly increased in size, and now gave an evident, though not very distinct, feeling of fluctuation. This fact served to confirm the previous diagnosis.

The abdomen was opened, and the tumour reached in the usual manner, the patient being thoroughly etherized. The tumour was smooth, of a pale, livid colour, free and unattached above, and so distinctly fluctuating to the touch that it was at once tapped; no fluid being obtained, the abdominal wound was enlarged, and the tumour found to be continuous with the fundus of the uterus. No other serious adhesions existing, and the uterus being elongated and slender at its lower part, it was at once decided to remove the whole mass; which was done by excision with the knife, after securing the uterus as low as possible in the pelvis with a strong double ligature. Only one artery had to be secured in the uterine stump, the entire hæmorrhage not exceeding six ounces. The left ovary, being diseased (but not connected with the tumour,) was excised with the uterus; the right was healthy, and left *in situ*, and the abdominal wound was closed with harelip-needles, sutures, and adhesive strips. Complete reaction followed; but, on the next day, a hernial protrusion of the bowel occurred through the wound, and, the gut becoming strangulated, death ensued on the fourth day after the operation. No secondary hæmorrhage occurred. The tumour proved, upon section, to be a large outgrowing uterine fibroid springing from the right of the fundus, and already softening and degenerating in its central portions; to the latter condition, and to the dilatation of the uterine sinuses in the vicinity of the tumour, was due the deceptive feeling of fluctuation. The body of the uterus was also elongated, the cavity when straightened admitting a sound to the depth of five and a half inches; but two inches below this point the cavity of the uterus was flexed sharply to the left, which rendered the farther passage of the sound impossible before death.

Case XIII.—I am indebted to the kindness of Prof. Peaslee

for the following details of a second case* upon which he operated in February, 1868;

The patient had detected a pelvic tumour several years previously; its growth was very slow, over three years from its discovery before tapping became necessary. The fluid then obtained was of a dark-brown (chocolate) colour, like what is occasionally (though rarely) obtained from an ovarian polycyst. At the date of the operation abdominal fluctuation was distinct; the uterus was of normal depth and in the central position, and was freely movable in all directions independently of the tumour. All the other means of exploration pointed to the diagnosis of ovarian cyst, which was the diagnosis adopted; although some doubt of its accuracy lingered in Dr. Peaslee's mind, from the slow rate of growth, and the nature of the fluid obtained at the previous tapping. Gastrotomy was performed, and it was only after the fluid was again drawn off that the tumour was found to be of uterine origin. Numerous and extensive adhesions existed, but the mass fortunately had a distinct pedicle three-fourths of an inch broad, and one-fourth of an inch long, which grew from the middle of the top of the *fundus uteri*. This was securely tied, the ligatures being cut short and left in the pelvic cavity, and the large fibro-cystic growth excised above the line of ligation. The peritoneal cavity was thoroughly sponged out; and a tent of moistened and firmly-twisted linen, projecting into the abdomen for a half inch, was left between the lower two sutures in the abdominal wound, for fear of secondary hæmorrhage. The patient entirely recovered, and two and a half years after the operation remained in perfect health.

Case XIV.—In Dr. Routh's *brochure* upon uterine tumours,† and in "Hewitt's Treatise on the Diseases of Women" (London edition, 1863, p. 403,) is narrated the following case, occurring in the practice of Mr. F. D. Fletcher, of Liverpool.

A widow, aged 40, who had borne five children, and had three miscarriages, had observed an abdominal tumour 13 months before applying for treatment. Mr. Fletcher thought the growth ovarian and decided to remove it, which was done May 14, 1862. On opening the abdomen, the mass was found adherent to the omentum and to the abdominal wall. Numerous cysts were punctured, and the tumour was then found to spring from the lower part of

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* American Journal of Obstetrics, vol. iii., No. 2, where the case is incidentally alluded to in article on "Injections of the Peritoneal Cavity after Ovariotomy."

† "On Some Points connected with the Diagnosis, Pathology, and Treatment of Fibrous Tumours of the Womb." London, 1864. Tab. ii., Case 13.

the womb to the left of the median line. The pedicle was broad and well developed, and this was divided by the *écraseur*, after which two short ligatures were applied. Recovery was complete; and, when, a few months after the operation, the patient reapplied for treatment on account of an eczema, she was fat and quite well.

Case XV.—A married woman, 42 years old, consulted Mr. Hakes,* for an abdominal swelling which had begun 15 months previously. She had two children, the youngest 15 years of age. A careful examination of the tumour led to the conviction that it was an ovarian cyst, and it was twice tapped, but soon refilled. Its removal was decided on, and on January 29, 1863, gastrotomy was performed for this purpose. The tumour was found adherent to the omentum and intestines, but had a slender pedicle, which grew from the uterine fundus. It consisted mainly of numerous small cysts, two or three of which were filled with old clots of blood. The pedicle was secured by two distinct ligatures, reinforced by another strong ligature around the whole mass. The tumour was then cut away, but the patient gradually sank, and died 33 hours after the operation. Both ovaries were diseased, but not connected with the tumour.

Case XVI.—A single woman, 45 years old, consulted Mr. Baker Brown,† in 1860, for an abdominal tumour which had begun to develop in the right iliac fossa eight years previously. At first its growth was almost imperceptible, but during the last six months the increase was very rapid. A very thorough examination convinced Mr. Brown that the tumour was ovarian, and, under that belief, gastrotomy was performed, May 15, 1860. Very extensive and formidable adhesions were found; and, while separating some of these, one of the compartments of the cyst was ruptured and a quantity of liquid poured into the abdominal cavity. The mass was now discovered to be a fibro-cystic tumour of the uterus, neither ovary being involved in it. Its removal was deemed injudicious, and a part of the cyst was excised and the wound closed. The patient progressed pretty well for ten days, when a little fluctuation was discovered in the abdomen. This was followed by an attack of erysipelas, extending to the right leg and gradually becoming phlegmonous. Death ensued on the 24th day.

Case XVII.—In 1855, Dr. W. L. Atlee,‖ reported the case of an

* British Medical Journal, February 28, 1863,

† Routh, *loc. cit.*, Tab. iii., Case 26.

‖ American Journal of Medical Sciences. April, 1855, p. 388, Case 6.

unmarried woman, 43 years of age, who had applied to him six years previously for the relief of an abdominal tumour which he considered ovarian. For this purpose he operated, October 13th, 1849: "Incision from one inch above the umbilicus to pubis; tumour uterine with large cystiform bodies incorporated with it. Non-adherent; not removed. Anæsthesia; recovery. Died between three and four years afterward, from progress of disease. Weight of the mass removed after death, 50 pounds."

Case XVIII.—A married woman, 36 years old, consulted Mr. I. B. Brown, in 1862, for a tumour which was first observed six years before. She had been tapped once only, when nearly two quarts of a brownish liquid were drawn off, and the tumour was thought to be a multilocular cyst of the ovary. She was subjected to operation (gastrotomy,) December 11, 1862, when the following condition was revealed: Ascites, tumour not ovarian, but a fibro-cyst of the uterus with extensive adhesions; two endo-cysts were tapped, and about a quart of muddy, yellowish fluid drained off; tumour not removed, as that would have involved ablation of the womb.

Six days afterward a violent attack of coughing reopened the wound, through which the serous fluid drained for several days. The tumour increased rapidly in bulk, vomiting and pyæmic symptoms ensued, the wound gaped, and death followed on the 26th day. †

Judged by the ordinary standards of diagnosis, the foregoing cases certainly exhibit no very hopeful prospect of avoiding similar errors in the future. For not one of these was undertaken hastily, or without the most careful examination, and yet in none but those of Peaslee, Storer, and Sands, did the operator entertain even a doubt of the correctness of his opinion until the operation had reached a point from which retreat was impossible. In Case XII. the history of development and the symptoms were antagonistic; and Dr. Peaslee thought the growth might *possibly* be uterine, but on the whole thought it ovarian. Case IX. was so obscure that Dr. Storer only adopted the diagnosis of ovarian multilocular cyst by exclusion, although not entirely satisfied of its nature. In Case X., Dr. Sands suspected that the tumour *might* be of uterine origin, although certain facts in the history and physical examination pointed to the existence of ovarian disease, which latter was the diagnosis of others * who had the case in

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† Transactions of the Pathological Society of London, vol. xiv., p. 199, Case also quoted by Kœberlé, Gazette Hebdomadaire, March 12, 1869, p. 164.

* Dr. Emmet, however, whom the patient had previously consulted, informs me that he was satisfied of the fibro-cystic nature of the tumour.

charge. Nor is this difficulty lessened by an appeal to systematic writers on the subject, who unanimously state that no accurate diagnosis is possible between the two affections.

Thus, Graily Hewitt ("Diseases of Women," ed. 1863, p. 403,) says: "These cases" (of fibro-cysts of the uterus) "are very rare, and it seems almost impossible to say how they are to be distinguished from cases of ovarian tumours during life." And again, p. 575: "This disease has never, so far as I am aware, been diagnosticated during life, but it has on more than one occasion" (we have instanced 18 such, without by any means exhausting the list) "been mistaken for an ovarian tumour." Mr. Baker Brown states‡ that "the diagnosis between these very rare tumours and encysted ovarian disease must be more difficult even than in the case of solid tumours. Indeed, I know of no distinguishing marks between the two."

Mr. Spencer Wells' opinion already quoted, is still more explicit, for he says: "Even after an exploratory incision I know of nothing but a rather darker—less pearly blue—aspect of the tumour, which would put the surgeon on his guard." †

Dr. Peaslee, who is justly celebrated as a diagnostician in ovarian pathology, informed the writer, in reference to the difficulties surrounding Case XIII. of this series, that, up to the present time, he "knows of no means of positively deciding in such a case" between an ovarian cyst and a fibro-cystic tumour of the womb.

Professor Kœberlé, of Strasbourg, has, however, published in the Gazette Hebdomadaire* a paper characterized by great ingenuity and research, in which he claims that the diagnosis of fibro-cystic growths can with certainty be established by attention to the following points:

1. The discoloured hue and dejected expression of the face, or the so-called *facies uterina*, of the patient.

2. The variable consistence of the growth, as shown by abdominal palpation.

3. The results of tapping. If the trocar touch a fibrous spot in the tumour-wall, blood will flow; even when the cyst is reached, the fluid never presents the clear, viscid character of ovarian cystic fluid, but is either yellowish, thin, serous, and rich in lymph or cholesterin, or it is brownish, muddy, seropurulent, or bloody.

4. The indurated (or nodulated) feeling of the tumour after tapping.

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‡ "Surgical Diseases of Women," second edition, p. 310.

† "Diseases of the Ovaries," vol. i., p. 362.

* March 12, 1869, p. 163.

5. The uterine connections of the growth, as made out by careful vaginal and uterine examination.

By these means M. Kœberlé was able to diagnosticate with precision the following interesting case, which is reported in the same connection.

Case XIX.—An unmarried lady of Wiesbaden, aged 34, consulted him in 1868 for an abdominal tumour, which was first observed two years previously; although three years before that time her health had become impaired by excessive constipation and other irregularities which seemed due to pelvic obstruction.

During the last year the abdomen had rapidly enlarged, and, at the date of consultation, was quite filled by a rounded tumour, fluctuating at some points, solid at others, and giving the general impression of a multilocular ovarian cyst. The pelvic cavity was also filled by the mass which seemed continuous with the posterior part of the *cervix uteri*, which was pushed forward, and to the left. The hymen was so tight and dense as to preclude the use of the sound.

Two of the largest compartments of the tumour were tapped, and yielded 2½ quarts a serous fluid, containing large quantities of cholesterin. This fact, with the *cervix uteri*, and the marked *facies uterina* of the patient, convinced him that it was a fibro-cyst of the uterus, in spite of its rapid development and multilocular character, which indicated an ovarian origin.

The patient, who had undergone a variety of useless treatment, imperatively demanded an operation, from which M. Kœberlé tried in vain to dissuade her; but, after fully explaining its risks and the improbability of a successful termination, he consented to attempt gastrotomy. Operation, August 31, 1868; anæsthesia by chloroform. Short median incision, afterward enlarged. When exposed, the tumour was lifted with great difficulty from the abdominal cavity; and, after numerous tappings, which obtained only 3½ quarts of fluid, it was found to spring directly from the posterior uterine wall, without involving the neck or fundus. Both ovaries were healthy.

The pelvic portion of the tumour, which was comparatively very small, formed a kind of pedicle for the rest. The punctures made by the trocar bled so freely that an iron-wire ligature was thrown around the pedicle as close to the womb as possible, and the abdominal tumour excised. The pelvic portion was separated with extreme difficulty, being intimately adherent to the recto vaginal *cul-de-sac*, and the posterior vaginal wall; it was gradually enucleated, without injury to the pelvic vessels, and the womd left intact.

Hæmorrhage very copious; arrested by metallic ligatures cut short, the actual cautery, and perchloride of iron.

The operation lasted 2½ hours, and the patient was exceedingly cold and feeble; reaction was gradual but complete, and in 29 days she was walking about, and soon returned home.

A careful histological examination of the tumour showed conclusively its uterine origin and its fibro-cystic structure.

It is not to be supposed that every case of fibro-cyst of the uterus will exhibit all the distinctive marks noted by Kœberlé, and a glance at the cases already detailed will show the need of bearing other points equally in mind.

For instance, as to time or progress of development—although generally slower than ovarian growths, this will depend upon whether the original fibroid is interstitial or merely subperitoneal. In the latter case, its cystic degeneration and growth may be quite as rapid as ovarian disease.

Again, menorrhagia, as a forerunner or coincident symptom, is seldom found to exist in fibro-cystic disease, because the neoplasm is extra-uterine from the beginning, at least only slightly invading the uterine wall, whereas the true fibroid is more deeply seated. The disregard of this fact, and the fictitious value attached to the absence of flooding, have powerfully contributed to errors in diagnosis.

Thirdly, independent mobility of the wound really indicates nothing but the absence of pelvic adhesions: for, if the fibro-cyst have passed into its second stage of development, and undergone extensive cystic degeneration, it will scarcely ever be affected by uterine motion—especially if a moderately small pedicle exist; and lastly, the uterine hypertrophy or increased length of the cavity, upon which much reliance has been placed, is shown to be of very doubtful value by Dr. Routh, who has found the greatest amount of elongation in certain ovarian cases.*

M. Kœberlé is of opinion that fibro-cystic disease never appears under 30 years of age, although, among the preceding cases, two exceptions to this rule are found. With these general facts in mind, the differential diagnosis between uterine fibro-cysts and ovarian cystic tumours may be pretty confidently stated as follows:—

IN OVARIAN CYSTS.	IN FIBRO-CYSTS OF THE UTERUS.
1. Disease may occur at any period, even before puberty.	1. Scarcely ever occurs under thirty —generally from forty to fifty.

* Transactions Obstetrical Society of London, vol. viii., pp. 128, *et seq.*

2. Development rapid—usually under two years.	2. Development slow ; generally over two years.
3. Aspect of face unaltered, if general health be fair.	3. "Facies uterina" generally marked; expression anxious and dejected.
4. Fluctuation equable over whole surface of tumor.	4. Fluctuation confined to certain regions—generally to upper portion, while lower is hard and dull.
5. Vaginal examination shows little displacement of uterus—mass smooth and distinct from uterus.	5. Vaginal examination shows uterus high up or displaced. Mass either not detected, or continuous with uterus.
6. Mobility of uterus independent of tumor from beginning—pelvic adhesions rare.	6. Independent mobility of womb confined to last stage of disease Pelvic adhesions common.
7. Tapping causes complete collapse of unilocular cysts—in polycystic tumors, it reveals the endocysts.	7. Tapping causes only partial collapse, leaving base of tumour firm and indurated.
8. Fluid clear, straw-coloured, serous ; or viscid, clear, mucoid, albuminous.	8. Fluid either brownish, bloody, sero-purulent, muddy ; or thin, yellowish, containing shreds of lymph or cholesterin.
9. When exposed by gastrotomy, sac is pearly blue, or white and glistening ; rarely vascular.	9. Exposed sac dark, vascular, thick, and frequently fasciculated with fibrous bands.

The following Chronological Tables, compiled upon the basis of the valuable Statistical Tables of Mr. John Clay, of Birmingham, exhibits at a glance the salient points of the preceding cases, which, for purposes of analysis, have been reported in greater detail.

No. of Case.	Date of operation.	Name of operator.	Age and social state of patient.	Duration and progress of the Disease.	Anæsthetics used or not.	Proceedings of the operation.	Result.		Source of information.
							Recovery.	Fatal, and cause of death.	
1	Feb. 14, 1844.	Mr. Lane, London.	43, Married, no child'n.	Disease had existed 8 or 9 years; cyst disappeared spontaneously five times; tapped three times; general health good.	Not used.	Abdominal incision of 7 inches; pedicle secured by temporary ligatures, then severed and secured by 6 permanent ligatures.	Patient recovered in 3 weeks: died 4½ years afterward.		Clay's translation of Kiwisch's lectures, Appendix, p. 166.
2	Jan. 8, 1848.	Dr. Sam'l Parkman Boston.	27, Single.	Tumor noticed 1 year before; general health good; abdomen about as large as at seventh month of pregnancy; no menorrhagia or dysmenorrhœa.	Chloroform given.	Usual incision in median line; no serious adhesions, and no pedicle; uterus transfixed with ligatures, and excised with knife.		Death from secondary hæmorrhage, in 12 hours.	Amer. Jour. Med. Sci., April, 1848, p. 371.
3	Oct. 13, 1849.	Dr. W. L. Atlee, Philadel.	43, Single.	Not stated.	Anæsthesia.	Incision from 1 in. above umbilicus to pubis; tumour non-adherent; not removed, as it was continuous with body of uterus.	Recovery; died between 3 and 4 years after, from progress of the disease.		Amer. Jour. Med. Sci., April, 1855, p. 388.
4	Sept. 21, 1853.	Prof. E. R. Peaslee, Buffalo,	35, Widow, Multipara.	Tumour appeared 21 months before—following a tedious and difficult labor; growth slow: health much depressed and exhausted; mobility of uterus, independent of tumor; fluctuation.	Sulphuric ether given.	Gastrotomy by usual incision; tumor continous with uterus, which was excised above a double ligature passed through the cervix; left ovary also removed.		Death on 4th day from strangulation of bowel, which protruded through the abdominal wound.	Amer. Jour., Med. Sci., April, 1855, p. 394, *et seq.*

5	May 15, 1860.	Mr. I. B. Brown, London.	45, Single.	Swelling first noticed in right iliac fossa, 8 years previously; growth slow at first; very rapid within last 6 months; health much impaired.	Not stated.	Gastrotomy as usual; adhesions numerous and formidable; cyst ruptured while freeing adhesions; part of cyst-wall cut away, but the rest not removed.		Erysipelas on 10th day involving abdomen and right lower extremity; death on 24thday.	Routh, Points connect. with Diagn'is &c of tu'ors Womb, Lon. '64, tab. iii., case 26.
6	May 14, 1862.	Mr. F. D. Fletcher, Liverpool	40, Widow, multipara.	Abdominal tumornoticed 13 months before; patient had had 5 children and 3 miscarriages; health moderately good.	Not stated.	Gastrotomy by usual incision; strong adhesions to abdominal wall and omentum; cyst sprang from left side of uterus, low down, by pedicle, which was tied, and divided by *écraseur*.	Recovery complete.		Routh, *loc. cit.*, tab. ii., case 13; also Grailey Hewitt, p. 403.
7	Dec. 11, 1862.	Mr. I. B. Brown, London.	36, Married.	Tumor first observed 6 yrs. ago; increase gradual; fluctuation distinct; tapped once, yielding peculiar brownish fluid; health failing.	Anæsthesia by chloform.	Gastrotomy as usual; adhesion extensive; two large endocysts tapped, but tumor, which was continuous with uterus (without pedicle), not removed.		Abdominal wound reopened by violent cough'g and retch'g gradual developm't of pyæmia, death on 26th day.	Trans of Path Soc. of Lon. v. xiv, p. 199; also Kœberlé Gaz. Hebdom, Mar 12, '69, p. 164.
8	Jan. 29, 1863.	Mr. Hakes, London?	42, Married.	Abdominal swelling observed 15 months previously; two children; growth of tumor gradual; twice tapped, cyst refilling rapidly; health fair.	Chloroform.	Gastrotomy as usual; adhesions to intestines and omentum; tumorarose from fundusuteri bya slender pedicle; no connection with ovaries; pedicle tied with double ligatures and then excised; hæmorrhage considerable.		Death fromexhaustion, 33 hours after the operation.	Brit. M. Jour. Feb. 28, 1863, cited by Kœberlé, Gazette Hebdom., Mar. 12, 1869, p. 165.
9	April 30 1863.	Mr. T. Spencer Wells, London.	53, Unmarried.	Tumor discovered 9½ yrs. before; increase very gradual; patient emaciated, but general health fair; dysmenorrhœa, but no menorrhagia.	Anæsthesia by chloroform.	Incision 9 inches long: extensive adhesion, and no pedicle; womb transfixed below Fallopian tubes, and tumor tied and cut away; hæmorrhage rather free.		Death in 3 hours from apparent shock of operation.	Spencer Well's "Diseases of the Ovaries," vol i., p. 354.
10	June 10 1864.	Mr. Spencer Wells, London.	45, Single.	Two solid tumors found 10 years previously; no decided enlargement until within 1 year; patient emaciated; never tapped; menstruation irregular, never profuse	Anæsthesia by chloroform.	Tapping followed by gastrotomy: two large cysts found, both springing from uterus; only the smaller was cut away—the other being too extensively adherent to permit removal.		Death from shock? never recovered consciousness.	"Diseases of the Ovaries," vol. i., p. 356.
11	Sept., 1864.	Prof. J.P. White, Buffalo.	About 45, Single.	Tumor large, movable, fluct'ng, presen'ng typical signs of ovarian tumor, never tapped; health fair; menstruation not noted.	Not stated.	Gastrotomy as usual; no serious adhesions, and ovaries found intact: cyst tapped and cut away from fundus of womb, with which it was continuous.		Death a few days afteroperation from apparent exhaustion; no secondary hæmorrhage.	Verbal statement of operator to reporter.

Chronological Tables. Concluded.

No. of Case.	Date of operation.	Name of operator.	Age and social state of patient.	Duration and progress of the disease.	Anæsthetics used or not.	Proceedings of the operation.	Result.		Source of information.
							Recovery.	Fatal, and cause of death.	
12	Sept. 23 1865.	Prof. H. R. Storer, Boston.	47, Single.	Tumor appeared 5 years before; enlargement steady; much dyspnœa and difficulty in walking: menstruation scanty but regular; tumor filled whole abdomen; localized fluctuation.	Sulphuric ether given.	Gastrotomy by customary incision; numerous adhesions; immense abdominal and pelvic tumor, continous with uterus; removed with *écraseur* above a clamp which was secured around cervix; hæmorrhage rather copious but not alarming.	Recovery without a bad symptom; returned home on 37th day after operation.		Amer. Jour. Med. Sci., Jan'y. 1866, p. 114.
13	October 1865.	Prof. H. B. Sands, New York.	45, Single.	Tumor appeared 7 years before in left iliacfossa; growth slow at first: menstruation irregular, but no menorrhagia; distention very great, umbilical hernia complicating tumor.	Anæsthesia by sulphuric ether.	Gastrotomy by short median incision, afterward enlarged; adhesions trifling above, but large and firm in pelvis; tapped; no fluid; mass cut away with great difficulty above ligatures passed through *cervix uteri*: profuse hæmorrhage from common iliac vein: bladder accidentally ruptured.		Death immediately after operation, from combined shock and hæmorrhage.	New York Med. Jour. Dec., 1865, p. 188.
14	Nov. 16, 1865.	Dr. C. H. F. Routh, London.	26, Married.	Abdomen began to enlarge 17 months previously—at first very slowly; no children; one miscarriage; no menorrhagta; fluctuation distinct; uterus apparently normal.	Anæsthesia by chloroform.	Gastrotomy as usual: adhesions slight; sac tapped. and seropurulent fluid withdrawn; sac then closed by ligature, and replaced; hæmorrhage from mesentery copious, and controlled by actual cautery.		Death from exhaustion, at end of 2nd day after operation.	Trans. Obstet. Soc. of Lond.. vol. viii., p. 122, *et seq.*
15	Feby. 1868.	Prof. E. R. Peaslee, New York.	Not stated.	Tumor detected several years before; growth slow; tapped once—fluid chocolate-colored: fluctuation distinct: uterus normal and freely movable.	Not stated.	Gastrotomy by median incision; extensive adhesions; tumor tapped, and then found to spring from *fundus uteri*; pedicle ligated, cut, and returned to pelvic cavity; linen tent left in abdominal wound.	Recovery complete; in perfect health 2½ years after operation.		Communicated by letter from operato reporter.

16	June 10 1868.	M. Demarquay, Paris.	43, Single.	Tumor appeared in right iliac region two years before; abundant menorrhagia before appearance of tumor: fluctuation and mobility distinct; no uterine examination; health fair.	Chloroform given.	Gastotomy by customary incision; sac tapped and bloody fluid drawn off; tumor now found of uterine origin, and ablation of uterus effected with *écraseur*; hæmorrhage checked by actual cautery; wound closed with metallic sutures.		Death from exhaustion and hæmorrhage, in 36 hours afterwards.	L'UnionMéd, Sept. 22, '68 p. 431.
17	Aug. 31, 1868.	Prof. E. Kœberlé, Strasbourg.	34, Single.	Tumor observed 2 years previously, although suspicious pelvic and abdominal symptoms existed for 5 years; increase rapid; health feeble; *facies uterina* marked; tapped once; tumor large, irregular, bosselated; fibro-cyst of uterus diagnosticated; uterine examination impossible.	Anæsthesia by chloroform.	Gastrotomy by short incision, then enlarged; tapping, very little fluid obtained; tumor found to arise from posterior wall of body of uterus; pedicle strongly ligated, and tumor cut away; hæmorrhage copious—arrested by actual cautery and styptics; uterus not incised or removed; wound closed by metallic sutures including peritonæum.	Recovery complete in 29 days: health good 6 months afterwards.		Gaz. Hebdom 26 Février, 1869, p. 135, *et seq.*
18	Nov. 2, 1869.	C. C. Lee, New York.	45, Single.	Abdominal enlargement noticed 2 years before; increase rapid; tapped once; general health fair, but patient chlorotic and depressed; menstruation irregular; no menorrhagia; *facies uterina* very marked.	Anæsthesia by chloroform.	Gastrotomy as usual; sac tapped, and large amount of brownish fluid withdrawn; formidable adhesions to mesentery, intestines, and pelvic organs; no pedicle; cyst developed from fundus uteri, from which it was detached with scissors; uterus not removed; hæmorrhage copious, checked by ligatures and styptics; small intestine lacerated; wound closed with metallic sutures, including peritonæum.		Death, from exhaustion and incipient peritonitis, 31 hours after operation.	*Vide supra.*
19	Nov. 29, 1869.	Dr. J. L. Little, New York.	44, Single.	Patient began to enlarge 4 years previously; increase slow; fluctuation distinct in tumor which gave all typical signs of ovarian cyst; menstruation not noted.	Not stated.	Gastrotomy as usual; adhesions numerous; no pedicle; sac tapped, but origin of tumor not found; a portion of the sac drawn through the wound, cut off, clamp applied, and wound closed by silver sutures.		Death fromexhausiion in about 10 days; after death the tumor was found to be a fibro-cyst springing from the *cervix uteri*.	N. Y. Med. Rec., Jan. 15, 1870, p. 520. Revised by operator.

PENETRATING WOUNDS OF THE CHEST.

Dr. W. F. BREAKEY speaks of the treatment of these wounds by hermetical closure, in the *Michigan University Journal*, as follows:

A more specific report of the following cases, was furnished the Surgeon General as material for the medical history of the late war, but as the publication of that history is so long delayed, perhaps, as repeatedly suggested to me by medical men, the tabulated facts are of sufficient importance to merit publication.

It may be generally remembered that during the late civil war, Dr. B. HOWARD, Assistant Surgeon U. S. A., recommended the revival of an old method of treating penetrating wounds of the chest by hermetically sealing them. At the battle of Gettysburg, July, 1863, he obtained permission of the medical director of the 5th Corps to have such cases turned over to him for treatment, and about twenty were so treated. His method of operating was, simply to convert the ragged wound into a clean, fresh, elliptical incision by paring the edges of the wound, closing the incision by deep, close metallic sutures, cut short aud covered by fine lint and collodion.

Dr. Howard, in a paper published about the close of the war, claimed for this treatment a greater success than for the ordinary treatment; stating substantially that the results of hemorrhage and suppuration would be removed by expectoration and absorption.

As the result of these cases is unfavorable to Dr. Howard's claims, I am sorry that I cannot find his paper and quote from it literally, though as only a statement of facts is intended here, and not a discussion of theories, no injustice will be done him.

I may remark that the Surgeon General, in acknowledging the reception of the report, stated that "many facts at variance with the conclusions of Dr. Howard in relation to penetrating wounds of the chest, have already been reported to this office."

It was the opinion of most of the medical men in the corps, whose opinions I heard at the time, that the theory was not sound, and that the practice indiscriminately applied would be no improvement over the old method of simple water dressings, leaving the wound open, and the result of these cases would seem to justify such opinions.

It is but fair to state that some of these cases were very unpromising at the time of the operation, being greatly depressed from shock, hemorrhage, and impaired respiration. Also, that Dr. Howard's plan contemplated immediate operations, while some of these men had been wounded twenty-four hours; though I think

their condition would average as good as that of the whole number of that class of wounded, resulting from the battle.

I was present and assisted in a number of these operations, and received from Dr. H. when he moved on with the army, July 5th, a list of fourteen cases, which he requested me to look after. As they were in different hospitals, I only saw a part of them daily, but heard from others while they lived, and collected the results given below from the records of the general hospital and medical director at Gettysburg in October, 1863.

In addition to this list of fourteen cases, the names of three others were found, who were known to have been thus treated, and another of whom it was not positive, but all the information obtainable rendered it probable that he had been so treated, making eighteen in all, of whom thirteen were known to have died within one month, and seven of these within from one to four days after the operation. The names of two could not be found on the register; one was recorded as "gun shot wound of shoulder" and "sent to Gen'l Hospital July 9th;" and another as sent to general hospital, July 24th—both dates prior to the reception of patients at the general hospital at Gettysburg, so that they must have been sent to some more distant hospital. I have tried to get further information of these four men, but thus far in vain; while the only one of the eighteen known to be living on the 1st of September, two months after the battle, was L. G. Bradley, corporal, Company B, 136th N. Y. Volunteers, of whom the Adjutant-General of New York, wrote me that he was discharged in August, 1863.

Thus, excluding one sent to general hospital and not heard from, two not on register, and one registered "gun shot wound of shoulder," there would be fourteen left, of whom thirteen died; and including these four very doubtful cases, it still leaves a mortality of over 75 per cent.; while of about *seventy* cases of penetrating wounds of chest (the whole number made during the battle, and including prisoners,) about forty were living on September 1st, while the thirty deaths included Dr. Howard's fatal cases.

Taking out his eighteen cases would leave *fifty two* cases and *twelve* deaths, or about 25 per cent mortality for the ordinary treatment. It is also worthy of remark that in all of these cases that lived beyond one or two days, the wounds became open and suppurating, and could hardly have been benefitted by being temporarily closed. A very full and fair consideration of this plan of treatment, and of the limited class of cases in which it may be applicable, will be found in Dr. Frank Hamilton's Work on Mili-

tary Surgery. Dr. Hamilton thinks the error is in applying it indiscriminately to all cases. Also may be found in the Medical Record, Vol. iv. p. 412, an interesting report by Dr. A. H. Smith, of New York., of a case or cases of collapse of lungs from gun shot wounds, recommending hermetical closing of the wound in such case, but without reference to Dr. Howard's theory or plan of treatment.

CERTAIN POINTS RELATIVE TO GENERATION.

Dr. F. J. Brown writes to the *British Medical Journal:*

It is well known that by cultivation the floral envelopes of plants may be changed in form and function—single flowers becoming double or infertile monsters. Similarly the floral envelopes of a human female become changed, and infertility is usually found to prevail. The labia majora represent the calyx in two segments, and the labia minora and clitoris the corolla in three segments. The os uteri is equivalent to the base of the pistil (this organ having been cut off.) Lock wards present numerous instances of misshapen hypertrophy of the clitoris and labia minora, resembling the changes in the floral envelopes of plants. Infertility is caused not only by over-culture of the generative function, but also by luxurious habits; the individual being cultivated and developed rather than the race.

Another curious subject is the attractiveness of the floral envelopes of plants. Insects aid in the fructification of the vegetable kingdom whilst they enrich themselves with its spoils; but I have never read any explanation of the fact that women delight themselves with flowers to a much greater degree than men as a general rule. I imagine that there are sympathies aroused in women, and that love and beauty are developed and intensified by the form, colour, and scent of flowers. The power of scent over the generative function is well known in animals, and the most energetic scents (castor and musk) are procured from animals. Women are sometimes rendered hysterical by powerful scents. The subject deserves study.

There is parallelism betwixt the generative function of plants and animals in the secrecy of generation. Germination occurs in the dark, whilst animals are entombed in some secret place in the womb during development. Wild animals generate in secrecy; and man does the same, showing shame at generation. Secrecy obtains in both the vegetable and animal kingdom, and shame, as well as secrecy, in the higher animals, including man. To this rule there are exceptions. Domesticity alters this characteristic in

some degree, and many individuals, and some tribes, exhibit shamelessness. All the mental traits of the animal world are developed in man more or less perfectly, rendering one man different from another, and one race the contrast of another race. This is true in matters of generation, as well as on other points; and we find one man happy with one mate, like the dove; whilst another man, like the peacock, requires many wives. Again, one man makes a good parental nurse, like the stickleback; whilst another, like the hart, would injure his offspring, if they were not removed from his company (as occurs with the hind and her young.)

Midwifery.

CHANCES OF LIFE IN OVARIAN TUMOUR.

Dr. Atthill, in his lectures in the *Press and Circular* (Dublin), gives the following statistical information:—

The most reliable data from which we can form an estimate as to the probable duration of life in cases of cystic disease of the ovary, are those supplied from the tables of Mr. Stafford Lee. Of 123 cases tabulated by him, nearly a third died within a year, and rather more than one half within two years, from the date at which the first reliable symptoms of the disease were noticed, a duration hardly longer than that of cancer, while but seventeen lived for nine years or upward; of these seventeen one survived for fifty years. From these tables we may fairly assume that the duration of life in cases of the disease under consideration is unlikely, on an average, to exceed three or four years. As a rule, you may consider that the chance for life being prolonged is in an inverse ratio to the rapidity of the growth of the tumour, for if this be rapid, the patient will speedily be worn out and die, exhausted no less by the distress caused by the size of the tumour itself, even should no inter-current attack carry her off at a brief illness.

The simple unilocular form seldom becomes dangerous to life, till the tumour by its great size interferes with respiration, and by its pressure impedes the abdominal viscera in the due performance of their functions. When this stage is reached, if with the view of relieving the patient's sufferings we have recourse to tapping, we may actually accelerate the fatal termination of the case. The drain on the system caused by the refilling of the sac, increasing the previously existing exhaustion.

The rupture of a cyst is another possible cause of death; this seems to be more likely to happen in the multilocular than in the unilocular tumour, but it certainly is not of very frequent occurrence; in all these cases there is a great proneness to inflammation of the abdominal and even thoracic viscera, and an attack which would in others be of no importance, becomes when supervening in the patient suffering from ovarian dropsy, a very serious matter, and therefore not a few die of disease not directly connected with the original malady, but which is not the less on that account chargeable with the result.

The certain and speedy death which, in the majority of cases, awaits the sufferer from ovarian disease, has decided surgeons to attempt its cure by the extirpation of the diseased organ. The question, then, which, in each case, has to be decided, is, will the patient, if left alone, have a fair chance of being one of the fortunate twelve who, out of every one hundred, may be expected to live for ten years or upward, or one of the eighty-eight who, if not operated on, must, in a third of that time, be consigned to their graves? In deciding on this momentous question, we should never for one moment lose sight of the fact that there are but two possible terminations to operations for the extirpation of ovarian tumours—the one being perfect recovery, the other speedy death.

According to the *British Medical Journal*, a Bedlamite named Sir Charles Dilke, addressed his constituents in a speech concerning the Medical appointments of the Royal Household, "You would hardly credit" he said, "the number of medical gentlemen who are required for the service of the Household, but I am aware that some of them are unpaid. There are three Physicians in Ordinary, three Physicians Extraordinary, one Sergeant Surgeon Extraordinary, two Sergeant Surgeons, three Surgeons Extraordinary, one Physician of the Household, one Surgeon of the Household, one Surgeon Apothecary, two Chemists of the Establishment in Ordinary, one Surgeon Oculist, one Surgeon Dentist, one Dentist in Ordinary, and one other Physician; while the Prince of Wales has for his special benefit, three Honorary Physicians, two Physicians in Ordinary, two Surgeons in Ordinary, one Surgeon Extraordinary, one Chemist in Ordinary, or more—making thirty-two doctors in one family." Will not some one of the thirty-two doctors above named, look after the poor daft gentleman, and see that he does not injure himself or others, as we should judge him to be dangerous, if permitted to be at large without a keeper.

Canada Medical Journal.

MONTREAL, DECEMBER, 1871.

SANITARY REFORM.

There is no subject of more engrossing interest than the sanitary condition of a community. There is no subject less understood, or on which people as a rule forbear to think about, or neglect to study than the laws bearing on the general sanitary condition of themselves and their habitations. As long as individuals enjoy the blessings of health, they thank God in a Pharisaical spirit, but care little about the comfort or well-being of their neighbours. It requires the occasional afflicting hand of Providence to bring out the finer feelings of our nature, and to induce man in a spirit of self preservation to seek to ameliorate the misery, and allay the suffering of his fellow man.

We are at the present time throughout the country suffering from epidemic disease. Typhoid Fever, Small Pox, Scarlet Fever, Measles, are unusually prevalent, and in some localities these diseases have proved of a severe type. The well ascertained fact that these diseases are fostered and propagated by local conditions, either defective drainage, bad water supply or over-crowding of individuals in ill-ventilated houses, should be sufficient to excite public attention, and stimulate to earnest and pains-taking exertion to remedy these evils.

What is everybody's business is nobody's business, and therefore a degree of laxity if not aversion, is exhibited on the part of the public generally to deal with the question of sanitary reform. If an individual suffers, then perhaps is he inclined to consider himself badly used, and to abuse generally the city in which he lives, the drainage, the water supply, ay verily the country and all in it, for not having had the foresight and good sense to guard him against an attack perchance of Small Pox or Typhoid Fever. With regard to Small Pox we can hardly close our eyes to the fact that it is on the increase in Canada, and while other communities are endeavouring by isolation and the erection of temporary Small Pox hospitals, to do away as far as possible with contagion, we in

Montreal, at least, are permitting the disease to spread gradually from house to house, thus neglecting one of the most efficient means recommended to arrest its fearful ravages.

It is true we have a Fever Hospital connected with the Montreal General Hospital, and built on the ground in rear of that institution; at the time of its erection we were doubtful as to the propriety of placing it on the present site, but since then having noticed the difficulty of preserving perfect isolation, we are convinced that the views then expressed on this subject were correct.

Persons suffering from Typhoid Fever, Measles or Scarlet Fever, cannot be placed in that building when Small Pox patients are there, without running a serious risk of contracting Small Pox, and even the inmates of the General Hospital are liable to contract the disease, at least in too many instances this has been noticed. We understand that changes in the construction of the present building are contemplated with a view of separating entirely the Small Pox patients from those afflicted with other fevers, but before further expense is incurred it would be well for the Committee of Management to consider the propriety of devoting that building to some other charitable purpose, and of putting up a fever hospital or pest house somewhere in the outskirts of the city. We doubt much if this is not the duty of the municipal body.

We are suffering from epidemic disease, many valuable lives have already been sacrificed, and we fear that greater evil is ahead.

It is a fitting time for the Government to consider the propriety of appointing a general Board of Health for the Dominion. This should be done without delay, as there is every prospect of epidemic Cholera making its appearance during the coming summer. Canada is in a bad sanitary condition for such an event, and if as is feared, Cholera does advance westward and invades our country, it will in all probability be the most severe epidemic of the kind that we have ever experienced. There is no time to exhibit indolence and lack of exertion, much has to be done, and the time is short in which to do it.

The Government of the country should without further delay initiate proceedings and create a Board, whose authority should be unmistakable, and by whose advice the evil may under Heaven be obviated. Much good followed the working of the Central Board of Health in the year 1866. During that year we were threatened with epidemic Cholera, but wise and timely ordinances were enacted, strict quarantine was enforced, sanitary regulations put in action, the cities and towns of Canada cleansed of much of their filth, individual exertion was stimulated, and we happily passed

through the period of alarm without injury. We have greater reason at the present time for anxiety, as not only is the disease Cholera smouldering in Europe, awaiting a favourable opportunity to break forth with unsparing virulence, but our own condition from a sanitary point of view, is very much worse than it was six years ago. We hope that in calling together a Board of Health for the Dominion of Canada, that the selections will be carefully made, and that the highest talent in the country will be secured, independent of sectional considerations. The profession have always been ready to give their time and advise on similar occasions.

In England the "Royal Sanitary Commission" is at work, and the report recently published by that body recommends sanitary reforms, which are being rapidly put in force. The report referred to recommends that in every district there shall be one local health authority, and that every local authority so constituted, shall have one Medical Officer of Health, and that every such officer shall have the power of an Inspector of Nuisances. It would take up too much of our space to discuss the various clauses of this report. We refer to it merely to show that earnest work is being done in England with a view of preventing as far as possible the spread of contagious diseases.

Dr. Lankester in his annual report of the sanitary condition of St. James', Westminster, gives a clear account of contagious diseases in his parish, and of the modes of preventing them. In the course of his report he estimates that the losses from Scarlet Fever, throughout Great Britain during the last sixteen years has not been less than 100,000 lives. And in Westminster, Mr. Barnard Holt states that 233 lives fell a sacrifice to Small Pox during the year 1871, against 13 who died of that disease the year previous. All these facts point to the necessity of earnest and painstaking exertion on the part of Governments and communities to adopt means for the arrest of the progress of epidemics.

Medical News.

SIR ROBERT CHRISTISON, BART.

The honour of baronetcy conferred by Commission on Professor Christison, of Edinburgh, is a just recognition of his well-earned position at the head of the profession in Scotland. Professor Christison already holds the appointment of Honorary Physician to the Queen in Scotland, and is President of the Royal Society of Edinburgh. He has received the honorary doctorate of

Oxford, and has been twice President of the Royal College of Physicians of Edinburgh. He has been a Professor of the University of Edinburgh since 1822, and is the author of a work on Poisons, which, although written many years since, is still a standard authority; and of a highly esteemed treatise on Materia Medica. Sir Robert Christison is a Crown Member of the General Medical Council, and took a leading part in framing the authorised edition of the *British Pharmacopœia* issued by the Council. Recently, as a mark of especial esteem and respect from his colleagues in the University of Edinburgh and other friends, his bust was sculptured by subscription, and placed in the library of the University—an honour which, we believe, had not befere been conferred on any professor during life.

Prussian Army Medical Department in the late War.—Sir Randal H. Roberts, Bart., in his recently published book, "Modern War, or the Campaigns of the First Prussian Army, 1870-71," says, "Perfect, however, as the organization of the Prussian army is in most respects, one portion seems to require a most thorough remodelling. I refer to the Medical Department. As it was in our service, so it is here: many an officer would rather endure pain and suffering than send for his regimental persecutor." The passage concludes thus: "It is true that during the war many eminent medical men from Berlin and all the German towns flocked to assist their country; but I am sorry to say that the want of good and efficient medical men, was deeply and fearfully felt." Sir R. Roberts went out at the commencement of the war as special military correspondent to the *Daily Telegraph*, and followed the fortunes of the first Prussian army from the beginning to the end. His book, therefore, contains an eye-witness's account.

A New Remedy for Leprosy.—Dr. Bose, Civil Surgeon of Furreedpore, has discovered, says the *Homeward Mail*, a remedy for leprosy, by which he has saved many lives. The remedy is no other than the Indrajab, a seed gathered from the famous Kurchi of the Indian flora, whose bark is so widely used in curing dysentery. This much has been known, but nothing besides. It behoves our Government to appoint a commission in order that the efficacy of the medicine may be tested, and the result given to the public as early as practicable. Neither "Indrajab" nor "Kurchi" are to be traced in Dr. Birdwood's "Vegetable Products of Bombay."

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Excision of the Elbow Joint, for Caries, the result of an injury in a man 72 years of age. By JOHN REDDY, M.D., L.R.C.S.I., &c. Physician to the Montreal General Hospital, &c., &c.

James Foley, aged 72, a native of Ireland, of healthy and youthful appearance for his age, was admitted into the Montreal General Hospital, on the 1st June, 1871.

He applied for relief on account of a running sore, swelling and stiffness of his right elbow-joint, which he stated was the result of an accident that had occurred two years previously, and from which time he had gradually lost the use of the joint, being unable to use his arm, it being at times most painful, especially whenever he used his hand, or follow his occupation, which was that of labourer. About thirteen months ago a swelling occurred on the upper and outer part of the joint, which was very painful, and after a few weeks burst, from which time to the present a thin matter flowed; a few weeks afterwards a second swelling occurred at the inner condyle, attended with similar consequences, the member became so swollen and painful that he sought admission into hospital.

Present Appearance—Joint swollen to nearly twice the natural size, of a reddish dark colour, hot and painful to the touch, can raise his arm from the shoulder, and move his fingers without producing pain, but the slightest flexion, extension, or lateral movement of the joint, always caused him much suffering and distress. The two apertures described above exist and discharge a thin sero-purulent non-offensive matter.

On passing a probe through the outer sinus into the joint, the roughened head of the ulna can readily be felt, also on exploring the inner one the bare and roughened end of humerus is easily detected, showing that little can be expected from palliative treatment.

On account of the heat, swelling, and rather œdematous state of the part, I ordered a lotion of hot acetate of lead and opium to be applied to allay pain. the arm to be raised upon a pillow and suitably positioned. From this treatment considerable relief followed.

10th June—Nothing in particular required to be noted till this day, as the pain and swelling have considerably abated, but now on the inner side of the joint below the condyle, and present sinus on same side, a small swelling has commenced, which is evidently an abscess forming. A hot linseed poultice was ordered to be applied.

12th—Swelling above mentioned has increased so much that an opening was made to-day, and exit given to a few ounces of pus, much to his relief.

15th—From last date to the present the pain and uneasiness have been much less, and the swelling so far reduced, that I now begin to hope some operative measure may soon be adopted towards his permanent relief.

16th—A consultation being held, it was deemed advisable to perform excision of the joint, which was this day performed in the following manner. The patient partly on his face with the back of the arm towards me, an incision was made along the inner edge of the humerus and ulna external to the nerve, a second incision at right angles to that already, was made outwards across centre of the joint which formed a T. Exposing the joint fully, the olecranon was first removed, then the articulating ends of the radius and ulna, to the extent of about $\frac{3}{4}$-inch, and lastly about an inch of the end of the humerus. Two small vessels only required to be ligatured. The flaps were then adjusted with silver sutures, the arm partly flexed, and a loose splint applied. The patient was then removed to bed and had the limb placed upon a pillow, and at the end of an hour he appeared tolerably easy and free from pain. The articulating ends of the bones were quite denuded of cartilage, and were very rough and irregular, giving evidence of long standing disease.

17th—Pulse 84. Morning, temp. 102 2-5ths. Evening 102 Fh. Slept most part of the night, felt the arm very hot but free from pain.

18th—Pulse 84. Temp. 98 Fh. Arm dressed and is doing very well.

22nd—Pulse 84. Temp 98 2-5ths. Arm free from pain, but a slight discharge has commenced from the upper end of the longitudinal incision, with every indication of a small slough forming.

24th—Pulse 84. Temp. 99 Fh. Has suffered pain in the upper

end of incision mentioned in last report. A slough the size of a florin has formed, through which some dead cellular tissue is protruding.

Ordered a mild aperient and 4 ozs. wine, and linseed meal poultice over sloughing part.

27th—Pulse 84. Temp. 99. Doing well since last report, and sleeps well at night. The slough has come away, but shreds of dead cellular tissue are occasionally discharged from the part, which is daily injected with carbolic acid lotion 1 to 40, and a linseed poultice constantly applied.

30th—Pulse 84. Temp. normal. All the sutures removed to-day; dead cellular tissue continues to come from the slough; in every other way patient doing well.

July 3rd—Pulse 100. Temp 90. The splint which had been loosely applied from the day of operation was removed to-day, an abscess is forming on the inside of the joint, near where a sinus had existed. Linseed poultice ordered. In every other respect patient doing well.

5th—Abscess burst to-day, and discharged quite a quantity of pus. Patient's health very good and improving.

12th—Able to be out of bed, and passive motion commenced which is well borne, discharge from abscess slight, and where the slough has come away on the 24th, rapidly healing up. The Edinburgh red wash has been applied to it for some days past, as well as the daily injection of the carbolic acid lotion.

22nd—Discharge very much diminished since last note, joint can be freely moved and is doing well, he makes quite a good attempt at flexing his arm. He had a slight attack of diarrhœa a few days ago, from which he is now quite recovered; he is able to walk about the hospital and grounds, and is doing favourably in every respect.

22nd August—I shall pass over the daily notes made since this day month, by stating that the small sinus still exists where the slough had formed, but no dead bone could be at any time discovered. Passive motion has been resumed and regularly made, and it is quite gratifying to have to record the amount of mobility that has been acquired; he cannot however flex the fore-arm, so as to bring it up to his head as yet, nevertheless he can use it in a variety of ways.

22nd September—Since last report he has not progressed so favourably, having made too free in going about the hospital grounds. He has been laid up for three weeks with rheumatic pains, and during that period passive motion had to be desisted

from; he is now so much better that it has again been resumed. Discharge from sinus very trifling.

3rd October—He leaves hospital to-day at the request of his friends, with a tolerably useful arm. He can pronate and supinate the fore-arm, and partly elevate it about half way to his head. A slight watery discharge occasionally continues from sinus.

I am indebted to Mr. Hugh J. Young, for copious notes of the above case.

On the 27th December I visited him at his home, where I found him in bed, having been confined there a few weeks with an attack of bronchitis, from which he appears to be rapidly recovering. On examining the joint (which was perfectly healed) I was much pleased to find that he enjoyed a tolerably fair use of the arm, complete flexion being the most deficient movement, but considering the many drawbacks that have occurred since the operation was performed, I nevertheless consider that the case has turned out quite as well as could be expected.

The record of the above case establishes a very important fact, I should say, viz, that advanced age does not prove so great a barrier as is generally supposed to excision of the elbow-joint. After a diligent search kindly made for me, by Professor Fenwick, of McGill College University, and by myself, of all the recorded cases (at all events within my reach,) that have been published in periodicals or standard works, this it would appear is the first case in which it was performed at such an advanced age, and it certainly has proved a decided success. The only two published cases that I could find, where it had been performed late in life, were first by Mr. Erichsen, at the age of 63, issue successful. Second by Mr. Beckerslette, of Liverpool, age 64, when the patient died of exhaustion on the 26th day.

Montreal, 5th January, 1872.

London Practice, by James Perrigo, A.M., M.D., M. R. C. S. Eng., Demonstrator of Anatomy, University of Bishops College.

For a person who has just graduated from any of our Canadian Medical Colleges, and who is desirous of increasing his clinical knowledge, and who at the same time may wish to devote some attention to specialities, London, above all cities, affords the most opportunities. It has a population of three and a half million, almost equal to our Dominion, and possessed of hospitals, both general and special of every description.

If the graduate have been a diligent student, a steady walker of the hospital wards, and also a good practical observer, he will be in a position to derive all the greater benefit from such a visit. He will be certain in meeting with a kind reception at any hospital. He will have to be ready to be cross-examined on the cause and treatment of diseases in Canada, habits and customs of the people generally.

Canadian students, as a rule, are much better workers than the English, and are, considering the difference of advantages and opportunities, almost their equals in clinics.

It is in the special hospitals, however, wherein the advantages of a visit to London is apparent. The General hospitals also have some of their wards for special diseases, and all of them are divided into medical and surgical sides.

There are fourteen general hospitals in London, eleven of which have schools attached to them. They are:—Guy's, holding 580 beds, the London City, holding over 300, St. Bartholomew's with 630, the Middlesex with 350, and the new St. Thomas hospital, which is, without doubt, the finest hospital in the world at the present time. It is built on the detached principle and consists of seven separate buildings, connected by corridors. The school is also in a separate building. Each building will hold about 80-100 beds. Then, there are King's College Hospital, with 175 beds, University College Hospital with the same number, St. George's hospital with 300 beds. Charing-Cross with 160 beds, Westminster with 190 and St. Mary's Hospital. All these have schools connected with them. There are also the London Northern Hospital, the West London and the Royal Free Hospital that have no schools attached to them. Each of these hospitals has its own operating day, in the week and some of them have two.

A student need lose no spare time in his hands; he can keep himself quite busy whether he devotes his attention to medicine or surgery.

As to the special hospitals; there is hardly an organ in the body that suffers diseases but what has an hospital especially for it. There are two pretty large hospitals for the eyes: Moorfields holding 90 beds and the Royal Westminster holding 46. There are two for diseases of females, the Samaritan and the Soho-Square hospitals. At these two places, children are also prescribed for in the out-door room. There are two also for children, one, the best is in Great Ormond street, and at present, holds 76 beds, but this last summer they have commenced to build a new one which will hold 200 beds. The other childrens hospital is in the Chelsea district. At the first, full clinical remarks are always made at the

bed side. Some of the general hospitals have wards for children.

For chest diseases, there is the Brompton hospital, and right opposite to it in the same street, is the Brompton Cancer Hospital with 56 beds. Skin diseases are attended to in the Blackfriars Road Hospital, and there is another in Leicester Square, but of not much importance.

Syphilis is well cared for in the Dean Lock Hospital and there are others as well, but I did not attend them and consequently know little of them. In Berners street, Sir Henry Thomson has a building that he devotes to patients suffering from stone. Deformities, club-feet, etc., are taken in at the Royal Orthopœdic hospital in Oxford street, and St. George's Hospital has a department under Mr. Brodhurst for the same purpose. In addition there is an hospital for epilepsy and diseases of the nervous system.

Beside all these, there are innumerable dispensaries and branch institutions of more or less importance, but a good many of which have been started as much for the benefit of the medical attendants as for the poor.

All the hospitals with schools attached have museums, some of them, second to none. Those of the College of Surgeons, St. Bartholomew's and Guy's cannot be surpassed. They are complete in almost every respect.

In addition to all these means of gaining information, there are the Pathological, Clinical, Medical, Medico-Chirurgical, and Obstetrical societies, that hold meetings every month, where papers are read and discussions entered into by the first men of the day. Strangers are always admitted and welcomed when in company with any of the members and are frequently invited to take part in the discussions.

The visitor after arriving in London, will feel like a "fish out of water," particularly, if it be his first visit. He will hardly know what to do first, what hospitals to visit, &c. If he should intend to go up for examination at the College of Surgeons, he had better see Mr. Trimmer, the secretary, who has his office in the College building, Lincoln's Inn Fields. There, he will have his tickets examined and receive advice as to his future movements.

Four complete years of study are necessary. Men who have the B. A. degree will escape the preliminary examination, also those who have passed the Matriculation examination of McGill, Kingston, Cobourg, and Toronto.

No man well up in his work need be doubtful of the examinations. They are thoroughly searching and eminently practical.

In the College of Surgeons, anatomy forms a large portion of the

examinations. The questions are all useful and very seldom do they attempt to confuse a man. The examinations are written and oral. In the written, six questions are given, and three hours allowed, from one to four o'clock, to answer them. No man is allowed to leave the room, before the expiration of the time, unless he has answered all. The room is large and has a large gallery around it. It gives room for one hundred students to write in. There is no possibility of cribbing, as there are two porters in the body of the room and two in the galleries, so that the slightest movement is noticed.

The fee for the diploma of the College of Surgeons is £22.

Persons holding the M. D. degree, are exempt from examination in medicine and Materia-Medica. The final examination is divided into two parts, theoretical and practical. In the practical, the same room which was used for the written examination is heated to a higher degree, and men are there naked lying on tables.

Instruments, bandages, splints and all surgical appliances are arranged ready for use. Upon these men, you have to take colored chalk and mark the line of incision for tying arteries, stating at the same time, what structures have to be cut through. Bandages have to be put on and imaginary fractures set. You are given twenty minutes for this work.

In my next letter, I shall be able to give some interesting items of the practice in the different hospitals I visited.

Hospital Reports.

Surgical Cases Occurring in the Practice of the Montreal General Hospital, under the care of G. E. Fenwick, M.D.

Case 8—Gangrene of both Feet followed by Amputation. Reported by John Morrison, M.A.

Michael McM., æt 40, height 5 feet 7 inches, weight 130 lbs. Small spare form, circulation languid, torpidity of all the functions, both of body and mind, temperate habits, never had any sickness, occupation labourer.

Came to this country on the 5th November, 1871, and on the 15th day of the same month, lay out on the road side all night, and had both feet frozen.

It was our first snow-storm, and although the night was cold for that season of the year, yet it is more than probable, that the

frost bite was not due so much to the intensity of the cold, as it was to the low vitality of the extremities, along with the feeble resisting powers of the individual; also the peculiar difficulties under which he was labouring at the time—such as tight boots, wet feet, a stranger in a strange land, unable to find a friend who would give him a night's shelter, would in all probability have not a little to do in bringing about such a result.

On the 16th he wandered about the city trying to get employment, he had great difficulty in walking, as his feet were numb; that evening he fell into the hands of some Good Samaritan, who took him to the House of Refuge.

On the 17th he was admitted into the Montreal General Hospital. On examination the feet were found to be very cold, presenting a dark blue mottled appearance, no pulsation could be felt in any of the arteries of the feet, no feeling when pricked with a pin except near the toes.

The feet were well covered with cotton wool and loosely bandaged. He was put on half diet with a pint of beef tea.

19th—The legs from the knees down to near the ankles were red, hot, swollen and painful; feet still cold, no pain felt in them.

20th—Phlyctenæ near the ankles, great tenderness and pain along the posterior tibial and peroneal nerves.

21st—Some constitutional disturbance. Pulse 109. Resp. 26 Temp. 101 2-5ths.

℞—Quinæ Sulph. gr. xvi.
Potass. Chlor. ʒi. . .
Tr. Ferri Perchlor ʒiij.
Aquæ ad ℥vi
Sg. A tablespoonful every three hours.

26th—Darting pains in the feet, feels sick. Pulse 128. Resp. 28. Temp. 103 1-10th. Numbness of the hands, twitching of the muscles.

27th—Pulse 108. Resp. 24. Temp. 102. Feet give off an offensive smell, sloughing of the skin covering the blisters. Applied a lotion of Chloralum 1 to 40.

December 1st—Line of demarcation appearing on both legs, about two inches above the ankles. Pulse 104. Temp. 99.

3rd—Pulse 86, small, weak and irregular. Temp. 99½. Ordered whiskey ʒiv daily.

6th—The line of demarcation being well marked, and the patient's strength, by the administration of tonics, nourishing food, &c., being so far recuperated as to stand an operation, Dr. Fenwick decided to amputate. Simultaneous amputation of both legs was performed. Dr. Scott operating on the left leg, and Dr. Fenwick on the right.

The left leg was amputated a little above the middle third; the posterior flap was found to be the seat of a dissecting abscess, which had extended upwards from the foot, so that a portion of the muscles of the flap had to be removed, but notwithstanding this delay, the despatch with which the limb was amputated, was almost incredible; putting one in mind of the days when chloroform was not known—when speedy manipulations gave the surgeon his prestige.

The right leg was amputated one and a half inches lower down; two dissecting abscesses were found burrowing in the muscles of the calf of the leg, and extending into the lower flap. Very great interest was shown by the members of the Clinical Class, in watching the results of these two operations.

The arteries being ligatured, the wounds were washed with carbolic acid lotion 1 to 40, and their edges brought together by metallic sutures, and dressed with carbolic lotion 1 to 40.

7th—Did not sleep well last night, although a draught was given at 10 P.M. Pulse 130. Resp. 28. Temperature 102. Profuse perspiration.

8th—Feels better, slept last night. Pulse 116. Temperature 101 2-5ths.

9th—Stumps dressed to-day. Small slough appearing on the left stump, about the centre of the lower flap. Right stump looks well; but the skin over the upper portion of the end of the bone is very white, as if it had been on the stretch fer some time. The lower flap was supported by a piece of plaster to remove this tension.

10th—Left stump, slough extending, sutures removed, and a poultice applied. Right stump looks well, but the white spot looks as if it had lost its vitality. Looks more lively to-day. Ordered—Wine 6 ozs., and Mist. Ferri et Quinæ.

12th—Pulse 88. Temp. 88½. Shooting pains in both stumps, appetite improving. Right stump is uniting well, small slough in the place of the white spot. Left stump,—slough is extending.

20th—Upper part of the bone is protruding in the right leg, the small slough having separated. The edges of the wound almost completely united. The whole of the posterior flap of the left leg has sloughed away. Instead of the poultice, carbolic lotion 1 to 40.

25th—Left stump is granulating. The small piece of bone that protrudes in the right leg is turning black, but the edges of the flaps have firmly united.

January 6th, 1872.—Left stump granulating nicely. In other respects the patient is well.

Case 9—Stricture of the Urethra. Perineal Section. Cure. Reported by Mr. Robert Howard.

J. C., æt 25, a native of England, steward on ship board, was admitted into the Montreal General Hospital on the 23rd October 1871, suffering from Stricture of the Urethra.

History—Has led a dissipated life, drank hard for a considerable time, which has had an injurious effect on his general health, and he presents a care worn appearance, is pale and haggard, and looks as if suffering from organic disease of his kidneys. About eight years ago he contracted a chancre and gonorrhœa, this continued for over a month, and was followed by a gleety discharge from which he has never wholly recovered. Eighteen months since he suffered from great pain in the region of the kidneys, and he noticed that he had to strain considerably before making water. He was treated actively and obtained relief. Six months ago he again suffered from pain in the region of the kidneys, the stream on passing water was small, and the bladder wrs evacuated with much difficulty. He continued in this state until admitted into hospital. Upon examination it was found that an exceedingly tight stricture existed in the spongy portion of the urethra about four inches from the meatus. The treatment by dilatation was practised but without any relief, as the patient suffered from rigors whenever an instrument was introduced; under these circumstances Dr. Fenwick decided on performing the operation of perineal section.

November 11th—The patient having been previously prepared, was placed in the usual lithotomy position and chloroform administered, a grooved staff was then passed down to the stricture, an incision of about two and a half inches in length was made in the raphé, and the urethra opened in front of the stricture. A fine director was then carried through the constriction backwards towards the bladder, and the stricture slit up from behind forwards, the grooved staff then passed readily into the bladder. As the urethra was naturally small a No. 7 catheter was then substituted for the staff, and tied in the usual way, and the patient removed to bed.

12th—Did not sleep very well, although a draught of morphia was given him at bed time, pulse 92; tongue furred, looks anxious, complains of pain in the part. Catheter allowed to remain in, the urine is coming away freely through the instrument.

13th—Passed a restless night; pulse 110; the morphia draught which was repeated at bed time did not act very well. He had a rigor which lasted about half an hour. The urine passed nearly

wholly through the wound by the side of the instrument, a stillette was passed into the catheter to clear away any mucus or blood clots which might be there, which had the desired effect, and urine again flowed through the instrument. The bowels having not acted since the operation, a black draught was administered.

14th—Pulse 130; looks pale and anxious, has a tendency to a return of the rigor, so that the catheter was removed and a No. 8 size was introduced, and he was instructed to remove it at the end of an hour. Barley water was ordered as a drink, and a diet of beef-tea and milk enjoined.

15th—Much about the same as at last report, pulse 120; tongue coated, complains of pain in passing water, the catheter could not be wholly passed into the bladder, a No. 6 was introduced through the stricture and left in for two hours, the wound looking well and granulating.

16th—The pulse had fallen to 110; his draught of morphia acted better last night, and he had a good sleep from which he awakened refreshed. Considerable urine passes through the wound, his tongue is furred and inclined to dryness. In other respects expresses himself as feeling comfortable.

17th—Still complains of not feeling well, there is considerable irritation in the bladder; pulse 108; tongue furred, complains of thirst, bowels constipated, a No. 6 catheter was passed and retained in for three hours.

18th—Looks better to-day, pulse 96; the wound is all but healed, still urine passes occasionally through the wound, more especially when he forces. A No. 6 instrument was inserted and left in for two hours, as the bowels had not acted, a dose of castor oil was ordered.

19th—Seemed to-day not so well, complained of feeling very weak, pulse was weak and irregular, about 100; as the oil had not operated an injection of tepid water was ordered, also 4 ozs. of wine.

20th—Feels relieved though weak, slept well without a draught of morphia; pulse 94; a No. 6 catheter was passed without difficulty.

22nd—Slept well, nearly all the urine passes by the natural passage, the general symptoms are improving, the incision is all but closed.

From this date he continued to improve, the wound closed entirely. The catheter was passed every second or third day, and he left the hospital early in December, with instructions to return every few days for the purpose of having a catheter passed.

Case 10—*Urinary Infiltration resulting from Stricture of the Urethra. Sloughing of the greater portion of the Scrotum. Subsequent Perineal Section. Recovery.* Reported by Mr. G. A. Stark.

N. D., æt 30, a French Canadian, was admitted into the Montreal General Hospital on the evening of the 30th of September, 1871.

October 1st—Upon examination by the attending surgeon, Dr. Fenwick, the following was his condition. The scrotum was enormously distended, the left lateral half presented a yellowish grey appearance from the existence of an actually formed slough. The perineum was distended and tender to the touch, the entire hypogastric and both iliac regions presented a dusky red, somewhat livid appearance, and looked as though the vitality of the integument was destroyed in several places. He had not been able to pass water for two or three weeks without much straining, and then only a few drops at a time flowed away. He complained of a burning pain, there was much distress and anxiety, and he was so weak and confused that he could not give a very lucid account of the commencement of the attack. It was ascertained that he had suffered from stricture of the urethra for several years, this had gradually come on after gonorrhœa. For several months past he noticed that the stream became gradually smaller. Two weeks ago he applied to this hospital as an out-door patient, complaining of bladder irritation, for which he received a bottle of medicine; no examination of the condition of the urethra was made at that time.

He states that when he applied for relief the perineum was swollen, and that he had to strain considerably to relieve his bladder. From this time the scrotum and perineum continued to swell, and a day or two before he applied for admission he suffered from rigors, and felt very ill and weak. He is a spare built man, rather above the average height, and is of a peevish irritable disposition, his pulse is rapid and weak, the tongue covered with a brownish fur, complains of headache, the features are somewhat sunken, pupils dilated, is inclined to be dull and soporose, is perspiring freely. Dr. Fenwick proceeded at once to make incisions through the entire thickness of the integument, into the cellular tissue beneath; a deep incision was made through the slough on the scrotum, from which gushed out fully half-a-pint of urine mixed with grumous looking pus. The perineum was incised on both sides of the raphé, and on the abdomen three incisions about two inches and a half in length were made on the right of the median line, and two on the left side; these went through the

skin into the cellular tissue beneath, giving exit to the same kind of discharge in smaller quantity: warm poultices were ordered, to be frequently changed. He was also to have milk, beef juice, four ounces of whiskey made into punch, and the following mixture :—

℞—Quinæ Sulph. grs. xii.
Potassæ chl. ʒi.
Tr. Ferri. mur. ʒij.
Aquæ ad. ℥vi.
M Ft. Mist.
Sig—A tablespoonful to be taken every four hours.

2nd—Passed a restless night, although he appears to have rallied considerably, the cuts are discharging a dark offensive matter, and the urine comes away wholly through the wound in the scrotum. No water coming by the natural passage, his bowels have acted once, he is still very weak, but his pulse has more volume than yesterday, and is at present 116 per minute.

5th—Since last report there has been very little change, complains of smarting pain whenever he makes water, which is apparently due to the urine passing over a raw surface. The slough on the scrotum separated to-day on removal of the poultice, the discharge has become very profuse, and is still of the same character. Shreds of dead cellular tissue are coming through the wounds on the abdomen, his bowels act regularly, but he is still weak, nor does he gain strength, takes nourishment well, but his sleep is disturbed by muttering, which does not amount to delirium. The pulse is about 100 and is weak, his tongue is very red in colour, and he complains of his mouth being parched and dry.

9th—Much the same as at last report, there is very perceptible emaciation, pulse 116, weak; bowels acting once every day, takes his food well, the discharge from the wounds is much the same as to quantity and quality; carbolic acid lotion (1 to 40) was ordered to the wounds as a dressing, the same also to be injected beneath the skin of abdomen, so as to dislodge the sloughs of cellular tissue which are coming away.

14th—There is very slight improvement if any, the pulse continues high, ranging from 112 to 128. He is very weak, and although he takes nourishment well, still the drain on the system from the discharge is such, that he only holds his ground. From the constant dribbling away of the urine, he is very uncomfortable, and a bed sore has formed over the sacrum. He was therefore placed on a water bed, and a pad with a circular hole in the

centre was put beneath the buttocks, increased care was enjoined on the attendant to see that the bed was kept as dry as possible. A large sponge damped with sulphuric acid and water was placed between the thighs, so as to soak up the urine as it came away. The discharge from the wounds is less offensive and less copious, the same treatment was continued. The left testicle covered by the tunica vaginalis is exposed, but granulating, and the loose skin is being drawn together, so that the organ will eventually be covered by a good coating of integument.

19th—He has been progressing favourably since last report; pulse 108, good volume; the discharge has become more healthy in appearance, and has greatly diminished, the wounds on the abdomen are closing rapidly. The general symptoms are improving, and he feels desirous for food which is given freely, a more nourishing diet with a piece of chicken being allowed, also a pint of ale is substituted for the whiskey.

25th—He has decidedly improved since last report. No change is made in his treatment, with the exception of the diet; he is put on half-diet with a beef-steak. At his own request the ale was omitted, as he states it does not agree with him, and six ounces of whiskey substituted; in every other respect he is going on well. For the first time he noticed that a small quantity of urine came away through the natural passage, the greater portion however flows from the fistulous openings.

From this period he gradually but very slowly improved in health and strength. A catheter was introduced on several occasions, and an exceedingly hard, almost cartilaginous stricture was found in front of the bulb of the urethra. This condition being satisfactorily made out, Dr. Fenwick stated that he would perform "perineal section" as soon as the condition of the patient would permit, in the mean time he would endeavour to build up his patient with tonics, good diet, and attention to general hygienic measures. He continued to improve very gradually but steadily, the parts cicatrised, the wounds on the abdomen healed, as did also those in the perineum. The scrotum at the part where it sloughed drew together, and the testicle became so well covered that the fact of considerable destruction of the skin was hardly noticeable. There exists, however, at the inner side to the left, a small fistulous opening, through which the urine comes out in a small stream whenever the man makes water. He has been up and walking about the ward, and is gaining strength and flesh.

November 26th—A whole month has passed since last report. To-day a careful inspection was made, and it was decided to perform Syme's operation to-morrow. He was ordered a dose

of castor oil at bed-time, and the bowels to be well washed out with an injection in the morning.

27th.—The patient was brought into the operating theater and tied in the usual lithotomy position. Chloroform was then administered, and a grooved staff passed down to the stricture. The incision was then made in the *raphè* commencing immediately behind the scrotum and extending backwards towards the anus for about two and a half inches in extent; the scalpel went through a considerable thickness of brawny tissue, and the urethra was found at considerable depth from the surface and opened in front of its constricted portion. A director was then passed through the stricture, and it was slit up from behind forwards. The staff then passreadily into the bladder. The staff was then removed, and a No. 9 silver catheter introduced and retained in position by tapes. The amount of blood lost was trifling. In the evening the patient expressed himself as feeling comfortable; the urine is flowing wholly through the instrument.

28th.—Slept well during the night, urine passing altogether through the catheter; says he feels well and easy, pulse 100. The wound looks well, but is tender.

30th.—All going on well since last report; urine flowing freely from the catheter, pulse 96. Sleeps well; bowels have not moved since the operation.

December 1st.—Catheter removed, and left out; all going on well, pulse 90. Complains of being hungry, so that a more generous diet was allowed, as it had been reduced after the operation. The bowels still being constipated, an apperient draught was ordered.

4th.—Pulse 90. Catheter passed and retained for three hours in the bladder. No urine has passed through the wound; it appears to have closed. Everything is going on well, and he says he feels very comfortable.

6th.—Is not at all well to-day; had chills and shivering during the night; complains of headache, is feverish, with a pulse of 120; is uneasy and anxious; the perineum and lower part of the abdomen feels stiff and uncomfortable. The urine comes away nearly altogether by the natural passages. There is slight dribbling in making water from the fistulous opening on the inner side of the scrotum. He was ordered a fever mixture, composed of chlorate of potash with hydrochloric acid.

7th.—Is no better, pulse 132. Complains of chills and flushings of heat. There is an erysipelatous blush over the lower part of the abdomen extending to the perineum. A lotion of acetate of lead was ordered to be applied, and muriate tincture of iron in ten

minuim doses to be added to the mixture and repeated every three hours.

8th.—Is very much better, pulse 100. The redness has nearly disappeared. The catheter was again introduced to-day. From this date he progressed steadily; the fistulous opening closed completely, and the urine was passed in full stream entirely through the natural passage. He was allowed to leave his bed on the 15th December. He gradually but steadily improved, expressed himself as feeling well; the catheter was passed twice a week, and he left the Hospital on the 3rd January, 1872, with instructions to return every week for the purpose of having the instrument passed.

Proceedings of Societies.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

MEETING HELD DECEMBER, 2ND, 1871.

The Society met in their rooms the President Hector Peltier, Esq., M.D., in the chair. After preliminary business, Dr. Fenwick, read the following paper on

Ligature of the Anterior Interosseous Artery for wound, and subsequent formation of a Traumatic Aneurism.

There are no specific directions given for ligature of the vessels of the fore-arm in surgical works. The surgeon when called upon to arrest hæmorrhage in this region, must depend on his knowledge of the anatomy of the part, and be guided in the steps deemed necessary from the nature of the injury. Aneurism of spontaneous origin in this region is almost unknown, and traumatic aneurism is extremely rare. I can call to mind three cases only of traumatic aneurism of the vessels of the fore-arm in my own experience. The first was the case of a boy aged 12 years, who was brought to me on the 18th May, 1849. The details of this case will be found in vol. 5, first series, of the *British American Medical Journal*, page 206. An aneurismal tumour the result of a gun shot injury to the coats of the radial artery, had formed about the upper third of the fore arm, it was about the size of a hen's egg, and was successfully treated by compression over the brachial. At this period the success of Drs. Hutton, Cusack, Bellingham, Harrison and others, in the treatment of aneurism by pressure, was attracting attention, and I believe it was the first in Canada in which that method of treatment had been adopted.

The second case of traumatic aneurism occurred in a patient of Dr. Reddy's, and in which, that gentleman ligated the radial artery. And the third case is the one submitted to the Society this evening.

[*The report of this case appears under the heading of Hospital Reports, at page* 244, *in the last number of this Journal.*]

It will be observed that although an aneurismal tumour formed in this case, yet its existence was not known until after the integument was freely incised, and the parts inspected with the finger. In similar cases that variety which has received the name of diffuse aneurism or false aneurism is very apt to occur. The formation of an aneurismal sack cannot in any way alter the mode of treatment, which consists in ligaturing the vessel at the point of injury, this is the surgical rule, and bearing in mind the free anastomosis of the vessels of the fore arm and hand, it appears to me the only safe procedure. It may be asked whether it is judicious to seek for a bleeding vessel at such a depth as the situation of the auterior interosseous artery. After the lapse of two weeks from the date of injury, the parts are liable to be changed, and considerable effusion of fibrine is likely to complicate the operation. True, but we may bear in mind the wonderful success of Mr. Syme in analagous cases. Ligature of the auterior interosseous has been proposed and carried out by Pancost, of Philadelphia, in a case where wound in the hand was followed by continued hæmorrhage, after ligation of both the radial and ulnar arteries. Sir W. Ferguson in speaking of this case says: "Considering the depth of the vessel, I should imagine that there would be far greater danger to the arm by such an operation, than if the humeral were exposed and tied." In the case just read, you must bear in mind that the interosseous was wounded, severed in two, and that undoubtedly it became the duty of the surgeon to endeavour to ligate the vessel at the point of injury, failing which I should have resorted to some other mode of arresting the bleeding, either acupressure, or even the actual cautery, and if all these means had failed, I should then have ligated the brachial artery.

I feel convinced from the facility with which the vessel was found and tied, that even in cases where time has elapsed since the receipt of an injury, and that the parts have become infiltrated and somewhat changed, yet that the proper thing to do is to follow strictly the surgical rule, and tie both ends of the vessel at the point of injury.

Doctor Reddy remarked: With reference to the case of trau-

matic aneurism alluded to by my friend Dr. Fenwick, and which occurred about five years ago in my practice. The history was as follows: A fire having occurred during the night in the house where my patient was sleeping, in order to save his life he was obliged to make a dash throngh a large window, and after passing through he found that blood was pouring profusely from his right wrist near the joint. On examining the place only a small wound existed, which was strapped and bandaged by a physician, the part healing at once, and at the end of a week all appliances were removed. Within ten days however, he noticed near the sight of the wound a small swelling about the size of an almond, this at that time, he did not consider of any importance, but observing that at the end of a month its dimensions had increased to the size of a hen's egg, with considerable prominence, he sought advice, and for a few weeks had been ordered Tr. Iodine and linseed poultices to be kept continually applied. The tumour remaining unaltered he came to Montreal and consulted me. Immediately recognizing the nature of the accident, I passed an accupressure needle above and below the sac, and at the end of four days finding no improvement, assisted by Dr. Fenwick, I slit up and emptied the sac, tying the artery above and below where it had existed. The case did well from that moment, and terminated in a perfect cure.

Dr. Trenholme had a case somewhat resembling that just reported by Dr. Fenwick. He is understood to have said that about two years ago he was called to see a fireman, who had been injured in the discharge of his duties. The man in thrusting his hand through a pane of glass, had received a wound in the forearm, there was a good deal of bleeding at the time, but the wound was dressed by a medical man on the spot, and the bleeding did not return until seen by Dr. Trenholme several hours after. It was again easily controlled by a compress, but soon returned. A tourniquet was then applied to the brachial, and an attempt made without success to apply a ligature to the bleeding point. Failure in some measure depending upon the hæmorrhage which was not controlled by the tourniquet. Dr. Trenholme then ligatured the brachial.

MEETING HELD DECEMBER, 16TH, 1871.

The Society met in their rooms the President Hector Peltier, Esq., M.D., in the chair after preliminary business, Dr. G. P. Girdwood read the following important paper on a case of

ALLEGED POISONING WITH THE OIL OF SAVINE.

Mr. Chairman and Gentleman,—The case which I wish to bring

before you to-night, is one which has some interest for the profession. It appears on the calendar at Sweetsburgh, in October last, as the Queen vs. George Mullin.

In the first instance, the father of the prisoner was to have been indicted with his son, but as the evidence would not bear out any accusation against the father, the case in so far as he was concerned was dropped. The father appears to have been in the habit of administering drugs to sick people in the neighbourhood, and seems to have given some pills to the deceased, but beyond giving her some purgative pills, he seems to have had no blame in the result.

During the trial evidence was not forthcoming to connect the son in any way with the death which ensued, and therefore after two days trial, the prosecution against him was dropped also.

The case may be briefly stated as follows: The prisoner George Mullins, was it appears commonly believed to be a lover of the deceased Josephite Fagan, and it was rumoured had already had one child by her.

She was the school mistress of the country school, and lived in the school-house, consisting of two rooms, a bed-room occupied by deceased, and a kitchen also used as a school.room, and the prisoner was proved often to have been alone in the house with her for hours, and even to have been seen in bed with her.

It does not appear that any of the neighbours suspected her condition until the birth of the child.

It is stated that on Saturday, the 25th of February, she complained of having taken cold, and on that day she had been out and apparently got her feet wet, she was out on the Sunday morning at church and got wet again, and afterwards was heard coughing by a neighbour who went to see her, and was found and reprimanded for sitting near an open window without sufficient covering. At this time she was coughing and complaining of pain in her stomach, her tongue was white at the edges and bright red in the centre.

On Tuesday, the 27th, she sent a neighbour to fetch the doctor, who, however, was not at home, she sent again at about 1 o'clock, with instructions if he were not at home to fetch Dr. Dartois, who was accordingly brought, he states that he found his patient almost pulseless, attempting to vomit, complaining of pain in her stomach, with a little cough, expectoration easy, sputa streaked with blood, and a pinched drawn expression of countenance.

He did not examine the lungs as he thought there was no immediate danger, but thought he noticed a smell of fresh blood pervading the room, and that she was suffering from an internal flux.

He enquired of the women present what was the matter, but they told him they did not know, the deceased stated that she had taken cold, he asked for two cups and mixed some medicine for her, and left her.

He was subsequently sent for in the evening late, and found her worse, and vomiting a greenish colourled fluid, she was conscious, saw a bottle which he thought contained pain killer and oil of savine, went again to see her on Wednesday morning, found her better, had vomited no more, did not complain of her water or her loins (kidneys), nor pain in her back, but had colic, saw her next day when she was dying. Found no disease that would cause abortion or premature confinement.

A post-mortem examination was made on the 11th March by Dr. Baique, who describes the following appearances :—

F. C. Baique, Physician and Surgeon stated : On the 11th of March last, at request of Coroner Blanchard, examined the corpse of Josephite Fagan.

No external injury, except a piece of skin worn off.

Lung was congested, in thorax about 1lb. of liquid blood.

Heart softened and pale, blood in it coagulated.

Liver congested, gall bladder full of gall and large.

Adhesion of pleura.

Stomach full of greenish liquid and distended with gas.

Uterus larger than in its normal state, contained about one ounce of coagulated blood, the posterior part more congested and darker. Concluded deceased had been confined shortly before her death.

Progenitive parts were still swollen, and in the vagina and in opening of the womb, a considerable quantity of coagulated blood, is of opinion that deceased died from the effects of her confinement, having taken place before maturity, and occasioned by certain medicines administered by one or more persons unknown, (from the evidences given) he remarked a considerable derangement in the thoracic cavity, which must have been the result of the pains experienced during and before confinement.

The Spleen and Kidneys were in their normal condition or about.

The Bladder appeared in its normal state and was empty.

The Lungs and Pleura contained a large quantity of bloody mucus.

The Face was dark as also the upper part of stomach.

The woman was buried. Subsequently, on the 14th April, the body was exumed, and Dr. D'Orsonnens of Montreal, was requested to attend, he did so, and at the second autopsy he removed por-

tions of the viscera and blood, which he took to Montreal for analysis.

A small phial which Dr. Dartois had noticed on the wash stand was enquired for, and was found in the dust heap, was also handed to him.

He made his analysis, and determined that the woman had had a miscarriage produced not by natural causes, but the result of some irritant poison. The result of his analysis being that the irritant poison was oil of savine.

The process for the detection of which was detailed as follows:

Portions of the various viscera were cut up, put into an evaporating basin and acidulated with hydrochloric acid and water, and put on a water bath and digested until all the tissues were dissolved, this was filtered through a wet cloth, and the residue washed. The filtrate and washings were then put into another evaporating dish and evaporated to dryness with sand, the residue was beat in a mortar with alcohol and hydrochloric acid and water—10 or 12 of water to one of acid—agitated with amylic alcohol neutralized with ammonia, and agitated with hot amylic alcohol, this was washed with hydrochloric acid and water, and neutralized with ammonia, and agitated again with amylic alcohol, and evaporated, with this residue he tried to obtain colours, but could not obtain any.

Another experiment was made with the blood mixed with alcohol and evaporated, and an extract obtained in the same way was tried upon a frog, also part of extract obtained by the former process was tried, and a frog died. Amylic alcohol tried on another frog, frog did not die. Chloroform did not kill another frog. Oil of savine mixed with chloroform on another frog, he died.

The little phial spoken of contained a small quantity of reddish yellow fluid, much inspisated, and this smelt like pain killer mixed with oil of savine, this mixed with chloroform applied to another frog's back, frog died.

From these experiments the doctor inferred that the deceased had taken during lifetime, enough oil of savine to be absorbed, and to cause death.

The crown failed to make out the connection of the prisoner with the case, further than being supposed to be the father of the child, and therefore the case was withdrawn, and the jury instructed to find a verdict of not guilty, which was accordingly done, without going into the defence. On the moral evidence there is no occasion to comment, there was nothing to prove that the prisoner had any knowledge of the use of oil of savine, or that he had

advised, councelled the use of, or administered anything for the purpose of procuring abortion.

But it is the medical evidence on which we have to comment. What shall we say of the medical man who finds his patient suffering from pain in the stomach with shrunken features, expressive of severe illness, and pulse small of 150, with attempts at vomiting, and thinks that he recognizes the taste of ergot of rye and oil of savine, and the smell of fresh blood pervading the room, and leaves his patient without ascertaining that she has just been confined, and is at that time suffering from hæmorrhage. What could he suppose oil of savine and ergot of rye, supposing them present, were for, especially in the room of a young woman in bed with pain in the stomach.

Dr. D'Orsonnens, process of separating oil of savine is the most novel and unique process I have ever heard of, he puts the parts cut up into an evaporating basin and digests with hydrochloric acid, filters and evaporates the filtrate to dryness, and then tells us that oil of savine was in the residue. In cross-examination he states that oil of savine is a volatile oil obtained by distillation.

During the process of boiling and evaporation, he did not find the peculiar odour of oil of savine, which had it been present must have permeated the whole room, and been the very best proof of its presence, but finding no irritant poison of a metallic character, and no vegetable poison by any chemical test, he tries a physiological test on a frog.

The best test for the oil of savine is the smell, and unless that be noticed and to a marked degree, and distinctly defined on the application of heat, it can not be said to be present.

Physiological tests are admirable evidence of the presence of poison, either as adjuncts to chemical tests or (of themseles, where there are no chemical tests) to determine the presence of a poison. But the action of the poison on the system must be marked, as for instance strychnine, belladonna, morphia, or atropine, whose action is peculiar, and characteristic, but where the poison sought is like the present devoid of characteristic action, I must most emphatically state my disapproval of their use, especially where a man's life is in danger. In the case of oil of savine, the only effect as a poison, besides that of irritation, and which is peculiar, is the action on the genito urinary organs, and this action is common to camphor, pepper, and many other such substances, which are used in the common pain killer. I have yet to learn that a frog is peculiarly adapted for displaying any specific action on the genito urinary organs, and what the evidence of strangury in a frog is would be an interesting communication to the profession if the doctor

would inform us, also in what peculiar manner the oil of savine would act differently to oil of turpentine, or many other similar substances or fluids of a similar nature. The process detailed by the doctor is the best calculated I know of for getting rid of oil of savine. I know if I wished to get rid of oil of savine, I should certainly evaporate to dryness, and more especially with water and hydrochloric acid, and then I should be sure to drive off any volatile oil. Whatever killed the frog, it certainly was not oil of savine, and I can only conclude it was too much doctor.

No reliance can be placed on the evidence of the phial which was found lying about, three weeks after it was thrown out, but here the doctor states that he had pain killer and oil of savine, and he says pain killer is composed of camphor, red pepper, ammonia, opium, spirit and water.

According to Pereira, camphor is very injurious to frogs. So this may account for this frogs death. But the doctor was not aware of the action of camphor on frogs.

Gentlemen. this case brings me to an important point in medico legal enquiries. The late Mr. Wakely used to say, that two medical gentlemen should always be present at a post-mortem examination in a criminal case, one for the Crown and one for or on behalf of the accused; and where chemical evidence is required two chemists should also be present and jointly make the analysis, so that they should appear as a commission to investigate and thus save the disgraceful long and to the defendant expensive cross-examinations which sully our court records.

PERISCOPIC DEPARTMENT.

Surgery.

TORSION OF ARTERIES.

M. Tillaux, Surgeon of the St. Antoine Hospital of Paris (*Courier Med.*, 14th October,) read a note on the torsion of arteries recently, says the *Doctor*, in which he remarks that there would certainly be great benefit if it were not required to tie the arteries, since the presence of the threads brings on suppuration, and is opposed to immediate reunion. It is also not rare to tie a

filament of nerve along with an artery, which causes great pain, and, according to some, tetanus. Also sometimes the noose of the thread takes in some muscular and cellular tissue, which becomes sphacelated. Now, torsion of the arteries quite shelters us from such disasters, and it obliterates completely and permanently the passage through the vessels. To make this ligature the ordinary forceps will suffice; it is better, however, to have different forceps for the torsion of the larger and smaller arteries. The artery being isolated he seizes the extremity between the two ends of the forceps to the extent of five or six millimetres. Holding the forceps in a direction parallel with that of the artery, he keeps it up with his left hand, whilst with his right he slowly twists it. After a variable number of turns, the extremity of the artery comes away in the forceps.

SHALL ECZEMA BE CURED?

The hesitation in curing eczema, lest it should "strike in," is thus met by Mr. Milton, in the *Medical Press and Circular:*

For years I have, in every instance, done my best to check the discharge of eczema as quickly as possible. During that period above 5,000 cases have passed under my notice, and as I have never seen or heard of any injurious results, I can only conclude that treatment cannot produce such an effect as bringing on internal disorder by relieving eczema. *Properly employed, treatment is neither innocuous or beneficial.* I can scarcely help thinking that, in such a large number of instances, if injurious results had been at all common, I must have heard something of them. On the other hand, it is quite certain that a number of patients, cured of profuse discharge, often of years' long duration, are, at the present time, not only well, but all the better for being freed from such a disgusting nuisance. I laid before the Medico-Chirurgical Society the particulars of a case, where the discharge from an eczema, covering the leg from the calf to the sole of the foot, was so profuse that the patient, an old man in shattered health, said, that often, after a day's work, he returned home with his shoe half full of water. This state of things had gone on for three years, yet the speedy removal of it, so far from bringing on any internal affection, was followed by a decided improvement in the patient's health. The old man was very well known in the part of the city where he resided. near London Bridge, and some years after, when I last heard of him, was certainly quite as well as he had

been previous to having the eczema. At the same time another instance was quoted, where a case of long standing eczema of the hand was cured, and where four years after the patient was in excellent health. This man, too, could have been easily identified, being a signal man at the Shoreditch station of the Great Eastern Railway. I could easily add to the list.

No doubt. if a patient suffering under eczema be attacked by some malady assailing the surface of the skin and the internal organization at the same time, as one of the ex-anthemata for instance, the eczema *may* be removed or suspended (for I trust I have shown that this does not certainly happen) as would many complaints, such as gonorrhœa; but I presume it would scarcely be considered the proceeding of a rational being to leave a gonorrhœa to take its own course, lest the removal of it might cause the development of some internal malady.

In all the cases I have seen, where eczema was complicated by an internal disorder such as bronchitis, an exacerbation of this, so far from relieving the eczema, either had no effect or made it worse; while in no case did the increased discharge, when the eczema was worse, in any way mitigate the internal affection. Thus, a poor weaver, suffering from eczema of the leg, came under my care. The disease of the skin was cured, and the patient remained well till an attack of bronchitis, at the beginning of the ensuing winter, prostrated him. In a very short time the eczema returned as bad as before, but without in the least relieving the bronchitis. A few years ago an old man came under my care for eczema of the leg. He was cured, and after an interval of quite four years, he again applied with the same complaint in both legs. I questioned him closely and learned that he had fallen into bad health, that then the eczema came on, and that the worse it grew the worse he became in other respects—a statement quite borne out by the results of treatment, for the eczema disappeared as he improved in health. A poor woman was recently in attendance at St. John's Hospital who had been four times the subject of a bad attack of bronchitis; each time she was laid up in this way an old eczema of the ankle relapsed and passed into a state of ulceration. There is a middle-aged woman attending now at the same institution for eczema, she has twice suffered from bronchitis, and twice eczema has followed the coming on of the chest affection.

I could have added many more cases, but I need no longer note them down, as I have found no evidence on the other side of the question, and to heap together facts, merely to swell the bulk of testimony without adding to its real value, seems to me sheer waste of time. My experience is, that *if two or three cases will not*

induce men to think upon a question two or three hundred will not. I shall, therefore, content myself with adducing the evidence of M. Rayer, who supports the view I have been endeavouring to combat, as to there being a connection between the healing of an internal complaint and the cure of eczema. M. Rayer then says,* that he treated a patient for gastro-enteritis, who had been previously suffering from eczema, and that *during all the time the gastro intestinal inflammation lasted the eczema was worse.* Again he says,† of another patient, "the appetite fell off remarkably (a certain sign that the health was not so good as formerly,) an occurrence which was followed by a notable exacerbation of the eczematous affection."

I think, then, we may conclude that the fear of curing eczema, of however long standing it may be, and however delicate the health of the patient, *is not warranted by either proof or analogy;* that no known agent possesses the power of repelling eczema; that we can cure it only by means which improve the health at the same time; and that it is as justifiable to arrest its discharge as that of diarrhœa or cholara. And I may here remark, that all that has been said of eczema may be said of ulcer; there is no danger in healing it up, no bad symptoms ever arose from doing so. Those reported to have occurred were the offspring of prejudice or faulty observation, and offer only a too painful comment on the mode in which surgery has often been studied and taught.

ON EXTRACTION OF CATARACT BY A PERIPHERAL SECTION OF THE IRIS WITHOUT INJURING THE PUPIL.

By Charles Bell Taylor, M.D., F.R.C.S.E., Surgeon to the Nottingham and Midland Eye Infirmary.

I have on former occasions, in the pages of *The Lancet*, the "Ophthalmic Hospital Reports," and the "Ophthalmic Review," called the attention of the profession to a mode of extracting, in cases of cataract, which I have been led to prefer to all others, and which, so far as facility of performance and percentage of recoveries are concerned, has appeared to me to leave almost nothing to be desired.

I now wish to point out certain advantages I have derived from a further elaboration of the method. In the operation I have

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* "Treatise on Diseases of the Skin." Translated by Willis, Second Edition, 1835. Page 316.

† Ibid. Page 322.

already described, the wound is subconjunctival, prolapse of the iris is prevented by excision of a small portion of that membrane, and the curvature of the line of incision is too slight to permit of reflection of the flap. There is no tendency for the wound to gape; no gushing of the aqueous, and consequent displacement of parts; manipulation of the eyeball is both safe and easy. Every portion of the cataract may therefore be removed at the time of the operation, and a clear black pupil obtained, through which the patient may count fingers before the eye is bound up. Moreover, although it is not possible that all the cases should be successful, still entire loss of the eyeball from shrinking or suppuration does not occur more than four or five times in a hundred operations. What more can be desired? To this I reply that every modern improved method of extraction, whether it be Graefe's, Mooren's, Pagenstecher's, or the one I have described, involves the sacrifice of a portion of the iris extending from the periphery to the pupillary margin, and that the one thing to be desired is, that with the same safety and facility of performance we should be able to secure for our patients the highest indication of success, a central and movable pupil.

Prolapse of the iris has always been the bugbear of extraction whether iridectomy has not formed a part of the operation; and yet the extreme beauty and superexcellence of the results, when no accident has occurred and when all has gone well, after one of the old flap operations, is such that we constantly find ophthalmic surgeons abandoning the the modern methods to revert to the old and necessarily much more dangerous flap extraction. When I was last in Utrecht I found that Professor Snellen had, in spite of the good results to be obtained by Von Graefe's and other modern methods, returned to the old flap operation; and the same is true of many other continental surgeons as well as of some of the most eminent in this country. Those for instance, who have had the good fortune to study Mr. Bader's practice at Guy's Hospital, must have noticed how frequently and with what excellent results he resorts to the old flap operation. I have myself on several occasions, actuated by a similar desire to save the iris and attain the maximum of success, extracted by my own method without excising any portion of the iris, merely enlarging the wound in a lateral direction, sufficiently to permit of the exit of the lens. Dr. Macnamara, of the Calcutta Hospital, has also endeavoured to effect the same object by the use of the spoon. In my own experience, however, prolapse has occurred from time to time, and whenever I have left the iris untouched I could by no means say as I was in the constant habit of doing when every step of my

process had been fully carried out, that my anxiety had ceased with the operation, and that scarcely any subsequent treatment was necessary.

Latterly I have been endeavouring to ascertain whether it were not possible to combine the prevention of prolapse and the other advantages attendant upon an associated iridectomy with the central and movable pupil so much to be desired in all operations of extraction for cataract, and having attained that desirable consummation, I am anxious to lay before the profession the steps of the process, which are briefly as follows.

As a rule I administer a mild aperient the day before the operation, and extract the following morning before breakfast. Chloroform is much more pleasantly given under these circumstances. The risk of vomiting is to a great extent obviated, and that of all other accidents dependent upon anæsthesia diminished.

The instruments that I employ are a pair of sharp forceps that pierce the sclerotic; a very light speculum (a modification of Von Graefe's;) and two knives, a line in width, and bent at an angle similar to the ordinary iridectomy knife—one with a sharp point, the other with a blunt or bulbous extremity.

Having separated the lids with the speculum, the eye should be gently turned downwards with a pair of ordinary forceps in the operator's right hand. Having got the globe into a favourable position, it should be fixed by the sharp forceps at about the junction of the upper with the middle third of the cornea; the pointed knife is then entered in the corneo-sclerotic junction one or two lines from the forceps at the summit of the cornea, pushed well into the anterior chamber, and then, with a gentle sawing motion, carried along the summit until one-third of the cornea has been incised. The capsule is then carefully divided with Von Graefe's cystitome, having been previously rendered tense, and the eyeball fixed with a pair of ordinaay forceps. (It is better to open the capsule at this stage, because bleeding from the wounded iris—and conjunctiva also—at a later period is apt to fill the chamber and render this part of the operation obscure and difficult.) The upper segment of the iris is then seized, and a small piece of the periphery only excised, the pupillary margin and portion of iris attached to it being left untouched and free in the anterior chamber; the lens is then extruded through the gap in the ordinary way, gliding behind the pupil, so that there is no stretching of the sphincter.

In this way I believe that I have secured all the advantages, in the way of safety and certainty, of an associated iridectomy (which

I have already detailed,) and at the same time attained that grand desideratum—a central and movable pupil.

The appearance is quite equal to excellent flap results, and, so far as vision is concerned, I expect much better averages than with that time-honoured operation, since the position of the wound is such as to obviate all risk of interference with the natural curves of the cornea and consequent astigmatism, which so frequently tended to depreciate the results, and disappoint both patient and operator, in Daviell's method.

NOTTINGHAM, October, 1871.—*Lancet.*

EXCISION OF THE SHOULDER-JOINTS FOR DISEASES.

Dr. Ewens, of Cernes Abbas, reports in the *Lancet* two cases of diseases of the shoulder, in one of which an elliptical incision was made, whilst in the other excision was performed by a modification of the single longitudinal incision, both terminating successfully. The first case occurred in a girl, aged 18, who originally suffered from inflammation, apparently of a rheumatic character, of the left shoulder-joint. An abscess formed and pointed at the posterior border of the insertion of the deltoid muscle. Six months after, she was weak and emaciated, with almost complete loss of power to move the arm herself, and forced movement excited great pain. There was a second opening above the joint, when the abscess burst, and both communicated with a sinus leading to the posterior portion of the axilla. No diseased bone could be detected by a probe, but it was shrewdly suspected that disease of the shoulder-joint existed. She was placed on a generous diet, cod-liver oil and iron. The paroxysms of pain were very severe, and as the diseased advanced became so violent as to necessitate a frequent resort to hypodermic injections.

At length, acting on the advice of Mr. Pollock, Dr. Ewens made an exploratory incision, and after some groping discovered loose bone. The ordinary elliptical incision was thus made, the flap dissected up, and the diseased joint fully exposed. The head of the bone was found in a very carious condition, and a portion, shortening the bone by about an inch, was removed by Butcher's saw. The wound was sponged with carbolic acid and oil in the proportion of one part of the acid to four of the oil; the flaps re-adjusted and secured by pins and twisted suture. Sickness due to the chloroform occurred after the operation, but passed off in the course of 24 hours. She progressed favourably for 10 days, when a slight rheumatic attack supervened, which was cured by ammonio-citrate of iron and bicarbonate of potash. From this date

she gradually improved; but a small sinus still remained, which indicating more diseased bone, necessitated a further operation. A small portion of the shaft was again removed, and rapid recovery followed.

Fourteen months afterward the arm was two inches shorter than the other. There was perfect use of the arm for underhand work, and power to move it behind her and to bring it forward on the chest. There was, however, no power to raise the arm. In the second case, a large abscess had formed beneath the right pectoral and had been opened; a sinus remained beneath the outer part of the mammæ, behind the pectoral muscle, into the axilla, but a long probe failed to reach diseased bone, or to find the end of the sinus. Careful examination elicited the history of a blow over the front of the shoulder three years prior to the opening of the abscess, with an account of symptoms of joint disease, but ascribed to rheumatism, in the intermediate period. A swelling was found on the back of the shoulder, and opened by Dr. Ewens, and curdy pus was evacuated. Her general health improved, but several times spots of erratic erysipelas appeared on the arm, speedily subsiding under the local application of strong tincture of iodine. As the sinuses did not heal up, an explanatory incision was determined upon, and the wound at the back of the joint was enlarged so as to enable the finger to be introduced under the deltoid, which was then cut through transversely, a little below its origin from the spine and acromion process of the scapula, and the joint was thus laid open posteriorly.

There was little hemorrhage. The head of the bone was found to be completely carious, with a large sequestrum in its centre. The posterior half of the deltoid being thus divided horizontally, a perpendicular incision carried through its whole length down to its insertion into the humerus fully revealed the parts to be removed. The patient being very fat, Butcher's saw could not be conveniently used, and the bone was therefore sawn through with an ordinary finger saw, the portion removed representing a shortening of about two inches. The wound was dressed as in the former case, and the patient made a more than ordinarily quick recovery, she being perfectly well in three months. The result now is that the arm is as useful as ever for underhand work; she can lift as heavy a weight as before, and is now, and has been for the last 10 or 12 months, managing a dairy. Besides, she can raise her arm forward and upward in a manner that could only be accomplished by the action of the anterior fibres of the deltoid muscle; and with practice Dr. Ewens fully expects much greater power will be gained.

ON THE TREATMENT OF SCIATICA BY THE VOLTAIC CURRENT OF ELECTRICITY.

By William Stephenson, M.D., F.R.C.S.Ed., Lecturer on Diseases of Children, and Physician Royal Hospital for Sick Children, Edinburgh.

The following two cases of sciatica treated by the voltaic current of electricity, illustrate well the action of the agent in the treatment of neuralgic pain—a subject which is attracting considerable attention.

By the Voltaic current is meant one derived directly from a battery, and distinguished as the primary and continuous current; in contradistinction to that in general use, the Faradic, induced, or secondary, obtained from an induction coil or magneto-electric machine. The latter is a momentary current more or less rapidly repeated. The distinction must be constantly kept in view, for they differ much in their physiological and therapeutic action, and as I shall presently show the Voltaic has much greater effect in relieving and curing pain than the Faradic:

Case 1.—David L., æt 34, a carter, states that twelve months ago, he had a fracture of the tibia for which he was treated in the Infirmary. Ever since he has had a pain in the outer part of the leg and foot. Eight months ago it extended to the hip over the sciatic nerve, and he has since been quite lame. The pain is easy while sitting but severe whenever he attempts to walk; he cannot stand erect; while in bed, if he moves his leg, he feels unable again to get it into an easy position, and has to get up often during the night on account of the pain. He has always enjoyed good health and has never had rheumatism. He has been attending the Royal Infirmary, where he has been purged, has taken quinine largely, needles were introduced, blisters applied, and twice he has been cauterised with Corrigan's button, but all without benefit.

Dec. 7th, 1870.—A current from ten increased to twenty cells (Daniell's) was applied for five minutes, by means of moist sponge conductors, the positive pole being placed over the sacrum and ischiatic notch, the negative at various points along the course of the nerve. He stated that he felt greatly relieved, but the pain was not entirely away.

8th.—He walked home with greater ease than before; could stand straighter up; he has had a better night's rest than since the pain began. Fifteen cells were again applied as before.

9th,—Walked home quite free from pain; slept well; found a slight pain in the leg in the morning when he rose, but passed off when he began to move about. Fifteen cells as before.

10th—Had a good night's rest; was able to take a walk to-day; can stand perfectly erect. Twenty cells direct and inverse current for fifteen minutes.

The application was continued regularly and the improvement maintained. There was still, however, a residue of pain which remained obstinate, and was always induced when he walked much, or if the treatment was interrupted. The affection was worse in frosty weather. The effect of the induced current was tried for a time by means of a magneto-electric machine. It at once relieved the pain, like the other, but the effect always passed off much sooner. The subcutaneous injection of morphia was next combined with the voltaic treatment. This produced a more decided effect, but the pain continued to return after a day's walking. Iodide of potass, quinine and arsenic were given, and for three months, with one or two interruptions, the electric treatment was persevered in. The patient indeed was always glad to return on account of the comfort he experienced. The strength and direction of the current and mode and duration of application were modified as much as possible, without any change. It then occurred to me to try the electro-puncture, an insulated needle being introduced into the hip near the nerve, and a moist sponge applied over the painful spots in the leg. The effect was decided, a steady and continuous improvement being felt after each application, and after the sixth all residue of the pain was removed.

Case II—David O., æt 50, a letter-carrier, has suffered from sciatica for four months, never had rheumatism, but once had lumbago. The pain extends over the whole length of the nerve, and effects also the superficial sacral nerves, it is always worse at night, and greatly interferes with sleep. He has been blistered seven times, four times had acupuncture applied, and taken several medicines. From the acupuncture he derived some benefit, but the pain always returned.

The electricity was applied, and benefiting from the experience of the former case the electro-puncture was used at once. The relief after the third application was decided, but the returns of the pain after walking were at first severe and frequent—but never lasting long. Whatever pain he had was always at once removed by the application. In a fortnight he could walk freely, but it was not until after five weeks use that the last residue was removed and he was able to resume his employment.

In using the electro-puncture a much feebler current is required than when the resistance of the skin has to be overcome. I had

several opportunities also of observing in the latter case that when too strong a current was used, or the needle applied too close to the nerve, there was sure to be an exacerbation of the pain during the night, Five cells produced the best results; ten seemed to over-stimulate and fifteen excited the pain at the time.

I have treated five other cases with the current. Two were recent cases, and had not been otherwise treated; both were well in a fortnight. One was the mild but persistent "residue" of a former attack and was removed in a week. The other two were much relieved, but left for the country after a few applications only.

In all an immediate relief was experienced, and this is the great criterion whether the case is likely to be cured or not. If no relief is felt after three or four applications there is little probability of any benefit. The progress to perfect cure may be slow—the above, from the experience of others, are exceptionally so—but the severity of the affection is broken at once and comparative comfort is gained. The first case was protracted, but all the more instructive, giving an opportunity of testing the relative merits of the two currents, and illustrating how much the want of success may depend not upon the remedy but the mode of its application.—*Medical Press and Circular.*

SURGICAL STATISTICS OF THE LATE WAR.

It is only as shreds and patches that we are able to gather particulars in regard to the results of wounds in men treated in hospitals during the Franco-Prussian war. Some such statistics have recently been published* in a report of the Ambulance de Termigniers, under the care of M. Lucas Championnière, and although the cases number only 157, the particulars given are useful for comparison. The whole were received between the 7th of December, 1870, and the 8th of January, 1871, and are classified as follows:—

Head.—Six cases, viz., two slight of hairy scalp by bullet, one of face by shell, with destruction of soft part of nose, and right cheek; one contusion of right eye by shell; one fracture of lower jaw by ball (transferred on 3rd January, doing well): one bullet wound through the molar region, the missile escaping at the nape, with additional wound in the left shoulder, and the feet completely frost-bitten. This patient died from these complicated injuries.

* "Le Mouvement Medical," 19th Nov., 1871.

Clavicular Region.—One, viz., simple fracture of the right clavicle—recovered.

Shoulder.—Three, viz., one of outer aspect by a shell; one *seton* by bullet above the left scapula; one fracture by ball, of the scapula; all recovered.

Arm.—Seven, viz., *seton* by ball in right arm, three similarly in the left; one fracture of right humerus by ball, treated by apparatus to prevent motion, and the patient transferred, doing well.

Elbow.—Two, viz., one *seton* by bullet of left elbow, with a fracture of the end of the humerus and olecranon by shell, for which excision of the shoulder was performed, but the patient succumbed.

Forearm.—Seven, viz., three *seton* by ball, two being in the left and one in the right. One gun-shot fracture of radius; one similar injury of both bones; these two cases being transferred, doing well; one case of fracture of both bones by a shell demanded amputation in the arm. This operation was performed on 24th December, but death by pyæmia occurred on 6th of January. One deep wound of upper part of the forearm, with profuse hæmorrhage; the axillary artery was secured by ligature, and 24 days afterwards the patient was transferred, doing well.

Hand.—Two, both by shell, with destruction of the two last fingers in one, and one in the other.

Hip.—Five, viz., two contusions by shell; two wounds by bullet, one in soft parts, the projectile not extracted, the other penetrating the bone of the right ilium under anterior superior spine, the projectile unextracted. In both these profuse suppuration occurred, but the termination in either is unrecorded. The fifth case was one *en seton* by bullet in the right hip, the precise tissues injured are unrecorded, but the case was fatal.

Thigh.—Thirty-one, viz., nine *en seton* of the right thigh; nine similar of the left; five contusions by shell of the right, three similar of the left; one contusion of both thighs by shell; one severe wound, with fracture of the right great trochanter, proving speedily fatal; one fracture between the condyles of the right femur, the bullet remaining fixed in the bone; amputation performed in lower third of the thigh, followed by gangrene of the stump, and death. Two comminuted features of the femur for which immediate amputation had been performed, death following in both, in one by hæmorrhage, in the other by pyæmia.

Knee—Thirteen, viz., seven were non-penetrant, of which three of the right and four of the left, are slight. The more severe included one penetrating of the right, requiring amputation in upper

third of the thigh, ending in death by pyæmia; one fracture of patella and external condyle of the tibia by a bullet, gangrene following, secondary amputation performed, and death occurring by pyæmia; one comminuted fracture, amputation and death by delirium tremens; one comminuted fracture of the left patella, with purulent arthritis, amputation in the upper third of the thigh, 19th December, death by septicemia on 23rd; one comminuted fracture of the left patella and external condyle, with large opening into the joint, treated by applying an apparatus to render the injured parts immoveable, but followed by multiple abscesses and death; one wound of the left knee, the bullet passing under the ligamentum patellæ, followed by purulent arthritis, and the patient transferred in a bad condition.

Leg.—Thirty-six. Among the cases which recovered are enumerated eighteen bullet wounds *en seton*, namely, eight of the right, and ten of the left; also nine shell wounds, of which seven in the right and two in the left; eleven comminutive fractures required the performance of amputation, of these seven were in the right and four in the left; of the former, one comminuted in the lower part of the right, with a wound *en seton* of the left, amputation of the right, recovery of the patient; one shell wound of the calf, with fracture of the patella, and laceration of the tibial artery, ligature of the femoral, and transfer of the patient, doing well; one gunshot of the tendo-achilles, and inner malleolus, followed by much suppuration, many incisions and the bullet ultimately removed, death; one comminutive fracture for which immediate amputation had been performed, secondary hæmorrhage recurring, a second ligature was applied at a higher part, the patient subsequently dying of exhaustion; one amputation of the thigh and two of the leg, performed on the field, one of these cases proving fatal by gangrene of the stump, and tetanus; of the four latter one was a shell wound, implicating also the right, followed by gangrene and death; one of the fibula, the patient transferred in a satisfactory state; two of immediate amputation of the thigh, death occurring in one by pyæmia.

Instep.—Five, one being slight, *en seton* of the left, the others severe, one penetrating the joint, the bullet remaining, tetanus supervening, and death; one penetrating the joint, requiring amputation, the patient subsequently dying; two immediate amputations in the lower third of the leg, one of the patients dying of tetanus, the other being attacked with gangrene of the stump, but ultimately recovering and being transferred in a good state.

Foot.—Seventeen, of which twelve by bullet or shell were of inconsiderable severity. The remaining five included one com-

minuted fracture of the metatarsus by a shell, the patient being seized with tetanus, and dying; one similar fracture, with severe injury of the toes, transferred doing well; one comminuted fracture of the left tarsus, requiring amputation of the leg, followed by sphacsus of the flap, pyæmia, and death; one destruction of a toe by a shell, and one fracture of the metatarsus by a bullet—both these cases doing well.

Chest.—Two; both wounds penetrating, followed by traumatic pneumonia, and both cases left in a satisfactory state.

Abdomen.—Eight, four non-penetrant, these recovering; four penetrant, there being in three, wounds of the intestine; one with injury of the liver, death occurring in all four.

Back and Loins.—Eight; one case of wound by a lance in the left lumbar region, and death by confluent small pox; five of the soft parts, of whom one died of dysentery; one, a shell wound in the lumbar region, with a lesion of the bowel—death; one fracture of the vertebral column, also ending in death.

Buttocks.—Four; two superficial, two deep. In one of the latter the bullet entered the left buttock, penetrated the pelvis, and probably injured the rectum; the patient was transferred to another hospital. The other case was one of wound by bullet through the left buttock and iliac bone, ending in death.—*The Doctor.*

EXCISION OF CANCER OF THE ŒSOPHAGUS.

The last number of the *Archiv fur Klinische Chirurgie* contains a paper by Dr. Billroth, in which he proposes, in cases of carcinomatous stricture of the œsophagus occurring in an accessible situation, to cut out, through its whole circumference, that portion of the tube which contains the disease. He has not yet performed this operation on the human subject; but he is led to believe in its practicability, first, from the occasional restoration of the urethral canal after its division, and secondly by the result of an experiment which he performed on a dog. He cut out about an inch and a quarter of the animal's œsophagus, fastened the lower end to the edge of the wound by two sutures, and fed the dog with milk through an œsophagus tube passed through the mouth into the stomach. The sutures were removed about a week after the operation. There was considerable mucous discharge from the wound. The external wound gradually contracted, and the discharge diminished. About ten weeks after the operation the external opening was completely closed. Bougies were frequently

introduced so as to dilate the cicatrix, and the dog gradually regained the power of eating flesh, potatoes, etc., and swallowing them with ease. Three months after the operation the animal was killed. The œsophagus presented a simple annular cicatrix, scarcely half a line wide; the tube was completely pervious.

Cancer.—That Cancer is to be regarded as a blood disease, requires stronger evidence than has yet been adduced. It is really a parasitic disease in its nature. To a certain extent a constitutional tendency must be admitted, just the same as there is to sebaccous tumours and warts, but no one ever thinks of calling these the results of a blood disease. Cancer flourishes best when there is plenty of good blood, and grows very slowly when the blood is poor. If a patient with Cancer of the uterus is kept on the sparest vegetable diet, just enough to keep body and soul together, the disease will be arrested and may disappear, as it has been known in one well authenticated case to do. The antagonism between tuberculosis and cancer, may be explained by the fact that tuberculosis is associated with waste of tissue.—*C. De Morgan from Braithwaite's Retrospect of Medicine.*

Medicine.

A Fully-matured Tœnia Solium, or Tape-worm, expelled from a Child Five Days old. Report of a Case occurring in the Long Island College Hospital, Brooklyn, N. Y. By Samuel G. Armor, M. D.

The natural history of tape-worm parasites has been a subject of fruitful speculation, and, so far as I am aware, the case here reported is quite unique. The tænia solium, according to Küchmeister's investigations, "only occurs in children who partake of hog's meat." Neither he nor Cobbold makes mention of the possibility of a fully-matured tænia occuring in infantile periods of life. And Vogel says, in writing of tape-worm: "They are rarely found in children under one year of age, in nurslings probably never." This latter statement is in harmony with the generally-accepted view that "animal food, either raw or partly cooked, is the probable source of the tænia solium."

The theory appears to have been generally accepted heretofore, that the encysted parasites are taken with the food into the stomach, and that the embryo, set free from the covering of the egg by a process of digestion, passes into the intestine, fixes itself

to the mucous membrane, and, by a process of budding, produces the long, tape-like series of the articulations, which are finally converted into the full-grown tænia. Whether this be the universally-accepted theory, or not, certain it is that the encysted parasite, found in whatever part of the body it may be, only develops to maturity in the *intestinal canal*. The query at once arises, therefore, how did the *cisticercus*, in the case here reported, gain entrance into the intestinal canal of the new-born infant ? for it is difficult to arrive at any other conclusion, from the clinical history of the case, than that the worm was fully matured at the birth of the child.

Without offering any speculations as to how the young tænia gained its embryonic *habitat*, I merely copy the clinical record of a case which recently occurred in the Long Island Hospital, Brooklyn, N. Y.:

Kate Quinn, aged twenty-four, an Irish servant-girl, of apparent good general health, was admitted to the hospital September 3, 1871. Diagnosis—*parturition* and a *primipara*.

In less than an hour previous to her admission she gave birth to a well developed male child in the street, and, having no home she was at once brought to the hospital.

September 4th.—Mother doing well; child nurses vigorously, and is apparently well.

7th.—Child for the last fourteen hours has refused to nurse, and examination revels *trismus*, preventing introduction of little finger into its month, and touching extremities induces slight tetanic spasms. Ordered mild anodyne, but with no relief.

8th.—Babe seen by Prof. Skene. who, supposing the child was suffering from intestinal irritation from some cause, ordered three $\frac{1}{6}$-gr. doses of calomel, to be followed by oil, and at 7 P. M.—some ten hours after taking the first dose of calomel—the infant passed, *per anum*, two segments of what was at once recognized from its obvious appearance as a *tape-worm*, flat, perceptibly cornuted, and possessed of slight wabbling motion of a menute's duration. The specimen, carefully picked out of the fecal matter in the babe's diaper, was submitted to different members of the hospital staff, placed under the microscope, and the diagnosis concurred in that it was well-matured tænia solium.

9th.—Trismus continues; small amount of mother's milk fed by spoon; at 5 P. M. three more segments of worm came away; ordered spts. terebinth, 15 drops in mucilage.

10th —One more segment voided; trismus remains; spasmodic action from touching extremities less; takes milk from spoon

eargerly, but has no power to grasp nipple; repeated spts. terebinth.

11th.—Another segment came away; still makes fruitless attemps to grasp nipple; ordered oil of male fern, 15 drops in mucilage.

12th.—Repeated the oil of fern, to be followed by small dose castor-oil.

13th.—One more segment passed; suspended medicine for a few days.

18th.—Two ½-gr. doses of calomel ordered at intervals of two hours; soon after the administration of last dose four more segments passed; trismus entirely gone; child nurses well, the mother having an abundant supply of milk; medicine discountinued.

Oct. 18th.—Mother and child still in the hospital; both doing well; the child has passed several segments since last record, but none having the appearance of the head. Child has never taken any nourishment but the mother's milk.

The foregoing is the brief clinical record of the case; as to the fact stated there can be no doubt. The case was carefully and critically watched by Prof. Skene, of the hospital staff, who was on duty, and by T. H. Hutton, M. D., resident physician.

On October 2d, twelve of the segments passed were presented to the Long Island College Hospital Society for examination, and, at their suggestion, B. A. Segur, M. D., a gentleman of skill and experience in the use of the microscope, was appointed to make further examination of the specimens. At a subsequent meeting of the Society, Dr. Segur reported that "the specimens presented to him for examination had the obvious appearance of tænia, and under the microscope, with ½-inch objective, he was able to see the eggs, presenting the same size of joints passed by adults."

The specimens were subsequently presented to the Pathological Section of the King's County Medical Society.

Can the mother communicate the germs of the parasite to the fœtus in utero? And, if so, how do they gain entrance to the intestinal canal?

To determine one of the questions, the mother, being still in the hospital, and having fully recovered from her confinement, was, on the 8th of November—about two months after the birth of her child—put upon treatment for tap-worm; although neither previous history nor present condition indicated the presence of tænia. She is an unusally stout Irish girl, of good flesh, good digestion, cheerful disposition, entire freedom from nervous disturbance, always rested well of nights, and never herself

suspected the presence of tape-worm. However, for the purpose above indicated, the mother's bowels were thoroughly evacuated, and, while fasting, she was ordered an emulsion of pumpkin-seeds, which she faithfully took for twenty-four hours, at the end of which time she passed over seventy segments of tænia.

This completes the clinical history of a case which throws much doubt upon the present received theories as to the probable and *exclusive* source of tænia. That the encysted parasites gain entrance to the stomach and bowels by means of animal food containing the parasitic germs, the experiments of Küchmeister and others leave no room to doubt. But that they may also gain entrance through the mother to the fœtus *in utero* would appear to be equally well established by the case here reported.—*New York Medical Journal.*

Midwifery.

THE MODE OF INVESTIGATING THE DISEASES OF WOMEN.

Dr. Robert Barnes, Obstetric Physician, and Lecturer on Midwifery and Diseases of Women and Children, at St. Thomas' Hospital, says in a lecture reported in the *British Medical Journal:* I have now a few general observations to make on the mode of investigatiug the diseases of women. In a former lecture, I told you that we were guided by the subjective sensations of a woman in our first investigations. When a woman complains of aching and pain in a part, we are naturally led to conclude that there is some mischief going on in the seat of pain, although there is no absolute certainty until we examine the organs suffering. In single women, we are chiefly guided by some disturbance of the function of menstruation. In many cases of disturbed menstruation, there exists some morbid condition which it is necessary to investigate. If there be intense pain and leucorrhœal discharge, we get the indication of disease requiring exploration. Discharges especially are significant, and render examination imperative. No woman suffers long from distressed menstruation or a discharge without danger of mischief. By examination, then, you come to a large class of *objective* signs, which, taken in conjunction with the *subjective* signs, throw great light upon the disease. From the two together, you may come to a rational view of the case.

First, then, as to the ovary. The ovary is recognised now as the *primum mobile,* the first cause of menstruation. When menstrua-

tion is disturbed we should look to the ovary; although the uterus, being the organ of the discharge, should be looked to also. Still, if there be no ovary, there is no menstruation; if the ovary be diseased, there is likely to be difficult menstruation.

There are diseases, however, having their primary seat in the uterus. The uterus has a certain definite position, size, shape, mobility, or range of motion, sensibility and attachment. All these conditions can be examined by the touch, and any deviations from them must have a cause. There are some other properties of the uterus which we can bring under observation—such as its vascularity, colour and alterations of surface. The speculum enables us to see the lower part of the uterus and the vagina, and is here of the greatest possible service; but nothing, of course, can enable us to see the ovary.

[Dr. Barnes then referred to a diagram of the uterus and its appendages in the healthy state, and proceeded to show how its position was affected by abnormal conditions.] If there be a large quantity of urine in the bladder, the uterus is thrown backward; if the rectum be loaded, the uterus is pressed forward. Sometimes the uterus is from this latter cause so pressed against the bladder, that there is retention of urine. I have known distressing cases of this kind. There are no means of keeping the bladder free until you have washed out the rectum. As to change of size, if the uterus be much enlarged, and the other signs of pregnancy agree, we conclude that the woman is pregnant; but the minor sizes of the uterus are not so easily settled as the result of pregnancy. They may be the result of engorgement, or of mischief coming on after pregnancy, or of tumours, etc. If at the end of three weeks from confinement we find that the uterus is large, we conclude that involution of the uterus has been arrested. The best way to ascertain the bulk of the uterus is to grasp it between the two hands. The sound will also measure the size of the uterus. The change of form chiefly indicates the presence of tumours in the uterus, which, springing out of its walls, alters its shape; or it may indicate a displacement. We ascertain the sensibility of the organ by the touch. Tenderness on pressure may arise from inflammation, or neuralgia, or irritability. There is supposed to be a simply hyperæsthetic condition of the organ, the slightest touch giving acute pain; the tenderness may also arise from hysteria. In its normal state its sensitiveness is very slight.

There is another sign of great importance in ascertaining the true condition of the uterus—change of density or hardness. The os uteri, in the unimpregnated state, is as hard as the point of the

nose: it feels firm, smooth and hard. If that condition be altered to softness, you may suspect pregnancy; but of course you would not rely upon that sign alone. Another meaning of the softness is increased vascularity, which may arise from a granulating surface, the result of lost epithelium. If that be combined with increased size, patency and cancerous growth in the cervix may also help to keep the os open.

The significance of altered mobility is very important. The uterus naturally moves about, and if it do not, you have to consider a number of causes which impede it. A large fibroid tumour will sometimes fix the uterus. Cancer almost invariably alters the mobility of the uterus. Of all things this is the great test of cancer. In the earlier stages, indeed, it affects only the cervix; but when it has invaded the roof of the vagina, the bladder, and rectum, then you get a dense, firm mass, filling the brim of the pelvis, which you cannot move. There are conditions about the os which make this sign still more clear; the history also will guide you. After labour or abortion, you may have inflammation of the pelvic peritoneum; and this is sometimes attended with great effusion of plastic matter, which sets the uterus and surrounding structures fast together. The history will also guide you here. In the case of cancer you can see the disease, and find cancerous bleedings and discharges.

There is another cause of fixed uterus: the pouring out of a quantity of blood behind it—the so-called retro-uterine hæmatocele, a very interesting example of which is now in the hospital. This condition is always accompanied by pelvic peritonitis. This is distinguished by the os uteri being pushed against the symphysis pubis, and the sound passing upward and forward toward the umbilicus. This determines the position of the fundus of the uterus, proving that the mass felt behind the os cannot be the body of the uterus. The history and other signs, then, lead to the diagnosis of hæmatocele.

Catheter removed from a Female Bladder.—Dr. W. T. Briggs (*National Journal of Medecine and Surgery,*) reports a case of escape of catheter into the female bladder during its use for the relief of retention of urine. It was removed by the dilatation of the urethra with a sponge-tent, and the employment of dressing forceps.

Dr. Briggs, in 1864, removed a catheter from the bladder, two weeks after its entrance, by dilatation of the urethra with the bougie and forceps. Dr. Briggs remarks in conclusion, that in the *Medical Fact Observations*, published in London in 1791, by William Ford, is possibly the only case on record.

Canada Medical Journal.

MONTREAL, JANUARY, 1872.

SANITARY REFORM.

We suggested in the last issue of our periodical, the propriety on the part of our Government, of establishing or creating a Central Board of Health for the Dominion of Canada. And we think that as far as Montreal is concerned, the action of our City Corporation during the last few days has fully proved the position assumed. The papers have been teeming with letters and articles from medical men and others, much wordy argument has been expended at the meetings of our local Board of Health, but we have so far failed to observe one single measure, calculated to allay public anxiety on the subject of the spread of epidemic disease which is known to exist amongst us. The present existing evil Small-Pox is more or less prevalent throughout the country. We have before alluded to the absurdity of our law bearing on vaccination, and the proof of the insuffiency of that law is almost of daily experience. As we before stated, our Legislature introduced and passed a law rendering vaccination compulsary in the cities and larger towns of Canada, while the country parts are left without its beneficial provisions. A law to be efficient should be general, and furthermore it should enact, under heavy penalty, that all children should be vaccinated, say, within three months after birth. The annals of vaccination are easily attainable, facts published by Hawkins and other writers on this subject are most convincing. An able paper published by the late Sir J. Y. Simpson, shortly before his death, is sufficient in itself, if we had no other evidence, to prove that of all diseases to which human flesh is heir, Small-Pox appears to be one of the most contagious, and furthermore that it is eminently a preventible disease.

It becomes therefore a duty in which a large measure of self preservation is mixed up, to inquire into and decide upon the best means of attaining this desired end.

From the teaching and experience of three-quarters of a century, the efficacy of vaccination has been fully tested and proved, proved to all but those who, with a desire of appearing singular,

have set up a theory of their own adverse to the teachings of Jenner; need we repeat the story of its reducing in Sweden, the annual mortality from Small Pox, in a period of three years, from 12,000 to eleven cases of death from this cause. Is it necessary to urge on our readers the statement of one writer, that vaccination had as effectually driven Small Pox out of Ireland, as ever did St. Patrick the snakes and reptiles. Or coming down to our own times, and to be more practical, is it necessary to show the thousand and one cases wherein the protective influence of vaccination has been marked and unmistakeable. We will not discuss the question of the protective influence of vaccination, all interested in that subject will find abundance of evidence in any work on practice of medicine. To endeavour to convince those who choose to adopt other views, would be waste of time.

We may state that Small Pox is a disease which as a general thing attacks but once in a life time. It is only propagated from individual to individual the recipient being peculiarly susceptible to the attack, or susceptible to the specific poison generated in the course of the malady, and transmitted from the affected to the healthy.

The mode of transmission is by the near approach of the one to the other, or by actual contact, by direct inoculation, or the disease may be transmitted through clothing or any substance, with which the sick may have come in contact. "We would no more expect," says Sir J. Y. Simpson, "this "known species of disease or poison to originate *de novo* at the "present day, under any combination of circumstances, than we "would expect a known species of animal or plant—as a dog "or a hawthorn—to spring up *de novo*, and without antecedent "parentage."

Laying aside therefore altogether the subject of vaccination, we are desirous of simply enquiring into the contagious character of Small Pox, with a view of ascertaining whether it is preventible, and what common sense measures should be adopted for its arrest. We must refer to the history of epidemics which have been noticed and which have originated almost in every instance from one single case. In 1818-19, the town of Norwich, England, was attacked with Small Pox, and some 3,000 persons suffered, of whom 530 died. Mr. Cross, who gives an account of this epidemic, states that it was originally introduced by a girl, who in travelling with her parents from York to Norwich, was exposed to the disease at a market town, and that on her arrival home it showed itself and rapidly spread. This was in June, 1818, and from that time to the spring of the year following, 530 lives fell a sacrifice.

In Sir James Simpson's paper before alluded to, another striking instance is given. The town of Leith was the habitat of Small Pox in 1861-62. Dr. Paterson, of Leith, made an official inquiry into the origin of the visitation, which brought out the following facts: "A beggar woman, on tramp from Newcastle, brought in the "course of her wanderings to Leith, a child lately affected with "Small Pox, and with the crusts of the eruption upon it. In "Leith she became an inmate of a lodging-house in a "land" or "block of buildings, full of lodgings for the poorest of the poor. "Many of the lodgers in the other houses with their children, "visited the room where the woman and sick child resided. By "the time Dr. Paterson was requested by the magistrates to in-"spect the tenement, several persons were already dead of Small "Pox, caught from this imported case. The disease soon spread "to other parts of Leith, and ninety-nine human beings were de-"stroyed by it, and much suffering and sickness produced among the "many hundreds in the town who caught the disorder and recover-ed." Evidence of a similar character to the above is to be found in the annals of the death-register throughout Great Britain, and from official returns, the spread of Small Pox, as of other contagious diseases, can invariably be shown to originate in districts and towns in a single imported case. This we think is evidence sufficient as to the contagious character of Small Pox.

It is but reasonable to believe that had the first case been reported to the authorities of the town, and precautionary measures adopted by isolation in a hospital, all this unnecessary loss of life and spread of disease would have been avoided. If we regard the occurrence and spread of any contagious malady in a pecuniary point of view, it will be readily admitted that the actual cost of the maintenance of the first few cases in any community would be very much less than the subsequent cost after the disease had become general.

We have asserted that the disease is transmitted through clothing, or any substance with which the sick have come in contact, and on this point we will again refer to the work of Prof. Simpson, he says: "I have heard of repeated instances of Small Pox obtained "by riding in public carriages, which had been employed imme-"diately before by persons still in the stage of convalescence "from the malady." There can be no second opinion on the propriety of providing vehicles specially for conveying those afflicted with contagious disease to hospitals. And in the case of our own city, we regard the neglect of this precautionary measure as criminal. The idea was mooted by our City Board of Health, and an expense which would have cost in all likelihood about one

hundred dollars, was not assumed probably to the exposure to direct contagion of many valuable lives that thousands of dollars could not replace. What we would urge on our Board of Health is to provide at once, without further delay, one or more vehicles to be placed at either hospital, or at the police stations, these for use only in conveying persons suffering from contagious diseases from their homes to the hospitals. A city bye-law exists prohibiting public vehicles for hire, taking dead bodies to the cemeteries; a very good addition to this law should enact that no public vehicle for hire, should under any circumstance, convey any person suffering from a contagious malady from their home to any hospital. This bye-law could only be rendered efficient by the civic authorities providing other means for the conveying of the sick. Such a precautionary measure would at least allay that public anxiety which does exist on this point, and would be but just to all parties concerned. Here even, in this necessary measure, delay will we have no doubt occur, delay which may spread epidemic disease and death into many families. Had we a general Board of Health for the Dominion, such an enactment would be passed and forthwith carried out. Our local Board of Health are powerless, they possess no independent authority, and were they to pass any measure requiring direct outlay, would have to submit the proposal to our council board, with the possible chance of its taking at least six months before a vote could be obtained, and then possibly shelved.

We have thus far dwelt on the subject of the contagious character of Small Pox, the same may be said of Scarlet Fever, Measles, Whooping Cough and Cholera. We had intended suggesting the best means for preventing the spread of contagious maladies, these consist mainly in isolation and strict segregation. The propriety of establishing temporary Small Pox Hospitals at a reasonable distance from the city, should under present circumstances be entertained and carried out. The length of this article obliges us to reserve until our next issue, the publication of what we desire to say on this important topic.

A REVIEW OF THE TRIAL OF ANDREW HILL FOR MURDER.

In the month of May last, we took notice of the trial of Andrew Hill, for the murder of his wife, and in the course of our remarks, we stated that in our opinion the theory of the medical witnesses for the defence was wild and extravagant, and we maintain that our opinion was based on just and reasonable grounds. That the deceased could have died of the bursting of a thrombus, we regard

as simply impossible; from the fact that the descending ramus of the pubis was stripped of its periosteal covering, a condition which is not possible to have resulted from the formation of a thrombus. This points in our opinion to direct violence to the part however inflicted. A reply to our article has been published by Dr. Paré, which we are not inclined to reproduce. Had Dr. Paré written a disclaimer to the CANADA MEDICAL JOURNAL, we should have been bound to give him the benefit of our pages, reserving to ourselves the right of criticism, but he has appealed to the public, and therefore as his opinions have already been made public, and as the case has become one of local dispute, we cannot further take notice of it.

L'UNION MÉDICALE DU CANADA.

This is the name of a monthly journal published in the French language, and devoted to Medical and Surgical Science. It is issued from the *Minerve* Printing Office, in our city, and has Dr. J. P. Rottot for editor, assisted by Drs. A. Dagenais and L. J. P. Desrosiers. It contains forty-eight pages of reading matter, is well printed, and is on excellent paper; altogether it presents a most creditable appearance. We rejoice to welcome this new periodical as the exponent of our French Canadian confreres. The price of subscription is three dollars per annum, and we sincerely trust that the work will be well sustained, not alone by subscriptions freely given, but by the united literary efforts of the profession in country parts. Gentlemen at a distance should be alive to the fact that this is a labour of love, that the projectors have assumed the responsibility of publishing a medical journal in the French language, chiefly with a view of cultivating amongst their professional brethren literary tastes. The journal in its present form, and under its present able management, is we feel confident, destined to do much good. We trust that the motto selected—"*Cur nescire pudens pravé, quam discere malo?*" will be carefully thought over and digested, and that dropping "false modesty" the profession generally will prefer to learn, rather than remain ignorant.

Medical News.

DISINFECTANTS.

M. Gille has published in the *Archieves Medicales Belges*, an interesting article "On the value of a Disinfectant," in which he says we must not only get rid of offensive smells, but of all other products of decomposition, and that any substance which only effects one of these ends, is a very imperfect disinfectant. He then passes in review some of the disinfectants in common use. Sulphate of iron he considers is useful from its effect of decomposing ammonia, carbonate, and sulphohydrate. Perchloride of iron, besides this, precipitates albuminoid matters, and acts also by its chlorine. Lime disinfects organic matters, fixing carbonic acid and sulphuretted hydrogen, and decomposing hydrosulphate of ammonia. The permanganate of potass. is a most energetic oxidizing agent, decomposing sulphuretted hydrogen, destroying organic matter, and acting upon all fixed compounds with which it comes in contact.

It may be remembered that M. Decaisne employed it in dissecting rooms, but that M. Gosselin, in 1864, reported that it was not adapted for this purpose. Chlorate of potassi may be used to disengage chlorine in places that are not easy to reach by other means. This is a capital plan for cesspools and middens.

Chloride of lime acts by the chlorine it sets free, and chemically decomposes most foul gases. M. Decaisne considers it the best disinfectant of offensive gases. Does it also, mixed with metallic oxides, act by disengaging oxygen as has been asserted? M. Gille doubts this. He also observes that, although chloride of lime destroys offensive gases, it does not arrest putrefaction, but by the lime set free, hastens the process.

Hydrochloric acid is employed to disinfect dog-kennels. Vessels containing it left open, completely destroys the offensive gases that abound where a large number of dogs are kept. This plan is adopted in the Veterinary School of Brussels.

The action of carbolic acid, M. Gille says, is not chemical. He accepts what is commonly called the germ theory, inasmuch as he says the acid prevents germs from provoking putrefaction. He also thinks it will hinder the formation of miasms, and is, therefore, a good preventive of epidemics. It is thus to be seen that all the disinfectants are good, but that they should be used with discernment, a selection being made according to the products we wish to get rid of.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

The Uses of Pus in the Animal Economy. By A. P. Reid, M.D., L.R.C.S. Ed., &c., &c., Professor of Medicine and Clinical Medicine in Dalhousie College and University. Read before the Halifax Medical Society, Feb. 6th, 1872.

It is not my object in this paper to discuss the ordinary qualities of this animal fluid, nor how or why it may present itself, but rather to seek for evidence of its beneficial influence, qualities which are not much insisted on by Pathologists.

Received opinion makes it a specially noxious fluid, and the aim of the profession has been, and will be, to prevent its appearance if possible; and so far we are right, if our endeavours are to prevent the circumstances which give rise to it, and happily in no other way can we succeed in our attempts.

Its chemical composition is very nearly the same as that of the blood, and hence very closely allied to that of the tissues. The Pus globules we have every reason to believe, are the white blood corpuscles which, having passed through the capillaries, form part of the effusion into inflamed tissues, and at the focus of the inflammation being deprived of their nutrition, have lost their vitality, and must separated from the living parts.

The exuded fluids in the immediate vicinity of these globules, also lose their vitality from the same cause, and the two together form what we call *pus*.

Its formation explains to us one of the services it renders.

Use 1st—It is the method by which Dead Exudation Corpuscles and fluids assume a condition allowing of their subsequent removal by a channel which is not necessarily injurious to the system at large, whereas they would be if permitted to enter the blood, to be expelled by the emunctories. Few proofs will need to be adduced to sustain this position, for we are too well aware of the pernicious influence exerted by the entrance of decomposing matters into the circulation,

The collection is ordinarily expelled by what is termed an abscess, evacuated after its approach to the surface, either by nature or the bistoury.

But in some instances the abscess is not evacuated, being what is termed, absorbed or encapsulated.

Use 2nd—It is the method by which the before mentioned matters (so collected together when from favouring circumstances they cease to produce irritation in their vicinity) are absorbed or removed by the emunctories. The solid parts first having undergone a fatty transformation, owing to the influence exerted on them by the free circulation of blood in the walls of the abscess.

Use 3rd—It is the method by which dead exudation material finally becomes encapsulated. The abscess ceasing to produce inflammation in its vicinity, the free circulation of blood in the abscess wall exerts such changes in the composition of the fluid parts of the pus, as permit of their absorption without injury to the health of the solid part, which cannot be so dealt with becomes inspissated in the form of the innocuous substances. Fat, Phosphate of lime, Carbonate of lime and other salts, united by an indeterminate animal matter.

Or in other words, through the agency of *pus*, dead portions of the economy may become interred within the living system in some out of the way place, (where it would have been impossible to remove it to a greater distance) and then to give no more trouble than the little burying ground in the ploughed field, that was there established by the *Pioneer Settler* from necessity, many years ago.

So far our attention has been devoted to *pus* as a means of getting rid of a too profuse inflammatory exudation, but it has a far wider area of usefulness.

John Hunter long since demonstrated that *pus* is a solvent of dead animal substances—raw meat being easily dissolved in an abscess, or in pus kept warm out of the body—Hence,

Use 4th—It is the method by which tissues of all kinds, when deprived of their vitality, are reduced to a fluid capable of easy removal, as the contents of an abscess.

Use 5th—It is the method adopted by nature to assist vital absorption in amputating dead tissues, either externally or internally.

Use 6th—It is the method which assists Ulcerative Absorption, *so termed* in bringing an abscess to the surface. One portion or side of the abscess wall becoming gradually thinner as the abscess points.

I will give my explanations in the fewest possible words.

Take a case of simple phlegmon or carbuncle, at first a very small amount of pus escapes, and the *core* or dead cellular tissue has tensile strength by reason of the white and yellow fibrous tissue of which it is composed, and it adheres strongly to the yet living parts, requiring either the knife or caustic potassa for its immediate removal. Yet we know that in time, it will be all liquified and pass away as pus, be dissolved as perfectly as if by caustic potassa.

Again, in the case of a slough, ulcerative absorption so termed, divides the living from the dead, and at this point pus is formed, which exerting its solvent power dissolves the dead tissue up to the surface of the living—over which it has no influence.

I will not deny that this is a vital action, (the real process we do not yet understand,) but knowing the chemical properties of *pus*, it is fair to assume that when circulation and vitality cease at the line of demarcation, ordinary chemical changes may and do supervene; the pus bathing the living surface is in the best position to separate the dead from the living, because at this point the heat is greatest, and the higher the temperature, up to 100° F., the more active the solution. Hence, why it may be that the dead tissue is most dissolved in proportion to its nearness to the living surface.

Suppose a case of inflammation of the liver eventuating in an abscess two inches in diameter. As a result of the disease, the proper tissue of the liver, that occupied at least a portion of this space, dies surrounded by the dead exudation products or *pus*—which *pus* dissolves the tissue, (it being most favourably situated for solution,) and increases in amount as if by growth, rendering everything fluid up to the indurated wall in which circulation and vitality still go on.

It is not difficult to understand also in what way pus favours the gradual pointing of the abscess.

The wall nearest the surface gradually becomes thinner; and the pus as well increases in quantity, that is "ulcerative absorption" goes on, which means waste of tissue—and as well implies an increased amount of *pus*—or in other words, it is fair to assume that "ulcerative absorption" is due to diminished circulation in the part—the equivalent of diminished vitality, which is tantamount to increased death of the surface of the abscess wall at the part which is getting thinner, and the rapid removal by solution in the *pus* of the dead wall tissue, thus increasing the amount of *pus*, the abscess rapidly approaching the surface.

It may be said that dead animal tissue breaks down into pus,

but this is disproved by every day experience, for there is no resemblance between putrefaction (a gradual conversion into inorganic compounds, gaseous and saline) and conversion into *pus*, which is in every way distinct.

The *pus* may undergo a similar putrefaction, but this is a subsequent change.

In the inflammations of cold blooded animals and birds, no pus is formed, and the changes which occur are rather undecided.

If the Science of Medicine so far progresses, as to enable us to prevent inflammations of a type sufficiently severe to cause profuse exudations and death of tissue, we might have a condition approaching that of cold blooded animals, but until then, we must recognise the great service conferred on us by an agent that collects the dead products of inflammation, and favours their expulsion or harmless burial, that amputates and liquifies our sphacelated tissues in situations where they could not be touched by the surgeon, and that at the same time paves the way for their complete removal.

98, Argyle Street,
Halifax, February 7th, 1872.

London Practice. By James Perrigo, A.M., M.D., M.R.C.S. Eng., Demonstrator of Anatomy, University of Bishop's College.

No. II.

Charing Cross Hospital I visited very frequently, following the late Dr. Salter in the Medical side, or Mr. Hancock in the Surgical.

The operating day is Saturday.

Under Dr. Salter's care, I saw a case of Hydatids of the Liver in a female of about thirty. Dr. Murchison, of the Middlesex Hospital, was called in consultation. He strongly advised tapping. Mr. Hancock tapped the tumour with a small trochar, drawing off about two quarts of fluid. The next day, the patient complained of considerable tenderness, but that gradually subsided, and a good recovery was made.

Dr. Salter was an excellent clinical teacher, being most precise in everything. It will be very difficult to replace him. I was informed that he was on the eve of publishing a work on the heart and lungs. He had a most retentive memory, and would remember patients and the beds they occupied in the hospital, even if some considerable time had elapsed. His wards were always full of asthmatic cases, and the amount of pains he bestowed

upon them was astonishing. He gave the Iodide of Potassium largely, and had great faith in its efficacy. He thought highly of Belladonna when the dyspnœa was urgent. He was a great admirer of Niemeyer, and sometimes followed his treatment as regards the cold application at the outset of inflammation. I have seen several cases of inflammation of the mammæ under his care, where he applied only cold iced dressings with benefit.

Dr. Salter held the opinion that pre-systolic murmur was of far more frequent occurrence than is generally allowed. He, like the rest of the London physicians, gave chloral hydrate in all cases demanding relief from pain. In painful dyspnœa from heart disease, he was accustomed to give it in pretty large doses. I have seen him treat several cases of hœmoptysis and hœmatemesis, where he very uniformly administered turpentine. He seemed to consider it a specific. In rheumatic fever, quinine in five grain doses, three times a day, was the remedy employed, and the majority of cases did not run a longer course than twelve days, and a great many not more than seven. Judging from the rheumatic cases that came under my observation, heart complications seem to be more frequent in England than here. I also noticed that those patients who lived close to the Thames, suffered more than those who came from some distance, and that they invariably required a more supporting treatment.

On Mr. Hancock's side, there was always a large number of cases of joint diseases to be seen. There hardly passed an operating day, without an excision.

The surgery in London is very conservative, and I have seen considerable risk run sometimes in endeavouring to push conservatism to an extreme.

In this hospital there are two wards devoted to children, and among the little patients, a good many cases of hip-joint disease are always to be seen. The treatment is much the same as here. Mr. Hancock excises the hip-joint early, but does not hesitate to operate even when the whole acetalulum is diseased, and some of the pelvic bones in addition.

Mr. Hancock was the first surgeon to perform the operation when there was much disease of the pelvic bones, but he shews that the muscles and fasciæ become so infiltrated with plastic matter and consequently thickened, that a pretty good barrier is formed to protect the pelvic cavity. I have seen him perform Pirogoff's operation on the foot, Chopart's and Syme's, but as a rule, in disease of the bones of the foot, he follows no rule, but saves all he can.

Mr. Hancock's name is associated with that of Kölliker, in

shewing that the urethra is surrounded through its entire length with an organic muscular coat.

Charing Cross Hospital is famous for the number of accidents it admits. I noticed that those of the lower classes (such is their habit of drinking,) who were brought in with broken legs, almost invariably had delirium tremens, two or three days afterwards. Bromide of Patassium and chloral hydrate formed the treatment then. One London physician, Dr. Wiltshire, strongly recommends half ounce doses of Tr. Digitalis, in traumatic cases.

Under Mr. Hird's care, I saw several bad cases of prolapsus uteri, where the operation for constricting the vaginal aperture was performed. He followed Baker Brown's method of removing a large portion of the mucous membrane, of the shape of a horse-shoe, from the lower portion of the vagina, and then bringing the opposite sides together by deep quilled sutures. These sutures were taken out the fourth day. The cases all did well.

Mr. Hancock had a peculiar treatment for old indolent ulcers that had no tendency to heal. It consisted in filling the ulcer with melted beeswax and bandaging, leaving it that way for four or five days and then renewing. By the kindness of Drs. Hingston and Coderre, I was allowed to try the method in two cases at the Hôtel-Dieu. It succeeded very well, although the cases were not very favourable ones. I may mention that I have seen Mr. Hancock operate three times for hernia, and in each case he opened the sac, and strongly advises it in all cases.

Charing Cross Hospital is situated in Agar Street, West Strand, and was established in 1818. The present building was erected in 1831, and last year an addition was built, giving thirty more beds. It has a school in connection with it, and the first year of its existence, there was only one student, and now there are sixty. Since the foundation of the hospital 350,000 patients have been relieved. Its annual expenses are not more than four thousand pounds.

When visiting the Middlesex Hospital, I went around with Dr. Murchison, and never have I seen teachers examine students as thoroughly at the bed-side. He was sure to pounce on any man who had not been following him regularly. Under his care, I saw a case of Locomotor Ataxia, where atrophy of the optic nerve ensued as early as six months after the commencement of the disease. The patient was taking preperations of silver.

I saw also several cases of diabetes treated by opium. I did not see any of the surgical practice of this institution.

Middlesex Hospital was founded in 1745, when it could only give accommadation for eighteen in-patients. It now receives an-

nually 21,000 cases, and its income is seven thousand pounds. It has one ward devoted altogether to cancer.

At King's College Hospital, I was fortunate in seeing Sir William Ferguson tie the subclavian artery twice. The first case died a few days afterwards, but the second recovered. The second was a case of traumatic aneurism of the axillary. The man had been wounded by a hay fork. During that same month (February, 1871,) the subclavian artery was tied four times in London. I also saw excisions of the knee performed by Ferguson, Wood and Smith. In all of them, the incision was oval. Engrafting was attempted in the healing of indolent ulcers. Some of the cases did very well, but a good many of them failed.

The expenses of this hospital are over £7,000 a year, and the new building which is now being enlarged cost upwards of £100,000.

At St. George's Hospital, I visited the orthopœdic department altogether, and followed Mr. Brodhurst. In treating hip-joint cases, he does not use Liston's splint at all, but employs instead a large gutta-percha splint well padded, which secures the whole pelvis. He extends the limb by the weight and pulleys, and counter-extension by means of bandages passed under the arm-pits, and attached to the head of the bed. He considers sub-cutaneous section of the adductor longus, gracilis and tensor vagina, as advised by Bauer, of no use whatever, and scouts the idea of its being antiphlogistic. Barwell, on the other hand, employs it, but only in the third stage.

I saw two cases where the chin was bound down to the sternum, caused by the contraction of cicatrices, the result of burns. He made several parallel incisions which relieved the deformity considerably. These incisions left large gaps into which he engrafted some portions of skin taken from the side of the neck. He covered them with lint and left them for several days. Healing went on rapidly from those centres, and in four or five weeks, they were quite well. The first of these cases is mentioned in his book on "Deformities," published last February. The second one I saw in March. Mr. Brodhurst is a great advocate of brisement forcée, and advises tenotomy beforehand, so that the influence of the muscles may be perfectly removed. He says that this operation of brisement is very frequently misunderstood, as some surgeons consider that it means forcible extension, and consequently the force is mis-applied, that instead of flexing the limb, it is extended. He says when this is done, it is apt to lead to mischief, but when the force is applied in flexing the limb, no danger can happen. He very kindly took me to see this opera-

tion in a private patient, a Polish gentleman, who had an anchylosed hip, the result of gonorrhœl rheumatism. In six weeks the patient was walking about with a cane. Passive motion, in this case, was commenced the third day after the operation.

The income of St. George's Hospital is about £10,000. Its museum contains a very valuable collection of specimens.

Before concluding this letter, I may state there is a Homœopathic Hospital, in Great Ormond Street, which was established in 1850, through the exertions of some English disciples of Hahnemann. Its annual income is about £3,000.

Hospital Reports.

Surgical Cases Occurring in the Practice of the Montreal General Hospital, under the care of G. E. Fenwick, M.D.

Case 11.—*Penetrating Wound of the Chest.* Reported by Mr. A. Stewart.

W. McL., æt 35, a stout Irishman, was admitted into the Montreal General Hospital, on Saturday, the 16th December, 1871, under the care of Dr. Fenwick, suffering from a penetrating wound of the chest.

He gives the following account of the manner in which he received the wound. On the Saturday evening above mentioned, while sitting in his own house he heard a rap at the door: on opening the door he was met by three persons, unknown to him, one of wohm dealt him a blow on the chest with a knife. After receiving the wound he made prisoners of two of them, and kept them in his house until the police had arrived. He did not suffer any from shock, and there was very little hæmorrhage from the wound, and no hæmoptysis. On examination after his admission, the wound was found situated about an inch and a half below the middle of the left clavicle, about an inch and a quarter in length, and directed downwards and towards the right side. On examining the wound with the finger, the intercostal muscles were found to be wounded. There was extensive emphysema on the left side, extending from the clavicle to the lower margin of the ribs, and from the sternum back into the axillary space. There was great tenderness all over the emphysematous part, and severe pain and tenderness along the lower border of the pectoralis major muscle. On percussing the chest, both sides were found

equally resonant, and on auscultating, the vesicular murmur was also alike on both sides.

The wound was closed by metallic sutures and adhesive plaster. Patient was put to bed, and ordered half diet and a pint of beef tea. Pulse 80 per minute, and slightly irregular; respiration 22; temperature 99 4-5ths.

December 18th.—Feels quite comfortable, no tenderness over the emphysematous portion, considerable pain and tenderness along the lower border of the pectoralis major muscle. On taking a deep inspiration he complains of pain in the region of the wound; vesicular murmur heard over both lungs; has a slight tickling sensation at the base of the left lung. Pulse 57; resp. 20; temp. 98 4-5ths.

19th—Slept very little last night, does not feel quite so well to-day, complains of pain in the region of the wound during inspiration; emphysema has nearly disappeared, except in the axilla. Pulse 96; resp. 20; temp. 99.

20th—Feels considerably better to-day, not so much pain in the region of the wound, and no pain along the lower border of the pectoralis major muscle: emphysema gradually disappearing. Pulse 86; resp. 20; temp. 98.

21st—Still improving, slight pain in the region of the wound; sutures taken out, wound almost healed. Pulse 68; resp. 20.

22nd—Feels quite well, emphysema all gone, was allowed to sit up to-day. Pulse 70; resp. 20.

26th—Discharged from the hospital quite well.

Case 12—*Skin Grafting in a Case of Ulcer of the Leg, of fifteen years duration.* Reported by Mr. Henry Hetherington.

J. S., æt 53, was admitted into the Montreal General Hospital, on September 14th, 1871, under Dr. Wright, suffering with a large indolent ulcer which had existed for 16 years. It was of an oval form, and about $2\frac{1}{2}$ inches in one direction by 2 in the other, and situated on the inner ankle.

Different methods of treatment were followed, without any success, until the 15th October, the patient having now come under the care of Dr. Fenwick, he decided on trying skin grafting.

October 15th—Two grafts were taken from the arm of the patient, and placed at about an inch apart in the ulcer, and covered with isinglass plaster, dressed with warm water and lint, the whole being lightly covered with a bandage.

18th—Examined and found both grafts adherent, presenting a bluish appearance round their margins.

20th—One of the grafts has disappeared, and the other, hardly as distinct as before.

23rd—Grafts again making their appearance in the form of new tissue, not having disappeared, merely having assumed the same appearance as the surrounding granulations.

30th—The grafts have progressed very favourably, new tissue being formed around their edges, and also the edges of the ulcer.

November 10th—Although the two former grafts did remarkably well, causing a large part of the ulcer to cicatrize, still quite an opening being left, Dr. Fenwick determined to apply two more grafts, which was accordingly done, and dressed in the usual manner.

11th—Grafts looking well to-day, having assumed that bluish white appearance, which they generally do at first.

12th—Evidently they are about to take; done up carefully with warm water dressings, and allowed to remain until

16th—When they were examined, and both found to be in sight and doing splendidly, having commenced throwing out their little bands of newly formed tissue, which are extending in all directions over the surface.

20th—Not looking so well to-day, begins to show unhealthy signs, a great deal of pus being thrown out; to be dressed with "red wash" daily.

23rd—Are now exhibiting more signs of life than when last examined. Cicatrization going on slowly both from the grafts and sides of the ulcer.

26th—Doing well, process of reparation going on pretty rapidly. The rays of tissue from the grafts, meeting those from the sides form bridges (as it were,) leaving small interspaces, which however are also closing up fast.

27th—Only three little openings now remain. "Red wash" dressing continued.

29th—Openings continue to close gradually.

Dec. 5th—To-day only one little opening remains. Ordered patient's clothes, allowed to move about the ward.

7th—Ulcer completely cicatrized, being covered with a layer of bluish white skin, which bids fair to be a strong and permanent cure.

Montreal, January 9th, 1872.

Case 13.—

J. O'D., æt 55, was admitted into the Montreal General Hospital on September 16th, 1871, suffering with two large ulcers on the anterior surface of the leg, one about four inches below the knee, the other on the anterior surface of the ankle. The borders were considerably inflamed, and the granulations large and indolent.

Dr. Fenwick ordered linseed meal poultices to be continued for three days, at the end of that time the inflammation had subsided greatly.

On the 26th October ordered the leg to be strapped according to Baynton's method. This had the effect of cutting down the tall granulations, and placing the ulcers in a fit state for receiving the grafts.

October 30th—Two grafts were taken from the arm and placed on the upper ulcer, the lower one being heated by the strapping. On this occasion no plaster being at hand, the grafts were covered with oil silk and done up with warm dressings.

November 2nd—When the oil silk was removed, one graft came away, the other remained adherent and presented a bluish white appearance, showing that it had become vital; the granulations surrounding it very healthy; warm water dressing applied.

6th—Grafts progressing favourably, new tissue forming pretty rapidly from the grafts, and also at the edges. But what of the lower one?

10th—Examined to-day, grafts doing well, but the lower ulcer completely healed under strapping treatment.

12th—The graft is doing a large amount of good to the upper one, the cicatrix is forming fast. The patient says it never was so nearly cured before.

13th—Ulcer just about closed, one small opening remains.

16th—The small space is gradually and steadily being closed, by the little shoots of tissue which are spreading out in all directions.

19th—Completely closed up. Patient leaves hospital to-day,

Remarks—In this case skin grafting can hardly be said to have proved so eminently successful, it rather indicates that Baynton's strapping when properly and carefully applied, is just as efficacious and in this instance it proved a little more so; as to the permanency of the cure, I cannot speak, not having seen the patient since he left the hospital.

Case 14.—

J. K., admitted to the Montreal General Hospital, for treatment of an ulcerated surface situated on the front of the wrist, about two inches in length, by one in breadth of oblong shape, the long diameter being directed across the wrist, the result of a scald.

December 5th—A piece of skin was taken from the patient's arm, and divided into two grafts, each being about the size of an oat, they were placed on the ulcer, at about an inch apart and dressed in the usual manner with the isinglass plaster.

6th—Examined to-day, and in attempting to remove the lint, grafts and all came away together, however, they were again replaced. It being remarked at the time that it was very unlikely they would take again, having once been disturbed.

8th—The prediction proved true, they did no good whatever, but assumed a puffy white appearance; they came off and were not replaced by any more, but the ulcer was dressed with "red wash," and bandaged, under which treatment it healed rapidly. Now although the grafts failed signally in this case, the cure being effected just as rapidly perhaps as without them, still they can't be said to have had a fair chance.

Case 15.—

M. L., admitted into the Montreal General Hospital, to be treated for an ulcer situated on the outer side of the leg, the result of an application of some nostrum for the relief of a pain she suffered at its present site, that ended in producing this unhealthy ulcer, which at the time of admission was of some four or five weeks standing. It was circular in form, and about an inch and a half in diameter, its edges were thin and blue, and its surface studded with tall flabby pale granulations.

November 19th—Braynton's strapping was first ordered, but whether from any negligence or mistake on the part of the dresser, in its application, or from not being continued a sufficient length of time it failed in doing any good, other than that of cutting down the granulations, and giving to the sore a more healthy aspect.

29th—To-day the ulcer is presenting good soil in which to try the efficacy of skin grafting. A graft of about half the size of a five cent piece was taken from the thigh, and placed on the centre of the sore, and dressed in the same way as the others.

December 2nd—Grafts still in the centre of the sore presenting a dull white appearance.

5th—Still visible, but does not appear so healthy as when last examined.

8th—It remains in sight, but is not of the slightest benefit, having neither formed an island itself, nor imparted to the ulcer any healthy action whatever.

12th—Graft has disappeared, in what manner I cannot say. Black wash ordered as a lotion, and dressed with lint and bandaged, under which it became rapidly cured.

Case 16.—

J. A., æt 40, admitted into the Montreal General Hospital, November 14th, 1871, for treatment of two very large ulcers situated one on each leg, at the anterior surface, near the ankles, that on the left being fully five inches wide, and extending greater part of the way around the leg, the right not so large and situated more internally.

November 22nd—Blistering and poulticing continued until to-day, when, deeming the surfaces in a fit state to receive the grafts, four small pieces were placed in each about an inch apart, being well pressed in with the point of a bistoury; strapped down with plaster (isinglass) dressed with hot water and bandaged.

23rd—To-day four or five small grafts were placed on the right leg, and dressed same as above, to remain undisturbed for three days, the dresser merely changing the lint daily, but on no account to remove the grafts.

26th—Examined to-day, only three of the five on the right leg are visible, and three of those on the left. The remaining ones having disappeared as they occasionally do, preparatory to commencing their reparative process. Already there is some slight action begun on the edges.

29th—Not much to be seen as yet, only one or two of those little islands are forming.

December 2nd—Things are progressing more favourably now, quite a number of the grafts are forming islands of new tissue, and the healing process is going on. From the sides this is especially the case with the left leg, which is doing remarkably well.

6th—The right not having done so well as its fellow of the opposite side, is to be grafted again.

10th—Left improving rapidly.

12th—Four new grafts were to-day placed upon the right, and dressed as usual.

15th—The left continues improving, rays of tissue are shooting out from the grafts in all directions.

The last four are in sight, but look rather œdematous and puffy to augur any good results from them; the difficulty I fancy, lies in the fact that a large amount of pus is being exuded from the sore.

17th—The left is now improving rather slower than heretofore, ordered to be strapped (both legs were strapped.)

20th—Straps removed, and found the grafts on the right leg in site and looking well. All other modes of treatment stopped, both legs are now to be dressed with red wash daily.

24th—Still improving, right leg doing very well.

January 1st—Continues to improve but slowly of late.

2nd—There is no doubt but that the grafts have proved very beneficial in this case, for during the past month the ulcers have continued to improve slowly but steadily, and to-day are much better and nearer cicatrization than at any other time, since they first appeared.

Case 17.—

At its commencement this bid fair to be the most interesting of all, not only on account of the grafting, had it succeeded, but also for the many other peculiar circumstances connected with it.

It is that of Robert St. Hill, a negro, who was admitted into the Montreal General Hospital, suffering with sloughing of the cellular tissue of the penis, from infiltration of urine.

It appears that for a long time previous to his admission, he had been troubled with gonorrhœa, which in spite of treatment went into ulceration of the urethra, producing a fistula, and the urine instead of infiltrating as it generally does into the scrotum, or up into the cellular tissue of the abdomen, found its way as I said before, into the cellular stricture of the penis, giving rise to diffuse cellulitis of the organ, and sloughing of the tissue.

At first five incisions were made to allow the escape of pus, and poultices were applied for some time until the organ began to assume more natural proportions. When these were stopped, the integument was found to have sloughed from the whole under

surface of the penis, and also left a large granulating surface on top of the dorsum.

Upon these ulcerated surfaces skin grafting was attempted. The grafts being taken from the arm of one of his fellow patients, belonging to the "white persuasion." Mr. Pollock has tried the reverse of this and had splendid results, thus proving by the dark spot on the cicatrix, that the grafts had really succeeded.

But even though the grafts in this case had taken, it could not have been proven by the white cicatrix which would remain, as the effect, some might think of the white crafts, because it is well known that an abrasion or ulceration of the surface in the negro, in which the "rete mucosum" is destroyed, always when healed leaves a white cicatrix.

I do not propose in this, as in other cases, giving a daily report of the grafts which were tried: they did not succeed, and it would hardly be interesting to give a long list of the changes and appearances they passed through.

It is not to be wondered at that they did not take, because as the patient himself expressed it, "it was a werry critical position for the grafts to take hold of," and no doubt he was very near right, if not altogether so. For owing to the fact that the patient was continually troubled with erections, the change in the state of the organ would tend to disturb the grafts. Or this failure might have been owing to the irritation produced by the urine and gonorrhœal matter which was continually being discharged, and must sometimes, especially at night during sleep, have trickled down about the grafts, irritating them and preventing them from taking on a healthy action.

Proceedings of Societies.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

MEETING HELD JANUARY, 27th, 1872.

The Society met in their rooms, the President Hector Peltier, Esq., M.D., in the chair. After preliminary business, Dr. A. H. David, read the following case:—

I have hurriedly put together the notes of a case that occurred a few months ago in my practice, and which soon ended fatally, and which I think is worth being given to you, from the fact, that

I believe many practitioners have never seen a case, or at least, if they have, have not recognized it, but mistaken it for some other form of disease. Although perhaps, its most essential features were recognized long ago—as long ago as the time of Sir Charles Bell, it is only within the last few years, since it was described and named by Duchesne, of Boulogne, as *Locomotor Ataxy*, that the attention of physicians has been drawn to it as a special disease. Before his observations were published, it was looked upon and mistaken for some form of cerebral or spinal paralysis—from which it is quite a distinct affection, although closely resembling it in many points.

Mr. R., 59 years of age, of spare form, of exceedingly active habits, and particularly temperate, a teller in one of our principal banks, suffered some years ago from Sciatica in the right side, which resisted all treatment, and he was persuaded by some of his "good natured friends," to visit a water cure establishment in the United States. He remained there about ten days or a fortnight, and returned home but little relieved. The very severe pain however gradually abated, and comparatively speaking, he was free from suffering for a couple of years, when the disease returned in all its severity, and he was again persuaded by his over judicious friends to return to the same water cure establishment. But he suffered so intensely from the treatment there adopted, which was pumping cold water on the thigh from a distance of 10 or 12 feet, that he only remained two days, and on returning home placed himself under my care, and the disease gradually subsided, and he remained well, *i.e.*, without any return of the Sciatica for some 7 or 8 years.

I mention these facts—merely as facts, to give his history as far as I am able, and not because I either believe or think, they had anything to do with the subsequent disease, although he himself could never divert his mind of the idea but that it was a return of his old attack, that notwithstanding the length of time which had elapsed; and that the cold water pumped on his thigh was the cause of his future disease, be that as it may, I think it but right to mention it.

About three years ago, Mr. R. began to suffer from severe pains in his thighs and legs. The pains in the right, the one in which he had had Sciatica some years before, as you will recollect I have mentioned—being much more severe than those of the left.

He fancied at first, it was a return of his old complaint—extending further than before, and called them "rheumatic pains" and did not apply to me for advice, but tried all sorts of liniments that are advertised as cures, for this and similar, and perhaps dis-

similar complaints—from Perry Davis' liniment to a saturated tincture of capsicums, but with, as you can well imagine, only momentary relief. He soon discovered that with the pains he had difficulty in walking, which of late has been termed Asynergia, or loss of Co-ordination of the muscular movements of the lower limbs, and is a pathognomonic sign, I may mention *en passant* of this disease. The pains and difficulty of walking, not amounting to paralysis of the lower extremities, but a staggering as it were continued more or less for near a twelve month, but never entirely left him altogether, when on the evening of the 12th March, 1870, while holding a step-ladder, for one of his sons to get up on to do some thing to the cornice in the drawing-room, he suddenly exclaimed that he saw everything double, and was afraid, (the pain in his legs being so severe, making him quite weak,) he would fall down, that he was assisted to the sofa, and his wife gave him a glass of strong brandy and water. After a short time, she finding him a little stronger, persuaded him to go to bed, he passed a pretty good night, but as the diplopia still continued, next morning I was sent for. On my arrival I found him up and dressed, lying on a sofa, he still saw everything double, his pulse was small and weak, but his mind was clear, his memory good, and the pains in the legs he described as severe, but not as intense as they had been the evening previous. This state of affairs continued for five or six days, when *one* of the visions, if I may so term it, began to be less distinct than the other, and the next day, that is about 24 hours after the *one sight or vision* appeared less distinct, whatever he looked at as well as being doubled, seemed to be going rapidly up and down, that is from the floor to the ceiling of the room, and from the ceiling to the floor. This peculiarity only lasted about 48 hours, and before the end of the week *his sight* had returned to its natural condition, and he saw as well as ever he had done, but the pains in the legs continued as severe as ever, and he tottered a good deal in walking, and was quite unable to go up or down stairs.

On closely questioning his wife, I discovered she had once or twice during the first days of his attack, noticed he had had squinting, but only for a moment or so, just sufficient for her to have observe it, but she thought nothing of it till I had closely asked her about it.

The treatment that I adopted was a combination of Iodide and Bromide of Potassium. But looking upon the case as one of Locomotor Ataxy, and of a serious character, I suggested the propriety of a consultation, and on the 31st March, Dr. G. W. Campbell, saw him with me. Dr. C. took the same view of the case as

I had, and as the pulse still continued exceedingly weak, suggested adding 10 grs. of the Citrate of Iron to each dose of the Potassium, which I did, he continued taking the medicines for a long time and gradually improved. During the summer he went into the country for a fortnight, and returned home very much improved, the pains had almost left his legs, he could walk well, all tottering had left him, and he returned to his work at the bank.

I should mention that during his illness it came to my knowledge, from conversations with the cashier, that the authorities of, and his fellow clerks in the bank, had for many months noticed a deficiency in his mind and memory, a want of recollection in counting bills and in such matters; and opportunity was taken of his serious illness, to remove him from the responsible position he occupied, to one where he would scarcely have any responsibility at all, but of course at a reduced salary.

This seemed to affect him a good deal, and from what I have since learned, he fretted very much about it—thinking he had not been well treated, but nevertheless he continued attending daily at the bank. During the month of January, 1871, his wife and family considered him better than he had been for years. On the evening of the 2nd February, on returning from the bank in as apparently good health as he had latterly enjoyed and partaken of his dinner, he went up stairs, and as he landed on the top step, suddenly called out he could not move. Asking one of his daughters who happened to be near to hold him, or he would fall, which she did till her mother came, and they assisted him to his room and got him to bed. I was immediately sent for, but being out of town, Dr. Smallwood kindly saw him for me, he found him partially insensible, and paralysed on the right side, he prescribed the usual treatment, and saw him again near midnight with Dr. Hingston, he was more insensible, and had had five or six of what his wife described as slight convulsions, and he continued much in the same state till death, which took place 36 hours from the time the attack had set in. I regret to say I was not allowed to make a post-mortem examination.

In the commencement of the paper I stated that this curious affection—Locomotor Ataxy is different and distinct from cerebral or spinal paralysis, and is not yet well understood. In most cases the pain in the legs, and which the patient usually calls rheumatic, are the first symptoms, and may continue for a longer or shorter period, sometimes for years, when double vision, with slight squinting follow these, as in the case just related, may disappear for a time and then return, and as in this case, end in epileptic convulsions, which carry off the patient. Again, the pains may

continue for months or even years, causing such weakness, that the patient cannot properly maintain his balance, he totters like a drunken man, indeed can scarcely walk, he has to a certain extent, lost the power of controlling the action of some of his elementary muscles.

The morbid anatomy has been well described by Dr. Lockhart Clarke. In two cases he examined, he found grey degeneration and disintegration of the posterior columns of the spinal cord; of the posterior roots of the spinal nerves; of the cornua and sometimes of the cerebral nerves. In the latter stages of the disease nearly all the nerve fibres of the posterior columns, and the posterior roots fall into a state of granular disintegration and ultimately disappear.

Usually the posterior columns retain their normal size and shape, in consequence of hypertrophy of connective tissus which replaces the lost fibres.

Corpora Amylacea are usually abundant, and oil globules of different sizes are frequently interspersed among them and collected into groups of variable shape and size, around blood vessels of the part; and Dr. Clarke is inclined to believe from his investigations, that the posterior cornua are always *more* or *less* affected, and *he* thinks they are the *first* parts that are mortally changed, and he thinks the peculiar symptoms of this disease depends solely on the lesion of the posterior colums, of the posterior nerve roots; but he adds, probably also of the posterior cornua.

Since I met with this case, I have been shown by a friend the "Bulletin General de Therapeutique," for January, February, and March, 1868, in which are several articles by Dr. G. Dugardin Beaumetz, of the Hospital de la Pitié of Paris, in which he recommends phosphorus in the treatment of Locomotor Ataxy, and he says it appears to have a favourable influence in the progressive form of the disease, as it acts as an excitant and tonic to the nervous tissue, an indispensible element. He recommends it to be given in very small doses at the commencement, say about 1.60 of a grain, gradually increasing the dose till 1-6 of a grain is reached. But it must be discontinued as soon as the digestive organs become deranged. As I said before, I was not aware of this recommendation of Mons. Beaumetz, or I should most certainly have tried it. Although I must say in this case, the combination of Iron with the Iodide and Bromide certainly did a great deal of good.

PERISCOPIC DEPARTMENT.

Surgery.

NOTES ON A CASE OF RHINOLITH, OR NASAL CALCULUS.

By James F. West, F.R.C.S., Senior Surgeon to the Queen's Hospital, and Consulting Surgeon to the Birmingham Dental Hospital.

The accompanying case is worthy of note from its extreme rarity, and from the fact of its producing loosening of the teeth on the opposite side to that on which the calculus was found. Nasal calculi generally, as in this case, form around some foreign body which has been accidentally introduced. This patient cannot remember anything having been inserted into his nostrils, so that probably it had been there for ten or more years, and its existence only became apparent when it led to a disagreeable discharge from the nostril, to bulging of the nasal process of the superior maxillary bone, and to loosening of the central and lateral incisors.

G. B., aged 17, a boy of strumous habit, and a parish apprentice to a tailor, came to the Dental Hospital in this town, on the 2nd of August, 1871. Mr. C. Sims, one of the dental surgeons of that institution, found the nose, especially on the right side, much swollen; and also much inflammation and tumefaction of the upper lip and gum. The central and lateral incisors were very loose. He had an offensive discharge from the nose, and was in much pain. He stated that the swelling came on suddenly two days previously, without any assignable cause. He had suffered six months before in a similar way, and was for a few days an out-patient at the Homœopathic Hospital, and then obtained relief by using fomentations to the nose. He had never had syphilis or any injury to the parts. Mr. Charles Sims, thinking it a case for consultation, brought the patient to me. It was decided as a tentative proceediug to extract the left upper central and lateral incisors, they being very loose. Mr. Sims removed them on the 5th of August; a copious discharge of very offensive pus followed the extraction. He was directed to syringe the mouth and nose with ozonised water.

The gum quickly assumed a healthy appearance, and the boy was much relieved. He attended as an out-patient at the Queen's Hospital; but not getting much better as to the nasal symptoms, on November 13th I made another examination of the patient, when an oval calculus, weighing twenty grains, was discovered by a probe, and removed with dressing forceps in two pieces from the right nostril. It was half an inch in length, and a quarter of an inch in breadth, and was composed of phosphate of lime and magnesia, concreted around a pebble the size of a large pea. The punctum lachrymale on that side was so closed that no tears could pass into the nostril. I therefore deemed it necessary to slit it up, and to pass an Anel's probe down the nasal duct.

On November 20th the nose was much less swollen; the discharge diminished, and the tears were passing naturally into the nose. The lachrymal probe was again used. No caries of bone has taken place. The nose is nearly of its proper proportions, and the boy is quite well.—*Lancet.*

Birmingham, January, 1872.

CASES OF STRANGULATED HERNIA.

Under the care of J. Fayrer, M. D., C. S. I.

Case I.—Modun Mohun, a Hindoo sircar, aged 45, was admitted on the 15th May, 1871, with symptoms of strangulated oblique, inguino-scrotal hernia on the right side. The hernia was of four years' duration, but had hitherto been reducible, and the present symptoms, pain in the tumour, which was very large, and in the umbilical region, constipation and constant vomiting, had set in about two hours before admission. His pulse was weak and depressed. The usual measures, chloroform and taxis, &c., having failed, the operation for strangulated hernia was performed without further delay. The stricture was found to be at the external ring; it was divided, without opening the sac, and the hernia reduced. The wound was antiseptically dressed, healed rapidly, and he was discharged, cured, on 29th June, 1871.

Case II.—Mohesh Chunder Bose, a Bengalli, aged 55, a broker, was admitted on the 13th September, 1871, with symptoms of strangulated oblique, inguino scrotal hernia on the right side. The hernia was of fifteen years duration, had once been strangulated before, but was reduced by taxis. The symptoms, vomiting and constipation, had been present for some time. All the ordinary measures for reduction having failed, the operation was per-

formed. The stricture was found to be at the external ring, and was divided without opening the sac. The wound healed, and he is now well, and waiting to have the operation for the radical cure performed.

Case III.—Fakeer Chand, a Hindoo trader, aged 70, a very infirm old man, was admitted on the 11th November, 1871, with symptoms of strangulated, oblique inguino-scrotal hernia on the left side. It was only of three months duration he said, and was not very large. It had never before been obstructed; the symptoms of strangulation, vomiting and constipation, with pain in the tumour and abdomen, had set in twenty hours before admission. The ordinary measures—taxis under chloroform, enemata, ice applied to the tumour—having failed, the operation was performed. The stricture was found at the external ring, and was divided without opening the sac. He was immediately relieved of symptoms of strangulation, but sank on the 17th November, with symptoms of gangrene of the scrotum, and chronic dysentery.

On examination it was found that the lungs were congested. There was a fibrinous clot in the right auricle, extending into the ramifications of the pulmonary artery. The lower portion of the ileum was partially gangrenous, but not perforated. The scrotum was gangrenous. The kidneys were extensively diseased. He was a very infirm old man, and had no power of recovery. The gangrene of the scrotum was probably caused, in his debilitated condition, by the attempts at reduction by taxis before operation.

Case IV.—Nilmoney Paul, aged 45, a stout aged looking man, by occupation a clerk, had suffered from inguino-scrotal hernia of the right side for five months; the tumour was very large, and the hernia had previously been reducible. When the symptoms of strangulation set in, the hernia had been incarcerated for two days; it had come down when travelling on the railway, and he could not reduce it. When I saw him on 5th November, 1871, the symptoms of strangulation were urgent, and general peritonitis was setting in.

I operated without delay, and had to divide thick layers of adipose tissue, before the stricture which was at the external ring, and in the canal at the margin of internal oblique and transversalis, was reached; it was divided without opening the sac. The symptoms of strangulation were immediately relieved, and the

bowels acted freely, but he never rallied, and sank five hours after the operation.

He was evidently of an unhealthy constitution, and had probably bad kidneys.

No *post-mortem* was permitted.—*Indian Medical Gazette.*

BILLROTH ON ACUPRESSURE, ACUTORSION, AND TORSION.

In fifty cases of amputation Professor Billroth performed acupressure or acutorsion, using on an average four needles in each case; he has performed it on two hundred arteries, including fifteen cases of amputation of the thigh; he has had no opportunity in cases of amputation of hip-joint, having had no cases lately; in exarticulation of shoulder he never succeeded in fixing the needles firmly enough to rely on methods above named. Acutorsion was performed more, acupressure less frequently, acufilapressure in no case. Hæmorrhage following removal of needles occurred in one case only; he accounts for it by his having performed acupressure according to the first English method, compressing against the integument, the brachial artery, the median nerve, and belly of the biceps muscle; this caused fluxion to the compressed parts; removing the needle, they receded, tearing the adhesions which had compressed the artery. He therefore abstains from acupressure *en masse*, and recommends careful acutorsion. In acutorsion, he considers one half turn sufficient, and preferable to a whole turn or more, since the needle is removed more readily. Gold needles occasionally become bent if very long; but they can be removed without causing irritation, and are therefore preferable to all others.

Prof. Billroth attempted torsion in several cases of amputation of the breast, with such negative results that he abstained from it until agai. led to it by English surgeons, and Porta, who performed it four hundred times without secondary hæmorrhage (out of 23 attempts of torsion of the femoral artery he failed four times, and applied ligatures.)

During last summer Billroth performed torsion in five amputations of the leg, two of the foot, two of the fore, and one of the upper arm; also upon the greater number of arteries in several amputations of the thigh.

Secondary hæmorrhage occurred in one case, from the posterior tibial; he believes this was due to his having forced the torsion. To perform torsion successfully, he considers it necessary—1. To isolate the vessel thoroughly; 2. To grasp the end of the same with a strong, well-fitting pinzette: 3. There must be a certain length

of vessel from the end to the nearest branch. These conditions are not given in the mammæ, hence his previous failure.

Although Porta recommends making but slight traction, four to five turns in small, and six to eight in large vessels, Billroth has in every case drawn out the vessel from one to one and a half inch, and turned the pincers until the vessel was torn asunder, one portion remaining in the instrument, the other receding; this was done to alter the walls as much and as far as possible, in order to gain an extensive thrombus.

Post-mortem examination has proved these views to be correct; the advantage of an extensive thrombus is, however, counterbalanced by the fact that vessels isolated for a greater distance, and denuded of their sheath, become necrotic. In cases below the knee and elbow, Billroth considers torsion advisable, if not too near a larger branch.—*New York Medical Journal.*

BILLROTH ON OVARIOTOMY.

This eminent surgeon, in his "Reminiscences," published in the *Weiner Med. Wochenschrift*, says of Ovariotomy:

First of all, surgeons must dismiss from their minds that ovariotomy is a dangerous operation; and, through the medium of well-informed practitioners, this conviction must make its way with the public. After ovariotomy, skilfully performed according to the rules of art, recovery is the general rule, and a fatal issue the constantly-diminishing exception. Comparing it with some other operations, ovariotomy, taking the mass of cases, is shown by statistics to be less dangerous than amputation of the thigh, disarticulation of the shoulder and hip-joints, or excision of the hip or knee. Its danger is about the same as that of amputation of the arm, excision of the shoulder, partial excision of the jaw, lithotomy in the young, and similar operations. We must, however, perform ovariotomy strictly according to the rules laid down by the English operators in their classical works; and only after having attained the same results should we venture to practically put into force our own ideas, in order to improve upon these. I had the good fortune to see Spencer Wells operate upon two complicated cases, and from them, as well as from oral communication with this remarkable man, I learned much. I constantly follow his precepts, knowing that he has long since thoroughly thought out and tested all that can happen to myself. I shall willingly regard myself during my lifetime as his scholar; and contented shall I be if it falls to my lot, by means of this operation, to snatch

from certain death one-half of the number of lives he has been enabled to save.

Up to the present time I am tolerably contented with my results. I give here a short account of them, in order to encourage the performance of these operations, and especially to inform the colleagues into whose hands these lines may fall that I have personally, no reason for supposing that the results attendant upon ovariotomy will be less cheering in Vienna than they are in London. Hitherto, I have performed it nine times; and of these patients only two have died, giving, therefore, only a mortality of 22.2 per cent. The first four cases recovered one after another; then two fatal cases occurred, to be followed again by three recoveries. The first case is related in my Zurich "Chirurgische Klinik," and the second, third, and fourth cases in the "Chirurgische Klinik," published at Vienna, in 1868.

Medicine.

BLACK SMALL-POX, AND ITS TREATMENT.

Mr. John Aiken, of Glasgow, has the following valuable article in the *Glasgow Medical Journal*:—

The onset of this fearful form, in most of its symptoms, resembles that of ordinary small-pox. It is attended by the usual sickness, fever, furred tongue, etc., but in addition there is very great oppression of the breathing, and great prostration of strength. The pain in the back, so often looked upon as pathognomonic, is quite a variable symptom, its place being occupied by the hurried and oppressed respiration. The patient is usually brought to the hospital about the fourth or fifth day of the disease, but in a few cases we have had the privilege of observing its progress from an earlier date. The ordinary state of patients on admission, and progress of the disease, may be described as follows:

The patient lies on his back, apparently exhausted, the legs stretched out, and the arms and hands lying as if powerless, by the sides. The face is flushed, and a deep red colour, with more or less of a cyanotic hue. The respirations are hurried, imperfect, and not filling the chest—often exceeding 30 per minute. The pulse runs from 100 to 140, and, at this time, is full, but soft, and often intermitting. The skin is hot, and gives to the hand a feeling of acridity, while the thermometer records from 104° Far.

to 106 ° Fahr., and in one 108·2 °. In many cases, and especially in the early stage, the skin is excessively tender, the patient suffering acute pain, even from an attempt to examine the state of the pulse if not very gently conducted. The corneæ are preternaturally bright, and sometimes the conjunctivœ are injected while the eyelids are swollen and of the same dusky red as the face. The skin on the surface of the body has a similar appearance. This congestion, for the first few days, disappears on pressure, but is freely intermingled with a punctated ecchymosis. In the most rapidly fatal of those cases, there is always no trace of a vesicular rash, while in others a few scattered vesicles of ordinary size may be distinguished, and in most favourable cases a very flat rash of a vesicular nature may be found shining through the cuticle like so many white spots, yet never developing sufficiently to be perceptibly raised above the surface of the skin. It can be felt beneath the cuticle like grains of sand freely sprinkled over the skin.

As the case proceeds, the points of ecchymosis, sometimes slowly, but sometimes with fearful rapidity, increase in size and number, and, coalescing, form large collections of extravasated blood. A similar effusion soon takes place from the conjunctival vessels, so as to form mere sacs of dark-coloured blood, more or less burying the corneæ. Should the patient be a female, from a comparatively early period in the case we find uterine hæmorrhage. This may commence at any period between the second and fifth day, but more frequently toward the fifth. At first the blood is fluid and dark in colour, but, as the quantity increases, it is discharged in the form of large, dark-coloured clots, which are easily broken down. In some cases the quantity lost may be so great as actually to cause death. Such was the case in E. R., a young woman 23 years of age, who died with all the symptoms of post partum hæmorrhage, on the seventh day of the disease. A careful inquiry could elicit no possibility of early pregnancy; in fact, the girl stated that she had menstruated almost immediately before her present illness. It occasionally happens that hæmorrhage occurs at or near a menstrual period; but although this is a noteworthy circumstance, it is not a fact of great clinical importance. The ordinary menstruation occurs, as usual, during small-pox, often slightly increased in quantity; but this has no prejudicial effect, but rather the reverse, as it frequently is followed by a relief of the mental disturbance, and occasionally an abortion of the rash. If, however, the case be one of hæmorrhagic small-pox, the quantity discharged soon becomes excessive, and all the characters of normal menstruation are lost. Towards the close of the

fifth or on the sixth day (sometimes a little later if the patient be a female,) the sputa become rust-coloured, and the oppression of the breathing rapidly increases. The quantity of blood becomes greater hour by hour, until the expectoration has the appearance of tar mixed with viscid mucus. In one case, to which we shall afterward have to refer, bright arterial blood welled from the mouth in the form of a fine froth for several hours. It was carefully ascertained that in this case there was no epistaxis. The urine about the same time becomes first tinged or smoky, and then loaded with dark coloured blood—never in the form of clots, but occasionally containing fine shreds. The stools toward the close contain blood in large amount, either in a tarry state intimately intermingled with feces or in a fluid state evidently shed from the lower bowel—the fecal matter, when distinguishable, being very pale in colour and clay-like.

The subcutaneous ecchymoses increase until large masses collect in a cellular tissue, distending it, and raising lumps as if of recent bruises. Sometimes this takes place in the forehead and eyebrows, causing them to overhang the eyes, and giving to the whole face a most repulsive expression.

Such a state never lasts long. The temperature, which has hitherto been six or seven degrees above the normal, suddenly falls beneath it; the pulse runs up until it is almost uncountable, frequently intermitting and very feeble; the respirations increase in frequency and decrease in efficiency, the air being but little carried into the lungs, though the struggles of the patient for breath are agonizing. Blood pours from all the mucous surfaces, and, oozing through the distended conjunctivæ trickles over the cheeks with the tears—giving to the face, already sunken and death-like, an aspect more disgusting than it is possible to describe, and causing one to wish for the termination which so soon relieves the sufferer. During the greater part of the time the patient retains his consciousness, and it is only at the very conclusion that the sufferings are veiled by the advent of semi-coma. In children I have seen obstinate bleeding from scrofulous ulcers on the neck. The blood shed was fluid and very dark in colour, and the bleeding was not controlled by touching the surface of the ulcers with nitrate of silver.

Until the end of May last not a single case was known to have recovered.

Before long I became satisfied that we had to deal, not with extraordinary virulence of the small-pox poison, but with its development in a peculiarly fitting soil; in fact, that it was not the epidemic nature of the disease, but the condition of the patient,

which was the main determining cause of the type. A fortunate sequence of cases suggested the seat of the mischief. It was a well known fact that a change of residence from the country or a small town, where a person has been constantly employed in the open air, to a large city and an in-door employment, is followed by very marked symptoms of impaired nervous energy. This history and these symptoms preceding the commencement of the attack I found in a number of consecutive cases, and I was thus led to extend my inquiry into other causes of enervation in the previous history of the patient. Epilepsy, paralysis, chorea, and other causes of impairment of the nervous system, appeared in the previous history of some, while in others, where the cause of nervous lesion was not so evident, nothing more than previous symptoms could be elicited, attributed to confinement in close or ill-ventilated work-shops, heat, or some other depressing agency. The great prostration and the tendency to hypostatic congestions which I observed invariably in such cases strengthened my opinion. Having thus been satisfied that the lesion lay in the nervous system, the next step was to try what could be done in the way of treatment. I chose strychnia as the most powerful nervine tonic with which I was acquainted, and determined to push its use to the greatest extent possible. The following was the mixture used :—

℞—Liquoris Strychniæ.
Tinct. ferri hydrochlor., aa ℥j.
Inf. quassiæ, ad ℥viij. M.

Sig.—One to be given every three hours.

Considerable fear was entertained at first lest mischievous effects should be produced by the large doses of the strychnia in the exhausted state of the patient, but experience showed that ℥jss of the *Liquor* might be given in the twenty-four hours, *if the case was very severe*, and yet no physiological effect be produced; while in an ordinary case, in which merely ℥j. per diem had been given, slight trismus and pain and twitching in the muscles of the neck resulted.

In those instances in which the case came under treatment early, our results were very satisfactory. If the hæmorrhage had not yet commenced, it was often prevented, or merely occurred to such an extent as to show the tendency; while if it had commenced, packing in wet sheets for a few hours was found a most valuable adjunct to the treatment. Mr. Greaves had previously satisfied himself that this practice had a beneficial, though transient, effect upon the hæmorrhage; but it had been discontinued

on account of the great exhaustion it produced, which we now found could be avoided by the combination and the administration of a small dose of stimulant on the removal of the pack. The next beneficial effect noted was the relief to the respiration. The crepitus, which before could be heard all over the back of the chest, diminished, and the respirations became much more efficient and decreased in frequency. The colour of the face improved, the pulse became steadier, and the ecchymosis disappeared. The rapidity with which this latter effect took place was a matter of great astonishment to us all. I have seen a young man brought in with the whole skin like the colour of the bloom upon a plum, the breathing rapid and oppressed, the urine containing a large quantity of blood, while not a trace of rash could be found on the body; and in three days the ecchymosis disappeared, the breathing became tranquil, the urine clear, and a copious small vesicular rash was developed upon the skin. This now introduces the next feature—viz., the development of the rash. This usually takes place to a greater or less extent within the first twenty-four hours of treatment; but it is not the ordinary rash of small-pox. It consists of a greater number of minute vesciles, which continue flat, and as the case progresses, coalesce, detaching large pieces of the cuticle, which is raised into enormous blebs sometimes standing three-fourths of an inch above the surface, and filled with a sero-purulent fluid. These burst and form crusts which eventually fall off, leaving no pits, but a tender pink skin beneath, which was often the seat for some time afterward of furfuraceous desquamation. This development of rash after the use of strychnia I have seen in cases not of a hæmorrhagic type, and was, thus led to adopt the rule never to give it until the rash had fully declared itself.

My colleagues and myself have now treated in this way over forty cases which came under treatment at a time when there was a possibility of doing them good—viz., either before the commencement of hæmorrhage, or before it had become alarming; and we have had the satisfaction of guiding fully two-thirds of such cases to a successful termination; while under any other method we believe they would have died.

CASE OF SNAKE-BITE.

Communicated by J. Fayrer, M.D., C.S.I.

I am indebted to Major C. A. McMahon, Officiating Commissioner of Hissar, for the following very interesting account of a case of death from the bite of bungarus ceruleus, in which hæmaturia was

a prominent symptom, and where life seems to have been prolonged by the internal administration of stimulants.

From Major A. C. McMahon to Dr. Fayrer.

I enclose an interesting account of a death from snake-bite.

Mr. Davis, a customs' patrol, was bitten on the 31st of August, (evening,) and did not die until 11 a.m. on the 3rd of September, having been kept up by ammonia and brandy all that time. The case is interesting, because Mr. Davis had skilful treatment from the first, and the most approved remedies appear to have been applied. Mr. Davis became perfectly insensible almost immediately after he was bitten (showing that the poison was powerful and active) and yet he was restored, not only to consciousness, by the internal administration of ammonia and brandy, but he became sufficiently well to do some work, and sign some official papers, (the latter part is not mentioned in the accounts I send you,) the influence of the poison having been checked for so long, one would hardly have anticipated a fatal termination about 63 hours after the poison was received into the system. It almost seems as if when a man is being bitten by a full-grown cobra, or krait, stimulants only postpone the fatal hour.

The case is an interesting one, and I shall be glad to hear your opinion on it.

The snake was evidently a krait. How ignorant men are of what snakes are deadly and what are not! Mr. Davis surely did not know.

The two accounts I enclose are by Mr. Edwardes, District Superintendent of Police, Rohtuck, and the Sub-Assistant Surgeon of Honsi. I think they give, taken together, a very full, complete, and accurate account of the case.

Statement of Mr. F. N. Edwardes.

On the 31st August, 1871, I was on my tour of inspection at police station Mahim in this district, and on the customs like. A Mr. Davis, an assistant patrol, went out patrolling on foot in slippers in the evening, and returned at 8.30 p.m.; as he entered the gate of the compound, he was bitten on the instep by a small snake, a karite or krait, or kerite. He had time to kill the snake, which was about two feet long, of a yellowish colour, with blackish stripes across its back with his slipper. On Mr. Davis being bitten, he called out to the guard at the "thuk" (or weighing house,) to bring a *lattie*, and by the time the men reached a distance of not 100 yards, Mr. Davis was insensible; they brought him to me at 8.30 p.m., or a few minutes after he was bitten, with the part bitten bleeding and a string tied under his knee, which I fancy he

himself tied. I gave him ammonia and brandy in a wine-glass, cut the part where he was bitten with a penknife and rubbed ammonia into it; on my giving him the second or third dose and rubbing his foot with ammonia and having him walked about, he came round, and at 9 p.m., was all right and perfectly sensible. I still kept walking him about and giving him small doses of ammonia at short intervals,—first with brandy and afterwards without, as he did not like the brandy. About 10 p.m., I allowed him to sit down in a chair, he then became a little sick, but came round again. I left him at 11 p.m. perfectly sensible, and the only thing he complained of was a pain in his leg. I was obliged to come into Rohtuck and was myself unwell. Shortly after Mr. Davis was brought in and after he came round, I thought it as well to send for the customs' native doctor at Hansi, and wrote him a putwanah, ordering him to come to Mahim at once, and on my reaching Rohtuck, I wrote to Mr. Davis' brother, telling him of the case and advising him to go out; he went out on the 1st September, and tells me found his brother very well, but complaining of the leg being tied up and wishing to open it; he remained perfectly sensible and well that day, that night, the next day, the 2nd September, and that about 1 a.m. of 3rd September, began vomiting; at first he thought it was nothing, but on his vomiting a second time he got up and attended to him. On his asking his brother how he felt, he said that he found his chest paining him a great deal, and complained of suffocation; after this he tried to vomit again, by putting his finger down his throat, but failed. The native doctor was present, and continued giving ammonia with brandy. He after this once fainted and began to get weaker and weaker, and after about 3 a.m., he did not speak, and died about 11.30 a.m. On the 3rd September, Mr. Davis states, that after he fainted, he got convulsive, three times, that on the 2nd September, about 3 or 4 p.m., he remarked that his brother was passing blood in the urine, stools, also from the part bitten, and vomiting. Mr. Davis states that he remarked the blood getting blacker and blacker as death approached.

Rohtuck, 6th October, 1871.

Statement of case by Sub-Assistant Surgeon B. R. Paul.

With reference to your docket No. 773, dated 9th instant, I have the honour to submit the following particulars of Mr. E. F. Davis's lamentable death, which occurred on the 3rd ultimo, at 11 a.m.

On the 31st August, 1871, Mr. Davis after taking his dinner at 8 p.m. with Mr. Edwardes, Assistant Superintendent of Police, Roh-

tuck, (who had come to Mahim on his tour of inspection) went out patrolling on foot towards the Hansi line, and on his return, not very far from his bungalow, just near the *naka*,* he saw a small, thin, black and white snake lying on the road, which he attempted to kill with his foot, but the slippers he had on being loose, unfortunately came off, and the snake bit him on the right foot, just above the great toe. He, however, killed the snake and walked a few steps, when he fell and became quite insensible and was carried by some of the peons to the bungalow.

Mr. Edwardes immediately administered some strong doses of brandy and liquor ammonia (which I had left with Mr. W. Forster for snake-bite,) which made him vomit and brought him to his senses; he was kept awake all night, and brandy and ammonia were administered frequently.

On the morning of the 1st ultimo, at 9 a.m., I received the notice and immediately started with a proper supply of medicines to Mahim, and found Mr. Davis, though quite sensible, yet very uneasy; his right foot and leg up to the thigh were very much swollen, and in several places had become blue, especially at the bitten part, from which blood was oozing in drops owing to its having been previously incised by the knife, and a kind of stone, called *zahr-mohra*, was applied for the purpose of absorbing the snake poison. The pulse was slow, respiration not difficult, pupils slightly contracted, urine frequent and consisted of pure blood; sputa also frequent and consisted of pure blood; complained of great thirst and feeling of uneasin ss throughout the whole body; stabbing pains now and then at the bitten parts; stomach very irritable and would not retain anything.

Treatment.—Stimulating mixture with liquor ammonia was exhibited every half an hour, which was retained; the swollen parts were fomented with decoction of *meen*, which greatly relieved the pain, and reduced the swelling, and the patient was not allowed to sleep.

On the morning of the 2nd, he said he felt better, sat down for half an hour on an easy chair, and took a little sago, which was retained; pulse a little improved, but the urine and sputa still bloody, though less frequent. Stimulating mixture continued every second hour, instead of half an hour; fomentation continued.

At 2 p.m., he complained of severe pain in the abdomen, which was relieved by hot fomentation, but he made several unsuccessful attempts to evacuate his bowels.

At 5 p.m., he asked to have some chicken broth, and wanted to

* The high thick thorn hedge carried across the country by the Customs Department to prevent smuggling. Neither man nor beast can get over or through it.

have an undisturbed sleep, which were allowed, as now it has been more than 48 hours since he had been bit.

At 10 p.m., a relapse took place; he vomited the broth, mixed with a large quantity of blood, and felt very uneasy and prostrated; stimulating mixture with liquor ammonia was given, too, frequently every quarter of an hour.

At 12 p.m., he again felt worse, suffocation and headache ensued; his bed was taken out into the verandah, and the medicine was continued.

At 2 a.m., the patient got very weak and insensible; pulse very low, breathing very difficult, convulsions commenced, and he could only be roused by loud calling, and with difficulty could swallow the medicine which was given.

At 4 a.m., he became comatose; could not be roused at all, neither could he swallow medicine or water; cold perspiration broke out over the face, eyes depressed, extremities became cold, pulse scarcely perceptible, breathing prolonged and stertorous; convulsions more frequent; twitching of the right hand and beating of the right foot, the left side of the body became paralysed, eyes insensible to light and congested, involuntary discharge of bloody urine and stools, and at 11 a.m. he breathed his last; his corpse was carried into Rohtuck for interment by his brother, Mr. Davis (Head Clerk, Deputy Commissioner's Office, Rohtuck,) who arrived at Mahim at the same time as I did.

In conclusion, I would beg to state that Mr. Davis solely died of snake-bite, and had no other disease. *He was addicted to opium.*—*Indian Medical Gazette.*

Hansi, 10th October, 1871.

ABSTRACT OF AN ADDRESS ON THE ADVANCEMENT OF MEDICINE.

Delivered at the Annual Meeting of the Clinical Society of London. By Sir Wm. W. Gull, Bart., M.D., D.C.L., F.R.S., President of the Society.

In addressing you this evening, gentlemen, I have in some sort to throw myself on the forbearance of the Society, for, though I have been able to bring certain ideas together on the subject on which I desire to speak, I have not, for want of time, been able to adopt a form of words such as I would have liked. In some sense I am the spokesman of the Society as its President, in especial when laying before the public the objects of the Society as I would now do.

We, in our calling, differ from some theologians in one important respect; they look on this world as a decaying world, as much worse than it once was; we, as students of nature, are opposed to this view, for if we look to the history of nature we see we are ever advancing towards perfection, even if we are not likely to reach it. This is an improving world, and we are met to advance that idea. We believe that this world has something better in store for all than anything which has yet been seen, and are like to the convalescent, whose last day should be always the very best he has ever spent. Some men are apt to think that science has certain limits set to it, beyond which no man may go; but we believe that knowledge extends far beyond the strictly scientific limit. Doubtless, were the early lower animals assembled together in conclave, they would conceive it quite impossible to transcend their status; that when the world came to megatheriums, let us say, then it must stop. They could not conceive the possibility of such a being as man. But at this point we join the theologians again in accepting a metaphysical element, in forming conceptions of things of which we have no positive knowiedge. In this way we may be said to worship nature, but only in a very limited sense. We look upon our being, not as perfect, but as becoming perfect, and, we are here to-night—and at all times have it as our object—to improve these defects of nature, and in endeavouring to perfect the human frame.

Respecting the object we work for—this living organism of ours—one great advance has of late been made. We are acquiring a physiological notion of disease. Disease is no entity; it is but a modification of health—a perverted physiological process; and this must at all times be insisted upon. Were it not that we fear death, and dislike pain, we should not look upon disease as anything abnormal in the life-process, but to be as part and parcel of it. Few would now venture on a definition of disease; for in reality it is but the course of nature in a living thing which is not health. In health the balance of function is even; incline it to either side, and there is disease. That being so, just as the life-process constitutes an individual and puts him apart from his fellows, so must any alteration in it be individual, and not general. But to the ignorant disease is an entity—an evil spirit which attacks us and seizes us. Hence arises the word "seizure," which, though in a somewhat different way, we still use, but with a protest. To the charlatan, disease is a set of symptoms to be attacked by a variety of drugs—a drug for each symptom. To us, disease is a life-process of a perverted kind.

Many states are not now called diseases which used to be, and

there are still some to be expunged. Some people are always ailing. Some have feeble stability, and to them it is as natural to be ill as it is to others to be well; but this is not disease. So, too, aged persons get ill; but this is not disease—in reality it is natural change simulating disease, and when we try to cure such we use all the farrago of the chemist's shop to prevent the sun setting. So syphilis at last ceases in the system to be syphilis, and becomes an early decay.

It is curious to consider the various morbific agents at work within our bodies, the lines in which they work, and their seats of action. These as yet have been but little studied, and deserve attention. Thus, it is very doubtful if scarlatina begins in the blood, as we should all be apt to say, rather than in any other tissue or fluid. Let it be our object to find out where all these begin within the body, and how they enter the body. In future, I hope, comparative pathology, which is just beginning to be studied, will teach us much; for in our bodies we men have many organs which are of little or no use to us, and are only relics of a former state of being. What, for instance, is the comparative anatomy of tonsils? Were I to make a man, I do not think I would put tonsils on him. Yet these, and such like organs, in accordance with the general law, are more prone to disease than are the others which are of real use in the system. I remember the case of a man who had a permanent vitelline duct. He had been out on a cold day, and the motion of the intestines twisted them in a mass round this persistent duct, and he died. I made a preparation of the duct, and wrote under it—"Cui vitam atque mortem dedit diverticulum." Every part of the body is alive, and has its own individual life and pathology, whether it be immediately required or not; only, if not required, it is more prone to disease than if it were. I could, for instance, suppose a fœtus of four months going to the doctor and saying—"I am going all wrong; my Wolffian bodies are disappearing, and kidneys are coming in their stead." Yet that is as much a condition of disease as some of those conditions of which I speak.

It is of the utmost possible importance, then, to be able to tell what we have and what we have not to cure. How often do we find people trying to do what is impossible. Some women have no more vital capacity than a canary bird; they are constantly ill, and it is useless to attempt to make them well. A man came to me, and said: "I don't know what to do with So-and-so. I have given her everything I could think of, and she will not get strong." "Why," I said, "you have been trying to put a quart into a pint pot. You cannot make her strong, and never will."

So, when a new instrument or mechanical means of diagnosis is introduced, we must try to make ourselves masters of it, so as to be able to use it aright, even though this is troublesome to ourselves; only we must beware of applying the knowledge thus acquired too early to practice. Thus, as regards the thermometer, doubtless it yields us most valuable information, but we must beware of using it as a guide to our treatment until we have a more complete knowledge of the condition of bodily temperature.

But after the physical comes the vital diagnosis. It is well to know exactly what is the condition of each part of the system; but to what is the wrong due? That no weighing or measuring can give you—only experience. A man has pneumonia—that is a too vague fact; what are the dynamics of the disease? One man with a pneumonia will get rapidly well and be right again in a few days, whereas another man will not get well at all. So, in different individuals, a form of disease apparently the same may be different from the beginning, and this we cannot always make out in our diagnosis, especially in internal disease. In skin-diseases we can do better.

During the last week I have been called on, as most of you know, to form a diagnosis of the workings of the mind. Here the break-down may be the first sign of the diseased condition, just as it may be in heart disease, peritonitis, and a score of other diseases. A man, after racing up a hill, finds himself breathless and spitting blood. He comes to you, and you find heart disease. It does not mean that the heart disease was produced by running up the hill; it only means that an organ, equal to its ordinary duties, failed when unusual stress came to be laid upon it. So is peritonitis often the result of disease previously latent, but brought on by exposure to cold, or some such agency. Some men say that such cases as those of doubtful sanity should not be taken up by us—that ordinary men are quite as well fitted for finding out the truth as we are, with all our training. If so, all I say is, that it is no honour to us that it is so.

Now therapeutics is the end, though the study of diseased conditions might be pleasant enough by itself. We are sometimes twitted with letting Nature alone to do her work. We do not. And here, again, we join issue with the theologians. They say, "If it is God's will that a man die, so be it." But say we, "God's will is to be found out; it is not a mere fate." We are not ignorant worshippers of nature, and whether a man is doomed to die or no, we know only by the result. We are connective agents. We have to adjust and correct. We know the tendency to recurrence to

the equilibrium—that is, health—and we endeavour to assist in adjusting this balance in each individual.

In fever, for instance, two things are promptly at work—destructive changes, and changes tending to recovery. In such diseases there are certain superficial accidents which we are apt to notice. In fever there are often complications; but these are really part of the fever-process, and are not to be interfered with by themselves. Our study must be, how best to bring the condition to a safe ending; for a patient in fever may get well of the fever, and yet die of a bedsore.

In conclusion, if I have spoken more as regards medicine than as regards surgery, I think the surgeons ought to be indebted to me for hints towards the extirpation of superfluous organs—a grand prospect for the surgeons of the future.—*British Medical Journal.*

PUS AND PUS CORPUSCLES.

The *Times and Gazette* remarks that two highly intesting memoirs on the chemical composition of pus corpuscles, and on the chemlcal composition of pus, by Drs. Miescher and Hoppe-Seyler respectively, have recently been published (Hoppe-Seyler's *Med. Chem. Untersuch.*, 1871, pp. 441-486); indeed, Prof. Hoppe-Seyler —no mean authority—regards Miescher's researches as the most important contribution that has been made of late years to the chemistry of pus. We propose to briefly summarize the results arrived at for the benefit of our readers.

Miescher, in order to obtain pus corpuscles free from serum, treated pus and fabrics impregnated by it with saline solutions of appropriate density. In these liquids the pus corpuscles sink to the bottom of the fluid, and may be obtained tolerably pure by repeated washings. Attention was first directed to the albuminoids of the protoplasm.

Pus corpuscles are mainly composed of albuminoids, and, when treated with solution of common salt, they are converted into a viscid gelatinous mass—a change dependent, as Rovida has shown, on the formation of a ring of hyaline substance around each corpuscle; but this is not due to myosin, for Miescher could obtain no reaction for this body. Five albuminoids were obtained, agreeing (in number, at least) with the five different albuminoids found by Kühne in muscle. These were—alkaline albuminate, undetermined whether kept in solution by alkaline phosphate or not; an albuminoid coagulable at 118° to 120° Fahr., which was not merely albumen dissolved in alkaline phosphate; an albumi-

noid coagulable at the temperature at which ordinary serum albumen coagulates; Rovida's hyaline substance; and a fifth albuminoid, the reactions of which need not be described here. Miescher was unable to detect paralbumen, though he does not deny its presence. The alcoholic extract of the globules was only investigated for lecithin and cerebrin, both of which were found to be present, the former in abundance. No glutin or chondrin was found in the watery extract, nor in the serum of pus.

It must be understood that a mixture of lecithin and cerebrin forms the substance to which Liebreich assigned the name "protagon," a highly phosphorized material, for lecithin leaves, on incineration, produce an ash very rich in phosphoric acid. But Miescher has also demonstrated the presence of another phosphorized substance in the nuclei of pus corpuscles, to which he has assigned the name *nuclein;* and he surmises that this body, on account of its phosphorous, plays an important part in cell-growth and in the genesis of the cell albuminoids and their derivatives. Nuclein closely resembles mucin, but is richer in phosphorous, and it appears to exist performed in the corpuscles.

With reference to the questions of the origin of pus corpuscles, their identity with the white blood globules and lymph corpuscles, and their ultimate fate, Hoppe-Seyler's results are remarkably interesting. Since living white blood corpuscles cannot be obtained from the blood in quantity sufficient for chemical analysis, and the spleen, although furnishing them abundantly, contains cerebirn and glycogen (both of which it is necessary to exclude), a novel expedient was adopted. Fresh crystalline lenses from the ox were introduced into the abdominal cavity of dogs, and, as was expected, the lenses became infiltrated with lymph corpuscles. The presence of glycogen was proved most clearly in the lenses at the period corresponding to the greatest number of active lymph cells; hence the conclusion that the glycogen comes from these. If, however, the lenses were allowed to stand still the corpuscles became rigid, sugar was found, but no glycogen. Since no glycogen was detected in the pus from inflammatory abscesses and wounds, its occurrence is a means of distinguishing lymp cells from pus corpuscles, although these have their origin in the former.

Canada Medical Journal.

MONTREAL, FEBRUARY, 1872.

SANITARY REFORM.

In the last number of this journal, we spoke of the contagious character of certain diseases, such as Small-pox, Scarlet Fever, Measles, Whooping-cough and Cholera. We alluded, moreover, to their being eminently preventible, by the adoption of certain precautionary measures, to which we propose to allude in this present issue of our periodical.

It has been computed that Jenner's great discovery, saves from death by Small-pox each year, in the British Isles, 80,000 lives, but there is not a country in Europe in which the beneficial result of vaccination has not been fully tested and proved. In Marseilles, in 1828, Small-pox was epidemic. The Academy of Medicine, Paris, took special care to collect the statistics of that epidemic. It was found that 8,000 persons in the city were unprotected by vaccination or a previous attack of Small-pox. Of these 4,000 or one-half, took the disease and many of them died; on the other hand, 30,000 persons in the city had been vaccinated, or were otherwise protected, and of these, 2,000 took Small-pox, and some of these cases were of a severe type.

We merely mention this case, more to place it on record, than to add any material weight to the already overwhelming evidence which is obtainable on this point. The assumption that vaccination is actually and in reality a preventive to the disease Small-pox is incorrect. In a great number of cases it proves a protective power which is at once striking and unmistakable, but that it is absolutely in every case a protection against the disease Small-pox, experience has proved to be untrue. This, however, is no reason against the employment of vaccination.

Vaccination has been shown to be one of the most efficient means at our disposal, for the prevention of the spread of Small-pox. But there are other means which experience has proved to be equally efficient, perhaps of greater efficiency.

These in the main consist in isolation, strict seclusion, surrounding the sick with nurses and attendants who are themselves in-

capable of being affected, inasmuch as they are known to be protected against the disease; and the early purification by disinfectants, and frequent ablution of the patient, his clothing, bedding, and the apartments he has occupied.

When the cattle disease spread from Europe to England, in 1867 6?, it was found to be a highly contagious malady, so much so that an infected animal would communicate the disease to a whole herd. The most efficient means for the arrest of the disease consisted in the destruction of the diseased animal, and sometimes of all those that had been exposed to the contagion. This of course was an expensive but most efficient method of treatment, and in due course of time the Rinderpest, as it was termed, disappeared. But inasmuch as the Lycurgan laws do not at present exist, this method of stamping out contagious diseases is not applicable to the genus homo. There are however measures quite as effectual as the pole-axe, which if faithfully carried out, would without doubt arrest the spread of contagious disease.

We observe that the Editor of the *Canadian Illustrated News* in alluding to the articles which have already appeared in our journal on the subject of "Sanitary Reform," propounds the novel doctrine that vice and ignorance give rise to contagious maladies. If this be the case, it is greatly to be wondered at that these diseases are so prevalent among the virtuous and educated. Experience certainly bears out the proposition of Sir J. Y. Simpson, that contagious diseases never spring up *de novo*, but that they are always due to contagion or infection in some form. The Editor asks: "Whence then the small-pox? Does Sir James mean to teach us that it was created, like the dog or the hawthorn, and must of necessity be propagated by its seed?" Most certainly. Small-pox is due to a specific poison, but requires an appropriate soil for its development. We have it in the sacred volume that the Almighty permitted Satan to try the patience of Job, and he did so by afflicting him with boils and other sores. We may therefore infer that small-pox was an invention of the devil, with as much logical precision, as that it was created like the dog or the hawthorn.

The Editor of the *Illustrated News* mistakes our meaning when he says: "Such hospitals under the charge of a Board of Health with powers that would be very likely claimed for it, might be made the agency for much domestic agony by separating those who from family ties and personal feeling would rather be together in sickness as in health, and even unto death." We never would recommend extreme measures of this character, but if persons assume the responsibility of the care of friends under such con-

ditions, they should be obliged to comply with the most strict measures of isolation and segregation.

We know of families in this city, and during this present epidemic of small-pox, who systematically sent their children to public schools, even while the disease small-pox was in their houses. And we could trace if necessary the propagation of measles and scarlet fever from the same want of forethought and common sense. Such is the experience we doubt not of every medical man.

It would appear that these measures cannot be forced on the people except by Act of Parliament. Man is so stupidly doltish, that recommendations for the preservation of his health, comfort, or his very life will be by him neglected, or altogether ignored, unless they come with the authority of law, with certain pains and penalties attached for their neglect.

Sanitary laws are based on actual observation and experience. It is well for any people if they profit by the experience of others. But the enforcing of sanitary regulations on the ignorant, becomes the duty of the Government of a country. In the case of Canada, the Government being without advice on this all important subject, cannot be expected to follow the suggestions of Local Boards of Health, or of every writer (however earnest), who takes up this subject in the interest of the whole community.

What we would again urge, is the calling together of a General Board of Health for the Dominion, not alone to counsel the Government, but to prepare an efficient and comprehensive bill to be submitted to the Commons of Canada during the coming Session. If this is not done, or if measures are not entered into with a view of arousing the people from the state of lethargy which exists, we cannot tell what amount of sickness and death are before us, and it will then be too late to set to work to remedy the evil while a state of panic exists. We observe that other countries are, as it were, setting their house in order, with a view of averting the threatened approach of pestilence, or at least of being fully prepared for its invasion. But in Canada we have not taken the first step. We are crying out "Peace, peace, where there is no peace." It is a subject unpalatable, and therefore ignored or wholly neglected—but it is not the wisest course to pursue, and we earnestly pray that our fears may prove without foundation.

THE MEDICAL OFFICERS OF HEALTH OF MONTREAL AND THEIR CIRCULAR.

Montreal,.....187

To Drs. Dugdale and LaRocque,
Medical Officers of Health,
City Hall.

I report the following cases of Small-pox:

No. Street, Ward.

(Signature,)

M.D.

We received the above printed document, purporting to emanate from the Medical Officers of Health for the City of Montreal, and we were inclined to regard it at first with favour, until we read an effusion which appeared in the Montreal *Gazette* of the 5th February instant, headed "The Medical Society's Opinion."

We copy the article *in extenso*, as it is too rich to bear any cutting down:—

"Drs Larocque and Ricard having been named by the Medical Society of this city to examine an article in the *Medical Record* of New York, which treats of certain measures adopted by the New York Board of Health, for the prevention of the spread of contagious diseases, such as scarlatina, small-pox, etc., and to report, and also having received instructions to confer with the Board of Health, and recommend the adoption of similar precautions by this city, prepared their Report, submitted it to the Medical Society on Wednesday last, and on Thursday to the Board of Health. The following recommendations were made:—

First, that every Doctor in the city shall be bound to report to the Board of Health every case of contagious disease under his care; second, that every person keeping a lodging house or hotel, or the relations and parents of persons thus affected, shall be bound in like manner. On receipt of such information the Health Officers shall go to the place, and decide whether the sick persons (of their own free will) shall be taken to the hospital. If the patient goes to the hospital, a sanitary policeman shall be charged with seeing that the house, and the effects that were used about the sick room, are disinfected. If he stay at the house the sanitary policeman shall ascertain two or three times a week whether the sanitary measures ordered at his visits are carried out. So soon, too, as the patient leaves his room, they must proceed to disinfect it. If the infectious disease be small-pox the vaccinator of that district should be notified in order that he may proceed to re-vaccinate the whole family, as well as the residents in each of the neighbouring houses, and if necessary those who live across the way.

The following rules to be observed in cases of small-pox, measles and scarlet fever, should be in the hands of all those who have sick people in their hands.

That the Doctor, the nurse and the mother of the patient should be the only persons permitted to enter the sick room, or to touch the clothes used by the patient, unless they should have been disinfected.

Second, that all those who do not wait upon the patient should be kept away from his room; and no use should be made of his clothes until they have been soaked for at least one hour in a preparation composed of three ounces of sulphate of zinc, one ounce of carbolic acid, and three gallons of water, and afterwards washed in boiling water. The feather bed, and all other bedding should be submitted to a complete fumigation before being used. The chamber vessel should constantly retain a disinfecting fluid, and be washed with boiling water whenever used. The closet, or *latrines*, should be daily disinfected, by throwing in chloride of lime, in the proportion of one pound to a gallon of water, besides a couple of ounces of carbolic acid. In lieu of handkerchiefs it is recommended that piece of cotton be used, to be burned as soon as done with.

So soon as the patient leaves his chamber, the ceilings, the walls, and wood-work, should be thoroughly washed with hot water and soap.

They also recommeend that energetic measures shall be taken to vaccinate all those who have not yet been vaccinated, and those in whom first vaccination has been doubtful, and following the practice of the New York Board of Health, to use only the lymph taken from the arms of absolutely healthy children—putting aside that which has been gathered seventy-two hours. They also recommend that a circular should be issued through the churches, informing parents of children that they are bound by law to have their children vaccinated within three months after birth; also that if any contagious disease, such as small-pox, measles, scarlet fever, or typhoid fever, breaks out in a family, they themselves are bound to give notice of the fact to the Board of Health, within twenty-four hours after the disease appears. In fatal cases the family should obtain a certificate of death from the family physician; and if he be absent or if they have not employed a doctor, from some doctor of the city."

We can assure our readers that the Medico Chirurgical Society of Montreal, which is composed of all the leading practitioners of our city, is not the Society here alluded to, nor have these sapient suggestions so far as we can ascertain, been submitted to that body.

We may be in error, or perhaps we look on this subject in a different light to the promoters of the suggestions above, but certainly they savour of an amount of ignorance and impertinence which is seldom met with.

Are the Health Officers in earnest when they request their fellow practitioners to report to them any cases of small-pox or other contagious disease, in order that they the Health Officers, may

be in a position to repair to the house of the patient, and decide the very knotty question of the fitness of the patient for removal to hospital. Is not every practitioner quite as capable of deciding this question as either of the Health Officers, or both of them together. But if the patient complies, his friends are then to be pestered by a sanitary policeman, who will issue his orders with the same amount of *sang froid*, as he orders householders to cut the ice from before their door steps, with the threatened alternative of being summoned before Mr. Recorder, and fined in case of non-compliance.

We need hardly allude to the other suggestions concerning disinfectants; no two minds agree as a general rule, and we see no good reason why a formula need be prescribed by the Health Officers. Certainly if we required a disinfectant, we could select from the numerous remedies of that class some few which would be equally good and perhaps better, than a mixture of sulphate of zinc and carbolic acid in water.

The recommendation to substitute a piece of cotton for pocket handkerchiefs is particulary good, but we would pity our patient's nasal appendage.

The concluding suggestion is a matter of very great importance. In fatal cases a certificate from a medical man, setting forth the cause of death should be always obtained; perhaps the Health Officers are unaware that a bye-law exists in the city code, compelling the keepers of all cemeteries to refuse burial without a medical certificate of death, or a Coroner's order. We fear the suggestions of our city Health Officers will fall through; certainly in their present form they will not be complied with by the profession generally, nor has the Corporation the power of enforcing them.

DRUGGISTS PRACTISING AS PHYSICIANS AND SURGEONS.

We beg leave to call the attention of the authorities of the College of Physicians and Surgeons to the following advertisement:—

VACCINATION.

Those who have not been vaccinated, and wish to be, for 25 cents, with the purest and best Vaccine, had better call round at JOHN BIRKS', CHEMIST AND DRUGGIST, 583 ST. CATHERINE STREET, where upwards of 400 have been done during the last two weeks with perfect satisfaction.

Don't fail to call at once.

If the law under which the profession is governed has become obsolete, whose is the fault? The College has a purse in which

several hundred pounds are to be found. We should imagine that a legitimate way of spending at least the interest of that money, would be in prosecuting all offenders. We are cognizant of the fact that several Druggists in this city, are constantly in the habit of prescribing over the counter, some go so far as to perform minor surgical operations; and others visit patients, and charge for their visits. These men, all of them, have set the College at defiance, in refusing to take out their license as druggists. Seeing they can act as they please without being interfered with in this particular, they next proceed to style themselves doctor, and assume the rights and privileges of that class, feeling convinced that the "old fogies" of the College cannot in any way molest them.

If the penal clause of the act incorporating the profession is inoperative, why allow it to remain so? Have it amended, and let us be in a position to change the present unsatisfactory state of things.

THE CANADA MEDICAL JOURNAL.

We have received a letter from a contributor, on the subject of the objects of our Journal, and who compares our Joarnal, unjustly we think, with the London *Lancet* and other medical periodicals, published every week in England.

In publishing the CANADA MEDICAL JOURNAL we were induced to do so to give to the profession in Canada, a means of making known their observations in the treatment of disease. No person can conceive the amount of labour connected with a publication of this character. Single handed we have laboured unremunerated, except in feeling that we have done some little good; and we will continue to labour—although the profession has not sustained our work, yet we hope that in time our confreres will be induced to earnestly aid us, by recording cases which may come under their observation. This would benefit themselves as well as the profession they have selected. It is no wise man's policy to hide his light beneath a bushel. It is the character of a churl, or of an indolent man, to allow important observations to go unrecorded.

What would be the present position of Medicine and Surgery, if earnest and painstaking observations had never been placed on record.

We cannot but feel that Canada has not taken that stand in scientific observation which she ought to hold. The Medical and Surgical profession is as well administered here as in other coun-

tries, and yet, with very few exceptions, there has been very little done, that can be pointed to with honest pride as being the work of a Canadian. We have felt on more that one occasion than our labour was one of supererrogation, and we have more than once been on the eve of relinquishing the task of publication, for we have felt that our journal was not appreciated, nor was it a welcome guest. If, however, our subscribers would become our contributors then indeed would much good result, and the CANADA MEDICAL JOURNAL would have fulfilled its mission.

Medical News.

THE USE OF SECONDARY LYMPH.

The *British Medical Journal* says: Our Manchester correspondent writes that the extent to which re-vaccination has been practised in Manchhster during the last few months, has afforded rare opportunities for deciding some questions which were before held by some to be still *sub judice;* for example, the custom which has prevailed among the mill owners of having all their work people vaccinated, has settled the question of the value of secondary lymph as compared with virgin lymph. Out of many similar experiences, the following may be quoted by way of illustration. A fortnight ago a surgeon vaccinated 300 operatives; in 150 of these cases he employed virgin lymph; in the remaining 150, secondary lymph was used. The first series gave the following results; 19 cases were unsuccessful; in 16 cases, small papules and spurious vesicles resulted, while the remaining 115 showed well-marked primary vesicles. The second series gave very different results; for out of them 50 were entirely unsuccessful, 86 terminated in papules and small spurious vesicles, and only 14 yielded true primary vesicles.

A WEST OF ENGLAND CIRCULAR.

Roger Giles. Sur John Parish Clark, & skulemaster reforms ladys and gentlemen that he drass teeth withowe waitin a moment, blisters on the lowest tarms and viziks vor a penny a pease. He Zells Godfathers Cordel, kutz korns and hundertakes to keep hevery bodys nayles by the year or so on, Young ladies and gentlemen larned there grammer language in the purtiest manner, alzo gurt kare taken off there morals and spellin, alzo Zarm Zinging teechin the bais vial and all sorts of phancy Work, Queerdrills, pokers, Weazils and all other contrary dances tort at

hoam and abroad at perfekshun. Perfumery and snuff in all its branches, As times be cruel bad He begs to tell that he has just begun to sell all sorts of Stashuary wares, Kox, Hens, foles, cheese, Poltry, blackin bauls, herrins & coles skrubbin brushes, trakel, Godley bokes & Bibles, Gimblets, micetraps, brick dust, & whisker seed, and hall sorts of sweatmeats, inkludin taters, sassages, and other gardin stuff, also phrute, hats, Zongs, hoyle, lattin bukets, and other eatables. Korn & bun yard zarve, and all hardwares, He also performs fleabotomy on the shortest notice and further more in partikular he has laid in a large assortment of trype, dog's meet, lollipops and other pikels,—such as Hepsom Zalts, hoysters, windzer Zoap &c, old rags bort & sold heare & nowhereshelse new laid heggs hevery day by me Roger Giles.

Half Holiday.——

AMERICAN MEDICAL ASSOCIATION.

The Twenty-third Annual Session will be held in Philadelphia, Pa., May 7, 1872, at 11 A.M.

The following Committees are exprcted to report:—On Cultivation of the Cinchona Tree. Dr. Lemuel J. Deal, Pennsylvania, chairman; On the Anatomy and Diseases of the Retina. Dr. R. F. Michel, Alabama, chairman; On the Comparative Pathology and the Effects which Diseases of Inferior Animals have upon the Human System. Dr. George Sutton, Indiana, chairman; On the Structure of the White Blood Corpuscles. Dr. J. G. Richardson, Pa., chairman; On Vaccination. Dr. T. N. Wise, Kentucky, chairman; On Skin Transplantation. Dr. J. Ford Thompson, D.C., chairman; On the Nature and Process of the Restoration of Bone. Dr. A. L. McArthur, Illinois, chairman; On some Diseases peculiar to Colorado. Dr. John Elsner, Colorado, chairman; On Correspondence with State Medical Societies. Dr. N. S. Davis, Illinois, chairman; On National Health Council. Dr. Thomas M. Logan, California, chairman; On Nomenclature of Diseases. Dr. Francis Gurney Smith, Pa., chairman; On What, if any, Legislative means are expedient and advisable, to prevent the spread of Contagious Diseases. Dr. M. H. Henry, New York, chairman; On American Medical Necrology. Dr. J. D. Jackson, Kentucky, chairman; On Medical Education. Dr. J. S. Weatherly, Alabama, chairman; On Medical Literature. Dr. Theoph. Parvin, Indiana, chairman; On Prize Essays. Dr. Alfred Stillé, Pa., chairman; On the Climatology and Epidemics of—New Hampshire, Dr. G. R. Crosby; Vermont, Dr. G. B. Bullard; Massachusetts, Dr. E. Cutter; Rhode Island, Dr. Edward T. Caswell; Connecticut, Dr. J. C. Jackson; New York, Dr. W. F. Thoms; New Jersey, Dr. E. M. Hunt; Pennsyl

vania, Dr. W. L. Wells; Maryland, Dr. C. H. Ohr; Georgia, Dr. A. J. Semmes; Missouri, Dr. W. S. Edgar; Alabama, Dr. R. F. Michel; Texas, Dr. S. M. Welsh; Illinois, Dr. David Prince; Indiana, Dr. Dugan Clark; District of Columbia, Dr. J. W. H. Lovejoy; Iowa, Dr. J. Williamson; Michigan, Dr. S. H. Douglas; Ohio, Dr. J. A. Murphy; California, Dr. F. W. Hatch; Tennessee, Dr. W. K. Bowling; West Virginia, Dr. E. A. Hildreth; Minnesota; Dr. Charles N. Hewitt; Virginia, Dr. A. G. Wortham; Delaware, Dr. L. B. Bush; Kansas, Dr. Tiffin Sinks, Mississippi, Dr. J. P. Moore; Louisiana, Dr. S. M. Bemiss; Wisconsin, Dr. J. K. Bartlett; Kentucky, Dr. L. P. Yandell, senr.; Colorado, Dr. R. G. Buckingham; Oregon, Dr. E. R. Fiske; North Carolina, Dr. J. F. Haywood; South Carolina, Dr. M. Simmons.

Physicians desiring to present papers before the Association should observe the following rule:—

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the secretary to whom such papers are sent, to examine them with care, and, with the advice of the chairman of his section, to determine the time and order of their presentation, and give due notice of the same....."

Officers of Sections.—Chemistry and Materia Medica—Drs. R. E. Rogers, Philadelphia, Pa., chairman, Ephroim Cutter, Boston, Mass., secretary; Practice of Medicine and Obstetrics—Drs. D. A. O'Donnell, Baltimore, Md., chairman, Benjamin F. Dawson, New York, N.Y., secretary; Surgery and Anatomy—Dr. John T. Hodgen, St. Louis, Mo., chairman, W. F. Peck, Davenport, Iowa, secretary; Medical Jurisprudence, Hygiene, and Physiology—Drs. S. C. Busey, Washington, D.C., chairman, E. L. Howard, Baltimore, Md., secretary; Psychology—Dr. Isaac Ray, Philadelphia, Pa., chairman, John Curwen, Harrisburg, Pa., secretary.

Secretaries of all medical organizations are requested to forward lists of their Delegates, as soon as elected, to the Permanent Secretary.

Railroad and Hotel arrangements will be announced at an early date.

W. B. ATKINSON, M.D.,

Permanent Secretary.

1,400 Pine Street, S.W., corner of Broad,

Philadelphia.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

An Address upon the Power of Nature in the Cure of Disease. Read before the New Brunswick Medical Society. By William Bayard, M.D., Edinburgh, President of the Society, &c., &c.

Gentlemen,—A year has passed since you so kindly re-elected me as your President, consequently the time has arrived when I should place you in a position to select another in my stead. And let me add, that while I gratefully acknowledge and appreciate the honor conferred upon me, I must this evening give place to another; as I think it for the best interest of our Society that we should have a variety of Presidents, as well as subjects for discussion.

In retiring from this chair, it gives me great pleasure to reiterate what I said upon a former occasion--that our meetings and discussions have been conducted in a spirit creditable alike to our heads and our hearts—illustrating the fact, that genuine good-will and brotherhood exists among us—and long may it exist—is the earnest wish of one who has ever valued the respect and esteem of his brother practitioners.

When I last addressed you I made some remarks upon the "*Progress of Medical Science*," recalling to your recollections some of the advances made by *art* toward the cure of disease. This evening, with your permission, I propose saying a few words upon the *Power of Nature in the Cure of Disease*, and shall endeavour to prove that the *delusions* regarding the cure of disease that have existed in former days, and exist in our day, take their origin in, and owe their success to this "*Power*."

The states of health and disease are conditions belonging equally to all kinds of animals and vegetables. When the functions of an organized living body are performed in the mode, and in the order, belonging to its natural constitution, it is said to be in a state of *health*. When the functions deviate from their nor-

mal type, the individual is said to be no longer in a state of health, but to be ill, sick, or in a state of disease.

Considered as an abstract fact, it cannot be doubted that *nature* possesses the power of curing disease, in other words, that diseases often terminate in recovery without the interference of art. Yet it must be acknowledged that the public generally, not excepting even the literary and scientific classes, are grossly ignorant upon this subject.

Sir John Forbes in his defence of nature justly remarks, that: "Perhaps there is hardly anything in the whole range of ordinary "every-day knowledge—that is, knowledge with which everyone "is more or less conversant and familiar—which is so little under-"stood by men in general, as the real nature of the medical art, "and its actual power in ministering to the relief and cure of "disease."

This ignorance is manifested both in public and in private, by the falsest and most absurd notions, supported by arguments oftentimes deliriously ridiculous. That omnipotent monosyllable, *Facts! Facts! Facts!* is shouted by every triumphant disputant, into the ears of sceptics and disbelievers. Dame Nature is ignored —the *post hoc ergo propter hoc* error is sounded, the patient made use of the remedy and got well, therefore the remedy cured him. Such *facts* are to be found in abundance under the reported cures by the "*Royal touch*," "*The Weapon Ointment*," "*The Sympathetic Powder*," "*The Metallic Tractors*," "*Homœopathy;*" *et hoc genus omne*, cures attributed by all sound reasoners, to the power of nature, not to the remedy employed.

In looking for evidence in favour of the curability of diseases by nature, we shall commence our inquiry by citing the fact, that in the case of fatal epidemics among inferior animals, all affected with the disease do not die, consequently those restored to health without treatment of any kind, must be restored by the power of nature alone. We also know that wounds and injuries of various kinds, in wild and domesticated animals, get well without treatment. It is true, we cannot assert that the power of healing, exists in the same degree in man, that it does in animals, but it is a fact that a similar power exists in both.

No people have yet been discovered among whom there is not the semblance of a medical art. Yet the art among most savage nations is so rude, that cures taking place under it must be referred to nature; and the reports of travellers leave no doubt that the cures are many. For instance, we are told that in the Tonga Islands, if a "middling great man" is ill, a finger or two of one

of his dependants would be amputated, but for a chieftain, nothing less would suffice than the strangling of a child.

Mungo Park describes the *Saphias* or charm used by the Africans in the cure of disease. It consists in writing the charm on a board, and drinking the matter of the words when it has been carefully washed off.

Hesselquist reports on the authority of an eye witness, the mode of curing an Ague in Morea: "The patient has merely to lean against a peach-tree during the fit; the Ague is cured, but the tree is killed."

Evidence in favour of Nature's ability to cure diseases is found in the history of travellers and shipwrecked persons, thrown upon uninhabited coasts, surviving the severest diseases and accidents without treatment.

The "*Expectant system*" of treating disease, affords another example of the power of nature. A system followed to a great extent—even by medical men—in Europe. The patient is placed in bed, and potions and ptisans, possessing no medicinal power whatever are given, in other words the case is left to nature. And what is the result of such treatment? No doubt deaths that might have been prevented, take place, and oftentimes the duration of the disease has been prolonged. But also many recoveries from even the severest diseases have been recorded.

Commencing with Edward the Confessor, and ending with Queen Ann, the Monarchs of England were in the habit of "*Touching*" those brought to them for the cure of Scrofula. William the Third discontinued it, but Ann resumed it. The process consisted in placing the hand upon the head of the patient, after which the Monarch hung a piece of gold around the neck by a piece of white ribbon.

Cases are related of persons who had been blind for months, yet recovered their sight immediately upon being "Touched," so as to be able to walk away without a guide. So widely diffused was the belief in this power, that Charles the Second "Touched" nearly 100,000 persons in 12 years.

Dr. Wiseman, the best surgical writer of that time, says: "I "myself have been a frequent eye-witness of many hundreds of "cures performed by His Majesty's "Touch" alone, without any "assistance of chirurgery; and those, many of them such as had "tired out the endeavours of able chirurgers before they came "hither. It were endless to recite what I myself have seen, and "what I have received acknowledgments of by letter, not only "from the several parts of this nation, but also from Ireland,

"Scotland, Jersey and Guernsey." Here we have the *fact* that a man of ability believed in a power that could not have existed.

A proof of the fallacy of asserted *facts* in medical experience is found in the history of the "*Weapon Ointment*," and the "*Sympathetic Powder*."

The "*Weapon Ointment*" was said to be composed of "portions of mummy," of "human blood," and of the "moss from the skull of a thief hung in chains." It was used for healing wounds. The injured part was washed and dressed, and the weapon, or a facsimile of it, with which the wound was inflicted, was anointed with the unguent.

Fabricus Hildanus, one of the best surgeons of the time, could not resist the solemn assertions respecting its efficacy, and yielded a reluctant belief in the facts. Lord Bacon who wrote upon the subject, also exhibited a partial belief.

The "*Sympathetic Powder*" composed of "powdered blue vitriol," was applied to the blood stained garments of a wounded person, to cure his injuries, even though the sufferer was miles away. Sir Kenelm Digby procured the recipe from a Friar, who brought it from the East about the middle of the 17th century, and soon had an opportunity for testing its virtue upon his friend Mr. Howel. It is said: "That four days after he received his "wounds, Sir Kenelm dipped one of Howel's garters in a solution "of the powder, and immediately, the wounds which were very "painful, grew easy, although the patient, who was conversing in "the corner of the chamber, had not the least idea what was doing "with his garter. He then returned home leaving his garter in "the hands of Sir Kenelm, who had hung it up to dry, when Mr. "Howel sent his servant in a great hurry to tell him that his "wounds were paining him horribly, the garter was therefore re-"placed in the solution of the powder, and the patient got well "after *five or six days* of its continued immersion."

"King James the First, his son Charles the First, the Duke of "Buckingham, then Prime Minister, and all the principal person-"ages of the time, were cognisant of this fact; and James him-"self being curious to know the secret of this remedy, asked it of "Sir Kenelm who revealed it to him, and His Majesty had an "opportunity of making several trials of its efficacy, all which "succeeded in a surprising manner." Doubtless the above statements were taken as *facts* to prove an absurdity.

The rise and fall of the *Tar water*, so urgently recommended by Bishop Berkely, is an illustration that however wise, learned, and honest a man may be, it does not necessarily follow that he can reason wisely upon a medical subject. This great and good man

believed that he had discovered a great panacea, and displayed his weakness by writing an essay upon it, asserting in the strongest terms that it would cure almost all the diseases that man is heir to. He gave his experience, and adduced any number of *facts* in support of his idea.

In the year 1796, Dr. Elisha Perkins, an American, promulgated the doctrine that two pieces of metal, one apparently of iron, and the other of brass, about three inches long, blunt at one end, and pointed at the other, which he called "*Metallic Tractors*," were to banish at least half the evils afflicting humanity.

These instruments were to cure diseases of all kinds by drawing them over the affected part very lightly for about twenty minutes. He took out a patent for the discovery, and charged five guineas for what cost about five pence.

Knaves generally seek the credulous to play upon, those with minds unable to weigh the value of testimony, and with minds of the class described by Oliver Wendell Holmes: "Minds with many "bright and even beautiful traits; but aimless and fickle as the "butterfly, that settle upon every gayly-coloured illusion as it "opens into flower, and flutter away to another, when the first has "dropped its leaves and stands naked in the icy air of truth."

Perkins soon found any number of dupes and advocates, who hounded on the great medical novelty with arguments and *facts* similar to those used in the present day to bolster up delusions not *yet* extinct. An establishment called the Perkinean Institution was founded in London with Lord Rivers as its President. It is a singular fact that "nostrum mongers" usually require and obtain a Lord, a Duke, or a General, to aid them in deluding others, as if judgment always accompanied the title. A Perkinean Society was also established, the transactions of which were published, recording in England alone, nearly 5,000 cures, or *facts* that the Tractors were used, and that the persons got well.

The majority of the members of the medical profession treated Perkinism with the contempt it deserved, for which they were assailed and denounced as they are at present, for disbelieving that Hahnenann's globules or Clairvoyant nonsense can cure disease.

The delusion was exposed by Dr. Heygarth, of Bath, producing equally wonderful effects with Tractors made of wood, lead and bone, with nails, slate pencil and tobacco-pipe. Dr. Alderson produced such effects upon five patients with Tractors *made of wood*, that "they returned solemn thanks in church for their cures." Oliver Wendell Holmes relates one of the cases: "Ann Hill "suffered for some months with pain in the right arm and shoulder. "The Tractors, *wooden ones*, were used, and in the space of five

"minutes she expressed herself relieved in the following apos-
"trophe: Bless me! Why! Who could have thought it, that
"them little things could pull the pain from one. Well, to be
"sure, the longer one lives, the more one sees. Ah dear!!!

And it may be asked how has this boasted discovery stood the test of time? With its brilliant promises, its learned patrons, its eloquent advocates, and its public institutions. It is dead and gone, having slept for the last forty years in the grave of oblivion, without an attempt to resuscitate it. And again it may be asked, to what are we to attribute the extensive belief in this delusion? The answer is simple. To that state of mind which leads the public generally, to give a credulous ear to the most ridiculous promises of Charlatans, to the extraordinary measures made use of to promulgate the novelty, to the almost universal ignorance of the power of nature to cure disease, and an undue estimate of the power of art; and to the fact that persons with minds so constituted, saw what they considered an effect, but mistook the cause, namely they saw the Tractors used, and they saw that the person got well. It is needless for me to say, that to nature belongs the credit for any cures that took place under the use of these instruments.

Every age has had its "medical delusion." Ours, with its increased knowledge in other matters, is not an exception. Among others, we have Homœopathy. I select it, as probably the best illustration that can be found, of the power of nature in the cure of disease. It has lived longer, and has been more generally adopted than most others. A vast number of persons have recovered while swallowing Hahnemann's infinitesimal "nothings," therefore if it can be proved that the "globules," which Hahnemann says it takes about 200 to weigh a grain, possess no medicinal property whatever, then the only conclusion to be arrived at, is that the cures have been produced by the power of nature alone.

This superlative delusion was founded by Samuel Hahnemann, in 1796, from that time until 1828, he wrote several works upon the subject, and he certainly represents Homœopathy as it now exists. As a system it is expressed by the Latin aphorism "*Similia similibus curantur*," or *like cures like*—that is, diseases are cured by substances capable of producing symptoms resembling those found in the disease under treatment. A disease, according to Homœopathic nomenclature, consists in a group of symptoms and the proper medicine for it, is the one which is capable of producing a similar group of symptoms when given to a *healthy* person.

The second great fact which Hahnemann professes to have

established, is the *efficacy of medicinal substances reduced to a wonderful degree of minuteness or dilution.* In his work on chronic diseases he gives us his mode of preparing his little doses. He tells us that one grain of the medicine is to be added to 100 grains of sugar of milk, and after just so many minutes devoted to rubbing and scraping it together, it constitutes the 1st dilution. Each grain of this powder contains the hundredth of a grain of the medicinal substance, mingled with the sugar of milk. Continue the process, and the 2nd dilution will be one ten thousandth; the 3rd dilution, one millionth; the 4th, one hundred millionth; and so on, to the 30th and even the 200th dilution. We are told that the 10th dilution is generally prescribed, but when great power is required, the 30th and up to the 200th dilution is recommended.

It has been computed by Sir James Simpson that one grain of arsensic, at the 30th dilution, would require material equal in bulk to 60 globes the size of this earth, to absorb it.

When liquids are to be used, the same process of dilution is to be observed, but it is ordered that the vial must have but two shakes. For Hahnemann's own words are: "A long experience and multi-"plied observations upon the sick, lead me within the last few years "to prefer giving only two shakes to medicinal liquids, whereas I "formerly used to give ten."

We are told that the *pediculus capitis,* is hunted down in his capillary forest and prescribed; it is well for the sensitive stomach of the patient, that the dose contained in the microscopic sugar-plum is so minute.

It may be asked, by what process of reasoning, can a sane mind be induced to believe that such doses possess any medicinal property whatever.

The third great doctrine of Hahnemann is, that "*seven-eighths at least of all chronic diseases* are produced by the existence in the system of that infectious disorder known in the language of science by the appellation of *Psora,* but to the less refined portion of the community by the unmentionable name of *Itch.* In his words:— "This Psora is the sole true and fundamental cause that produces "all the other countless forms of disease, which under the names "of debility, hysteria, insanity, idiocy, epilepsy, cancer, paralysis, "deafness, asthma, loss of sense, pains of every kind, &c., &c., &c., "appear in our pathology as so many peculiar, distinct, and inde-"pendent diseases." He also informs us that it took him 12 years to make this "great discovery."

This is a startling discovery to say the least of it, to be made outside the walls of a lunatic asylum.

These are the three cardinal doctrines laid down by Hahnemann

in his "organon" and his Treatise on Chronic Diseases .All Homœopathists agree that the law "*Similia similibus*" is the only fundamental principle in medicine. And the belief in, and employment of infinitesimal doses in general, though a movement has been made of late years, to employ the 1st dilution, instead of the higher ones, as recommended by Hahnemann. And many are becoming ashamed of the doctrine that all chronic diseases originate in Psora. The fallacy of the Homœopathic doctrine has been so thoroughly established by sound reasoning, arguments and experience, no doubt familiar to you all, that I will not take up your time by repeating them; my object being simply to shew that the Homœopathic Materia Medica, consists of nothing but "sugar of milk" and a "nomenclature," and as such can have no effect upon disease.

"In 1835, a public challenge was offered to the best known "Homœopathic Physician in Paris, to select any ten substances "asserted to produce the most striking effects, to prepare them "himself, to choose one by lot, without knowing which one he had "taken, and try it upon himself, or on any intelligent and devoted "Homœopathist, and, waiting his own time, to come forward and "tell what substance had been employed. The challenge was at "first accepted, but the acceptance was retracted before the time "of trial arrived."

Public trials of Homœopathy have been made in many hospitals in Europe, by men of the highest integrity and standing, and not in a single instance has any effect been produced. And the juggling statistics published by its advocates, have never stood the test of examination. As Oliver Wendell Holmes says: "Most "scientific men see through its deceptions at a glance. It may be "practised by shrewd men, and by honest ones, rarely it must be "feared, by those who are both shrewd and honest. As a psycho-"logical experiment on the weakness of cultivated minds, it is the "best trick of the century."

As I said before it is the interest of believers in "medical delusions," to ignore the powers of nature. Hahnemann among the rest asserts that "no one has ever seen the simple efforts of "nature effect the durable recovery of a patient from a chronic "disease."

If the Homœopathic practitioner, when administering his infinitesimal doses, would acknowledge that he is amusing his patient —who as a rule likes to be dosed—leaving nature to do the work; we could in many cases, excuse, though not justify, the deception. But when he asserts in the most positive manner, that his doses possess medicinal property, we are compelled to impugn his

judgment, and stamp his system as utterly false and deceptive. Yet while doing so, we may learn a lesson from its application, it should teach us, to place more reliance upon the powers of nature.

I only allude to the *Clairvoyant* treatment of disease, as one of the delusions of the day. I will not insult your understanding by discussing such nonsense. If a mind is weak enough to believe that any human being possesses the power to distinguish and prescribe for disease—by the examination of some of the patient's hair, without seeing the individual—why! let him swallow the Charlatan's doses, and then engage a room in the Lunatic Asylum.

And now, Gentlemen, when bringing under your notice what I conceive to be proofs in favour of the power of nature over the cure of disease. I by no means wish it to be understood that I undervalue, or do not appreciate the power of *art;* far from it. I say with Sir John Forbes: "The medical art must hold its pre-"eminence as one of the greatest boons that human intellect has "ever elaborated for man's estate." And I may add, that when the public mind becomes more enlightened upon the course and progress of disease, then, and not till then, will the skill and learning of the scientific practitioner be appreciated.

Daily experience teaches us that nature almost invariably makes an effort to cure disease, but very often cannot accomplish her work, without the assistance of art. And the judgment and learning of the medical man, tells him when to assist her, and when to leave her unassisted. She means well, but does not like to be hurried, she took nine months, more or less, to every mother's son among us, before she thought him fit to be shewn to the world.

As an illustration of the necessity for the interference of art, I may mention that I was once called to a lady, high in position, who had been swallowing "infinitesimal nothings" for about five months, for bleeding from Hæmorrhoids. She became alarmed at the continued flow of blood, and requested her physicians to arrest it, who told her that "it would not do to stop it, as the bad blood was going away." Consequently the pile was allowed to discharge until she became anæmic, dropsical, and unable to leave her bed. Knowing that she had already lost too much of the vital fluid, I immediately took means to arrest the bleeding; gave her iron, cod-liver oil, and nourishing diet, and she recovered in between three and four weeks. Here nature could not perform her part, and required the assistance of *art*, and had art been resorted to at the proper time, this lady in all probability would

not have been confined to the house as many days as she was months.

At about the same time a gentleman came to me with the same disease. I found him plethoric, with a flushed face, and full and bounding pulse, and concluded that nature was relieving some internal congestion; therefore told him to go home and take a glass of cold water every morning, and return to me in four days. He did so, and was quite well. Now, it will require a deal of persuasion to induce this man to believe that the cold water did not produce the effect. He reasoned like the multitude, he was sick, took cold water, and got well, great is cold water! This argument serves all imposters, it is irresistible, consequently quackery flourishes.

St. John, N.B., January, 1872.

On the Glue Bandage in Fractures. By E. D. Worthington, M.D., Sherbrooke.

I read with a good deal of interest the very interesting article in the December number of the Journal, on "The Glue Bandage as a primary setting for Fractured Limbs. By George Ross, A.M., M.D., House Surgeon to the Montreal General Hospital."

In stating that I have used the Glue bandage occasionally since June, 1867, and frequently for the last three years in fractures, and in other surgical cases, I do so with the single view of adding my testimony as to the value of its introduction into surgical practice, rather than with the remotest intention of asserting any claim to priority of use, in this country.

I am persuaded that the Glue bandage has only to be used to be fully appreciated, and I venture to predict that, in the hands of a surgeon possessing an ordinary amount of mechanical ingenuity, with the fractured extremity as a model—a glue pot and brush, and a supply of old cotton or paper—such a perfectly adapted splint can be made, as will completely, and for ever supercede the use of the complicated, expensive, and cumbersome splints now in use.

There is hardly a case of simple fracture of the extremities where it is not at once applicable; and where a broken leg or arm, may not be put up in any position that is thought desirable. There is too, this further and most important recommendation that the glue splint—for it is to all intents and purposes a splint—if carefully applied, must necessarily fit the exact outline of the injured extremity, instead of the injured extremity being obliged

to suit itself to the accidents of form and shape, of perhaps the first splint that comes to hand. Its crowning glory however consists in this—as so ably pointed out by Dr. Ross—that as soon as the Glue bandage is dry, instead of the unfortunate sufferer being subjected to a long and painful continuance in one position, he may be allowed with perfect safety, and no discomfort, an amount of liberty of motion that is truly surprising.

In one of the cases reported by Dr. Ross, the patient having an "oblique fracture of both bones of the leg, got up on the fourth day and walked on crutches from that time until the completion of the cure, without any detriment to the limb." Really one might be excused for doubting the truth of such a statement, it seems so utterly impossible.

I first used the Glue bandage—or rather a modification of it—in June, 1867, in a case of oblique fracture of the middle of the humerus. The modification consisted in this, that I used a solution of white glue, and thickened it with starch, to give it a body, but I was soon satisfied that the starch was an unnecessary addition. In that case I found that the bandage when dry not only made a perfectly fitting splint, but made the necessary amount of counter extension itself, the arm being of course bent at a right angle. Shortening was just as possible as elongation, and both were out of the question.

In August, 1868, in a case of affection of the knee-joint, where I wished to secure absolute immobility of the whole limb, I proceeded very much in the manner as described by Dr. Ross: Using first a split sheet of wadding, then a roller applied in the ordinary way, smearing glue thickly over this, then another roller, glued, then strips of cotton longitudinally and transversely applied, then a third roller, covered with strips as before, all being thickly covered with glue, until I got a thickness of covering which when dry, fairly encased the limb in a beautifully fitting covering as hard and unyielding as a covering of steel! At the end of about six weeks this was removed, and a second one applied. This second one however was of a different material, and applied in a different manner.

Instead of cotton I used thick brown wrapping paper unglazed, in strips of two or three inches in width, crossing and re-crossing each other in every conceivable manner until I got the required thickness. I adopted this plan for the following reasons: When I removed the first glue bandage, I found the leg somewhat indented from irregular pressure. These indentations had caused some uneasiness, and it was this uneasiness, or as my patient expressed it "cutting in," which induced me to remove the band-

age. I am thus particular, for it is mainly in this mode of procedure that my plan differs from that of Dr. Ross. Where the continuous roller is used, no matter how carefully applied, there will I think necessarily be some degree of inequality of pressure, as the result of its application, and of course as the bandage dries, this unequal pressure becomes a source of annoyance to the patient, and splitting the bandage down will not entirely remove it. In any case, until the bandage become solid the patient must rigidly and religiously keep in one position, for as the bandage dries, so it remains. When the material—either cotton or paper —is applied in the manner that I have suggested—that is, not round and round in one continuous roller—there is a certain amount of "give" to it, and it naturally accommodates itself to the exact outline of the parts, from the pressure from within, and in this way, according to my experience, there is less liability to the formation of what I may call "ridges" in the drying process.

I used no lining of cotton then, nor have I used it since, but put the paper immediately on the skin. It might be supposed that there would be a serious objection to this, in the removal of the bandage, from its adhering to the fine hairs upon the surface, but this is not to be dreaded; the confined perspiration will be found to have liberated the hairs, at the end of a few weeks. A razor however would remove all cause of alarm. Paper is, in my opinion, better than cotton. It is less elastic, consequently less liable to dry unequally. It makes as firm a splint, it dries as soon, and it must commend itself in large practice, or in hospitals, on account of its comparative cheapness.

I have frequently used the ordinary wall paper, and found it to answer admirably. The commoner it is the better. The softer and more pulpy it becomes when wet with the glue, the more easy the splint. And then if the surgeon has an eye to the ornamental, room paper affords every facility for going into the decorative line. I used once some hunting paper, and my patient was lost in admiration, his broken leg, or rather its covering, was a "thing of beauty," one noble looking grey coming up to a stiff fence especially interested him, and his anxiety merged into doubt as whether the grey would not eventually be obliged to go under, instead of over it.

The relative merits of cotton or paper, and the different modes of applying them, may after all be considered as a matter of taste, or convenience. This however is certain, that either will make a splint, that for comfort, lightness and firmness, and for keeping the parts in situ, has never been equalled. Giving it one fair

trial will remove all doubt as to the possibility of Dr. Ross' case "walking about on crutches on the fourth day." Although I never had the courage to venture so soon, upon the "experimentum *crutches*," I am prepared to believe that in a case of simple transverse fracture of the leg, well put up in a Glue bandage, the patient might almost indulge in a hornpipe, or the Highland Fling with impunity!

In a case of fracture, of the leg for instance, with a certain amount of swelling, and where it is necessary to put it up for a few days in the usual manner, with a roller, and in a box splint, or on an inclined plane, the course I have always adopted in applying the Glue bandage is as follows: Dissolve a certain quantity of No. 1, white English glue, to the consistence of drained honey. Get a small sized paint brush, half or three-quarter inch diameter and a smooth board two or three feet in length, on which to give the paper—already cut the requisite lengths—a coating of glue. Now split the roller that is already on the leg down the middle, open the ends out, give the leg a good coating of glue, brushing under both sides as far as possible, and readjust the cut ends of the roller as you would an ordinary tailed bandage. With a little pains the whole leg may be glued, except at the heel and calf, and even at the latter point only a very narrow line need be left untouched. Now apply in succession layers of paper previously glued, and as each layer is completed give the whole a liberal covering of glue.

In five or six hours this will have become perfectly solid. All this time the leg remains in the original splint unmoved. The box splint of course has, or ought to have moveable sides. At the next visit lift the leg out of the box splint. and apply a few thicknesses of glued paper, to cover the unglued line on the posterior aspect of the leg. In this way no assistant is needed, and the whole thing is done without the slightest possibility of disturbance to the fracture.

As Dr. Ross says, all this "might lead some to suppose that the process is long and tedious, and in consequence objectionable," but it need not take up much time, and if it does, the comfort to the patient, and "its never getting out of order," will more than make up for it.

In the early part of January, I had three fractures primarily done up in Glue bandaging. One being of the leg, and two of the forearm, in children. In the leg case there was no confinement to bed at all, the child moving about freely from the first, using a chair instead of a crutch.

I used the glue bandage once, in a case of fracture of the neck

of the Femur, extending the glue splint up the outside of the hip-following the line of the groin anteriorly, and a corresponding line posteriorly—to a point above the pelvis, and then glued the broad bandage passed round the body to the point of this triangle, and I cannot imagine a better form of splint applicable in this form of fracture.

When necessary to split the bandage, an ivory paper cutter will be found very useful, cutting down on it with a sharp knife.

The Glue bandage split and laced, ought to be of service in cases of varicose veins.

I have never found it necessary to sling the leg, that the air may have equal access on all sides to dry it. Glue will dry very quickly in a mortise—where when the tenon is in—the air may be said to be excluded.

I was first led to use the glue bandage from the uncertainty attending the use of the starch one, very frequently in using the latter in Fractures, after the swelling had subsided, I was met with one of the great disadvantages of living in the country. Sometimes after the starch was prepared by most experienced matrons, and sometimes after making it myself, I found on the next day after its use, that it was as limp as possible; and of course in country practice, where a broken limb is often at a distance of several miles, and only seen occasionally, this uncertain stiffness was a serious objection to its use.

This led me to make up my starch with a strong solution of glue, which plan however I followed only twice, as it became evident that the glue alone was quite sufficent, and that it could be certainly depended upon to produce the requisite amount of stiffness, if only made strong enough, and applied with a liberal hand.

The common dark coloured glue is quite unfit for use, it has a most offensive smell, and under any circumstances will not make as good, or as nice looking a splint as the best quality of no. 1, or as it is commonly called "fish-glue." To give some idea of the quantity required, I should say that at least a quarter of a pound would be necessary in a case of fracture of the fore-arm in an adult; and where it is used as a primary setting, perhaps even more would be necessary.

It may be taken for granted, that every one is not acquainted with the fact, that glue may be kept, for any length of time, soft, but undissolved, in cold water. Cabinet makers are I believe, in the habit of keeping a supply of glue, for present use, in cold water; for the reason that not only will it dissolve more readily, but that there will be a difference in its adhesive properties sufficient to pay for the extra trouble. It is well to bear this little

fact in mind and in any case to dissolve the glue without "burning" it. When glue in its hard state is put into hot water, it will take a very long time to dissolve, it will generally form a most aggravating ball, or mass, in the centre of the pot, that would try the patience of an angel to rub down to a uniform consistence. When, on the contrary, it is first soaked for a couple of hours in cold water—as described by Dr. Ross—it will dissolve in a glue pot, or common tin cup, in a few minutes, and in a uniform thick or thin paste, according to the quantity of hot water added. I have for some time kept a supply of glue, in a jar, in cold water. It retains the consistence of soft "gum drops," or "jujube paste." When required I put the soft flakes into a tin cup, or glue pot, add a *very little* hot water, and there is a perfect solution before I can have time to prepare my paper, or cotton appliances. When a thick glue is wanted, no hot water need be added.

Only this morning I met Dr. Paré in a case of fracture of the middle of the leg. The case was his. As there was hardly any swelling he agreed with me that it was a good case for the primary application of the glue bandage. I drove home, got a supply of soft glue, and we finished bandaging the leg before glue—all ready in a carpenter's glue pot—in the house, was dissolved. I merely mention this case to shew the advantage of keeping glue ready prepared for solution.

Case of Retained Placenta. By F. W. Shirriff, M. D.

Mrs. B., aged 35, is in the sixth month of her pregnancy. Has had three children, the last born six years ago. Sent for me about 2 P.M. on the 25th January last. Says that for a month previous she has had great bearing down with pain in back, difficulty in making water, having to lift up the swelling in her abdomen frequently before doing so. Was taken ill during the past night with pains which resembled labour pains. I examined and found the child low down in the pelvis, but could not determine whether it was the head or nates. I could discover no os uteri, but the child was covered with a thickish membrane which was reflected over the posterior part of the vagina, and prevented the passage of my finger betwixt the child and vagina. I waited an hour but no progress was made, pains continuing slightly. I returned at 9 P.M., symptoms the same. Went home and was called again about 4 A.M., 26th; no progress had been made, but it appeared to me that if the membranes were ruptured, immediate delivery would take place. This however I did not dare attempt, as I believed that the child was pushing the uterus before it, and that there must have been a version of the uterus for a long time. I left again at 9 A.M., as I had a patient two miles off whom I must

visit that morning. I returned at 11 and found that the membranes had given way, water discharged, and the head on the perineum. I delivered her immediately of a small child, which lived fifteen minutes. On attempting to remove the placenta it would not move, and the patient reminded me that in all her previous deliveries, I had to remove them by introducing my hand into the uterus, as they were all adherent. I waited an hour, giving her two doses of ergot which had no effect. I now introduced my hand into the uterus without difficulty, but could not reach the upper part, as there was a contraction which would not admit more than two fingers, and I could not reach the adhering part. I persevered for a considerable time, but was at last forced to remove only what portion of placenta was within reach, leaving a large portion firmly adhering, an event which never happened to me before. Of course I watched my patient very closely, and I furnished her with a syringe and carbolic acid solution to be injected into the vagina occasionally. She continued very well until the evening of the 1st of February, when tearing pains and hæmorrhage came on, but not to an alarming extent. I examined, and now found the os open, but still could not reach the retained portion of placenta. I gave her an enema which operated well. I left her but was again called up at 12, as the hæmorrhage had slightly returned. I had prepared an infusion of ergot which was to be taken frequently. I saw her again at 4 A.M., when she was seized with rigors. This was easily checked by 20 minims Tra: op. and ʒi spt. ammo. aromat. In the morning she felt pretty well, and continued so all day. Next morning, the 3rd, I was shewn the placenta which had been discharged during the night. It was not putrid, and would have weighed over two ounces. My patient has now quite recovered without any untoward symptoms.

This case I consider to be an extremely interesting one. The membrane covering the presenting nates was not very thick, and at first I felt tempted to rupture it, but on examining more closely when I found I could not introduce my finger betwixt the presenting part and the posterion wall of the vagina, I became fully convinced that the covering membrane was the waters. I regretted very much I was not present when the uterus were discharged, as I then could have easily detected the difficulty. On introducing my hand the os uteri seemed to hang down in broad flaps which was another indication that it was the uterus which was pushed before the presenting part. The portion of placenta was retained nearly eight days after delivery, and seemed to have done no injury to my patient. There was a hæmorrhage on the first day, but not to an alarming extent.

London Practice. By James Perrigo, A.M., M.D., M.R.C.S. Eng., Demonstrator of Anatomy, University of Bishop's College.

No. III.

While visiting Guy's Hospital, I witnessed a death from chloroform. The poor fellow had his foot crushed by a railway carriage passing over it. Not more than three drachms had been administered. During the year I lived in London, there were two other deaths, from the same cause: one at the Royal Westminster Ophthalmic and at the Charing Cross Hospitals. The Canadian student will be surprised in passing from one hospital to another, to see the different kinds of apparatus used for the administration of chloroform.

Guy's Hospital was founded in 1721–24, by Thomas Guy, a bookseller of Cornhill, who at his death, in 1724, endowed the charity with a gift of £219,499. It has since been enlarged by a bequest of £200,000 by the late W. Hunt. The building now contains twenty-two wards, making up 580 beds; medical, anatomical, and operating theatres; a museum, library and laboratory; and a fine collection of anatomical preparations and wax models. It has a chapel, and Sir Astley Cooper, the great surgeon, lies buried within it. It had large open grounds behind, but the authorities have lessened that by building a large addition, which, I was informed, will add nearly 300 more beds; 5,000 in-patients 50,000 out-patients are annually relieved.

At the Brompton Cancer Hospital, Wednesday is the operating day. Here, excision of the tongue is not thought highly of. Messrs. Marsden and Weeden Cook are the attending surgeons. Sutures are altogether discarded in removal of the breast, the edges of the wound being brought together by adhesive plaster. No carbolic acid is used as a dressing, but a mere spirit lotion, and I am certain with as much benefit. I may state *en passant*, that no London surgeon employs acupressure. Sir James Paget occasionally uses it for the smaller arteries. Cases of epithelioma of the lips and vulva I have seen successfully treated, at least for the time, by Mr. Marsden. He employs two drachms of arsenious acid to one of mucilage. He holds that this paste may be applied to cancers situated in any part of the body, except inside the mouth or nose, or other parts where its application might be dangerous. He says it should not be applied to cancers that exceed four square inches, and only one-fourth at a time should be attacked. This paste is covered with lint and left on for forty-eight hours or three days, and then bread and water poultices applied and changed every three hours. He

does not recommend this treatment for cancers that are deeply seated, but he says that it is applicable to all forms of cancer, except in the above mentioned limits. He has employed this treatment during thirteen years, and finds no other caustic equal to it.

The Brompton Cancer Hospital was established in 1851, but did not occupy its present site till 1860. It is ultimately intended to accommodate 300 patients. From 1851 up to 1869, it has afforded relief to 8,546 patients.

The only thing I saw, out of the common run of cases, at the Black Friars Skin Hospital, was a man who had an indurated chancre, midway between the pubis and umbilicus. Psoriasis seemed to be more common there than here. I think, in England, they pay more attention to the internal treatment than what is done in this country.

Visiting the children's hospital in Great Ormond Street was always a great treat. While there I followed Dr. Dickenson. Cases of chorea are always to be seen here, and about one-half of them, as a rule, had a cardiac murmur. Rest, good diet, iron and strychnia, and during last summer the sulphate of zinc, formed the chief treatment. In giving zinc, Dr. Dickenson begins with two grain doses three times a day, and gradually increases till he gives as much as thirty grain at the dose. I did not see it cause any emesis, and the patients improved as well upon that treatment as any other. The zinc, however, he only gave in acute cases, and only began the treatment after they had been in the hospital for three or four days

I saw two cases of cardiac dropsy in children 5 years of age. They were put on squills, digitalis, and mercury. They improved and were sent to the convalescent branch at Highgate.

Pleurisy, owing to the neglect of the parents in not bringing their children sufficiently early to the hospital, always ran a severe course, and I was not surprised, when told the reason, at seeing so many cases of empyema. Dr. Dickenson never hesitated to perform paracentesis.

There was a very peculiar case of what was supposed to be Locomotor Ataxia, in a child 5 years old. He was the son of a gamekeeper, and his mother was dead. His father was afraid to leave him in the house, when out on his rounds, and consequently used to take him with him, sometimes leaving him to sleep for hours on cold damp grass and exposed to all kinds of weather. He was a regular little smoker, and showed great aversion to females. He had all the symptoms peculiar to the adult His muscular power was good, but there was complete loss of co-ordination. He suffered also from amblyopia. His case created quite

a little excitement in the profession, but unfortunately his father would not allow him to remain longer than six or seven weeks.

I saw one poor little girl aged 9 years, die from diabetes. It was proved in her case that the system does absorb moisture from the atmosphere.

Dr. Dickenson is a great believer in the theory that alkalies can prevent amyloid disease in long continued suppuration. This is in the face of opinions recently held of alkalies long administered, causing anæmia by lessening the number of red corpuscles. He shewed me a case on the surgical side, suffering from a suppurating hip-joint, where the patient had been taking citrate of potash for eighteen months, and no amyloid disease present. In looking at the case, I was surprised that excision had not been performed, as it seemed to me to be a typical case for the operation.

The treatment for chronic hydrocephalus was hydrarg sepcretâ and compression by an elastic band. Dr. Dickenson informed me that he had had several successful cases, and no other treatment employed.

The fee to attend this hospital is three guineas every six months, and I would advise any person intending to spend that length of time in London, not to neglect its clinical class. He can do so easily, as the visits are made at 9 in the morning.

In my next and last letter, I shall be able to finish in relating the most interesting items that transpired at the Samaritan Female, West London, and Moorfield's Ophthalmic Hospitals.

Proceedings of Societies.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

MEETING HELD MARCH, 9th, 1872.

The Society met in their rooms, the President HECTOR PELTIER, Esq., M.D., in the chair. After preliminary business, JOHN REDDY, M.D., L.R.C.S.I., read the following paper, with cases,

On Paralysis with Aphasia.

MR. PRESIDENT AND GENTLEMEN,—I have much pleasure in bringing before you the following cases of Paralysis with Aphasia, which have come under my observation, and trust that I shall not be trespassing too much on your patience, as it is necessary to bring before you the early history of—

CASE I.—On the 6th May, 1860, I was sent for to attend Miss

M. C., aged 11 years, and was informed by her friends that four days previous to my visit, she had been seized with pains in all her joints, which within the past two days had so much increased, that medical advice was deemed necessary.

I found her lying on her back, the face indicative of much suffering, her joints swollen and quite painful to the touch, and total inability to move—on pressing over the epigastrium, it caused her much suffering. Her tongue was white, pulse rapid, breathing hurried, skin moist, bowels confined, and appetite absent. She was unable to sleep owing to constant pain, she occasionally dozed for short intervals, awaking with much pain. Her case was not difficult to diagnose, being one of acute articular rheumatism. She had, however, one alarming lesion existing, which evidently was quite of recent date, a loud systolic mitral murmur extending to apex. While examining, even the gentle pressure of the stethoscope caused her much suffering.

Her treatment consisted of calomel and opium, a blister over the precordial region, and half-dram doses of the bi-carbonate of potash every three hours. During the first three days she progressed very favourably, but on the fourth she was seized with a rigor, followed by acute pleurisy of a mild character, when she was seen by the late Dr. Holmes, in consultation with me. She had so far recovered that on the 31st May she was able to sit up, and in a few days more to get out of bed. I attended her for a short time in June, and under the use of tonics, she rapidly regained her strength, the mitral murmur being much modified in character. I did not attend her again till April, 1863, when she was seized with great dispnœa and violent tumultuous action of her heart. I then found extensive precordial dulness, with well marked hypertrophy, the heart's action laboring, accompanied with a loud systolic mitral murmur, pulse small and irregular. This attack lasted for about a week, and was gradually subdued by aconite, digitalis, &c., followed by iron tonic, from which she derived decided advantage. I saw her occasionally from this period till 1870, the object of my visits being chiefly to prescribe for weakness, accompanied with general debility. From the date of her first illness she remained more or less anæmic. For the past two years her health has been so good, that I cannot find any memorandum of having prescribed even once for her. Excitement of any kind always affected her breathing and heart's action, and she could not go up or down stairs, face a strong wind, or ascend any height, without a feeling of great distress. Having given you this sketch of her history, I shall give the details of her final illness, death, and post-mortem.

On the 24th January, 1872, at 6 o'clock A.M., I was hastily summoned to visit my patient, her brother stating that she had been seized with some kind of fit before he left, and that she appeared partly unconscious. Within twenty minutes I was at her bedside, her dwelling being only a few hundred yards from mine. She presented the following appearance, partly lying towards the right side. Face pale and expressive of much suffering, left hand spread out over the left side of her head and ear, pressing the part firmly; right arm bent at right-angles, with the hand spread over the precordial region; legs partly flexed; pulse 76, feeble and inclined to be thready; heart's action quiet, with a soft mitral systolic bruit heard down to apex; feet warm, sensation unaffected; entire right side of the body slightly cooler than the left, which was best marked on the face, her nose being remarkable for its icy coldness; pupils regular, acting well under light. When addressed unable to reply, though perfectly conscious of our presence, and what we were saying. She made several ineffectual attempts to speak and answer questions, which sounded as if her mouth had been full of food, but not a syllable could be distinguished. She could, however, when asked where she suffered from pain, point with her finger to a small spot over and in front of her left ear, and occasionally she pressed her hand over the epigastrium. Her temperature was 99° 3-5ths.

I ordered a mustard poultice to be applied to the epigastrium and nape of the neck, and also had her feet placed in a mustard foot-bath, and afterwards had hot water bottles applied to the feet. I also gave her some warm tea, which was almost immediately vomited, accompanied with a considerable quantity of bile. Once or twice she became faint, and also very restless for two or three minutes at a time, unable to keep quiet in any position, at the close of one of these turns, she usually pressed the side of her head, where she evidently was suffering from pain. I remained about an hour and a half with her, and before leaving mentioned to her father, that from the manner of her seizure, and the symptoms following, I believed it to be a case of Embolism. She however had rallied to such an extent, and seemed so much relieved that I left, leaving word that should any change occur before my next intended visit, that I should be immediately sent for.

At 9.15 A.M., I was again hastily summoned, and on my arrival her mother informed me, that a short time before sending for me, she had had a fit, which lasted a few minutes, that she then fainted, but had revived again in a few minutes. She appeared to be very weak and restless, pupils unchanged, but the pulse had

risen to 84; the same amount of consciousness was present as when I had seen her previously. Temperature 98. I had hardly finished my examination, when she took a very severe convulsion fit, the left side of her face being very much distorted, the left side of her body seemed only to participate in the attack, this lasted for about two minutes, immediately afterwards the right side of her face became cold, her nose still retaining its icy coldness, I was struck at once with a marked difference between the two sides of her body, although at this period hemiplegia did not exist; her stomach again became very irritable, and she vomited phlegm and bile mixed, she also was suffering from flatulence; her right arm which was now flexed, and her hand pressed over her heart was rigidly fixed there.

To relieve the flatulent distension I gave her a turpentine enema, which had the desired effect, and gave momentary relief. I told her father that what I had so much dreaded at the time of my first visit had now fully taken place, and I advised him to send for Professor G. W. Campbell, as I wished to have a consultation with him. He arrived at 10 A.M., and while examining the case, it occurred to me again to tickle her feet, and although but twenty minutes had elapsed since my last doing so, I found the right leg motionless, the left quite sensitive, the right arm was also powerless. The Doctor coincided with me in my view of the case, and the following mixture was prescribed:

℞—Bromidi Potassii ʒii, Iodidi Potassii ℈j.
Tr. Aconiti Brit Phar m xlviii, Syrup Aurant ʒiij
Aquæ ad ℥vj m.
A dessert spoonful every three hours.

A sinapism to the nape of the neck and along the spine, and nourishment such as beef-tea and chicken broth, to be frequently administered.

12.30 P.M.—I visited her again. Pulse 78; stomach has been very irritable, quite a quantity of bilious matter of a sour offensive odour being ejected. She cannot retain the medicine, and seldom the nourishment She appears weak and restless.

5.30 P.M.—Saw her again, the paralysis of the right side of her body is more marked, and her swallowing is also evidently affected. She however understands what is said, and points to where the pain in her head exists. The pulse is unchanged, she is unable to retain food, at least in such quantity as will nourish her.

10 P.M.—Pulse 84. She appears to be about in the same state as at last visit.

January 25th, 8.30 A.M.—Pulse 90, much weaker. Hemiplegia

more marked; right pupil more sluggish than left; the pharynx evidently affected when she tries to drink. On tickling the right foot it is motionless, the left quite sensitive; the temperature of the right side is remarkably cooler then of the left, and the coldness of her nose remains unchanged.

At 1.50 P.M. she appeared very much worse. Thinking her perceptive faculties were absent, I asked her if she knew me, to press my hand; this she did twice. She nevertheless seemed weak, and if as about to sink from sheer exhaustion.

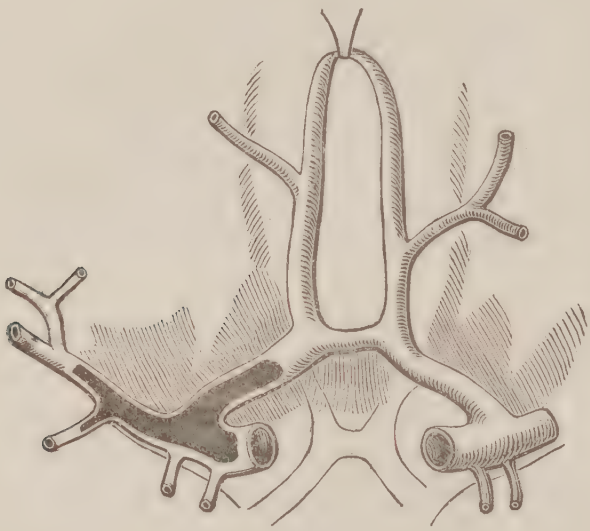
At 7.30 P.M. called again, when I found that about an hour previously death had terminated her sufferings, that shortly after my last visit she was seized with convulsion fits, which lasted up to the time of her decease.

It should have been mentioned before, that on retiring to rest the previous evening she appeared in her ordinary health, nor could any cause be assigned for provoking the attack. She had crossed bare foot from one room to another to reach her bed, and that across an oil cloth. Her mind also had been dwelling on a subject that may have caused much excitement of heart.

POST-MORTEM APPEARANCES.

On removing the calvarium, it was noticed that the anterior portion of the skull was nearly one and one half times as thick as the posterior. Dura Mater looked dark and congested from the outside. Little blood in the sinuses. Pacchionian bodies largely developed. Pia mater coarsely congested. No fluid under the arachnoid. On section, the consistence of the organ was found below par. Centrum ovale anæmic, puncta vasculosa but slightly marked. Very little fluid in the ventricles. Choroid plexuses pale. Cerebro-spinal fluid slightly in excess. Occupying the anterior half of the corpus striatum, and extending from that into the convolutions of the left anterior lobe of the cerebrum, was a patch of softened brain matter pale greyish white in colour, completely broken down, and having in or about its centre a small clot about the size of a duck shot. Examination of this softened matter demonstrated the nerve fibres somewhat shrunken, yet entire, a quantity of debris, &c., but none of the compound granular corpuscles of Gluge. The minute capillaries were loaded with fat granules, and much free fat was observed in the specimens. On searching for the point of obstruction, the left middle cerebral artery was chosen as the likely site, from the group of symptoms occurring in the case. On opening the artery a long, firm, bloody clot was found, commencing in the cavernous portion of the internal carotid, about one-fourth of an inch from its bifurcation,

and from that point extending outwards into the middle cerebral, occupying it to a short distance beyond its first division. In front the clot involves the anterior cerebral, nearly as far as the anterior communicating. The clot was not examined microscopically, as it was thought better to make a preparation of it in situ.



HEART.—On opening the pericardium, a large distended organ presented itself, somewhat fatty on the outside. The auricles and right ventricle were completely filled by post-mortem clots. The walls of all the cavities appeared thicker than normal, the left auricle being in addition enormously dilated. The tricuspid valves were thickened at their margins and contracted a little. On the ventricular surface near the margin were attached several minute masses of fibrine, united to the valve by narrow pedicles about two lines each in length. In place of the mitral valve, a narrow button hole like slit existed, admitting only the top of the little finger, and looking from the auricle like a narrow opening at the bottom of a funnel shaped depression. The ventricular surface of the valve was completely surrounded by a number of short thick chordæ tendineæ, all having their origin from one musculus papillaris, situated about half an inch below the orifice. These chordæ were so arranged, that blood driven from the auricle into the ventricle impinged directly on the centre of the musculus papillaris, and then passed into the ventricle through the openings between the chordæ. The margins of the orifice were much thickened and indurated, rendering closing of it quite impossible.

I am much indebted to Mr. William Osler, who assisted me at the post-mortem, and who has kindly made me this very valuable wet preparation, by which you will be enabled readily to perceive the clot in situ in the arteries described above.

Case II.—Maggie Q., aged 17, employed at Mr. John Lovell's printing and publishing establishment, came home from her work in apparent good health, on the 29th April, 1870, and having partaken of supper, walked towards the street door, and while doing so, she was suddenly seized with what her mother described to me as a fainting fit, followed by great weakness. She was placed upon a sofa, and I was immediately sent for. On arrival I found her lying on her back, breathing quietly, face pale and cold, with slight contortion of left side, the opposite expressionless, her pupils unaltered by light, the pulse 80, irregular and feeble, the right side of her body hemiplegic, her intellectual power was dull, but loud speaking roused her so that she could understand what was said, she moaned occasionally as if in pain, and at intervals of every two or three minutes, pressed her left hand on the left side of her head over her ear, and sometimes performed the same action over her precordial region. Respiratory sounds normal. A loud systolic mitral murmur however existed (on mentioning this fact to her mother, she informed me that it had existed for upwards of four years since she had had acute rheumatism.) On giving her some water to drink, she swallowed a little without any seeming difficulty. I now told her friends that I believed her case to be one of Embolism, explaining to them what I considered to be the accident that had occurred. I felt however in a better position at the end of twenty minutes to express my opinion more confidently as to its exact nature, she being by this time so far recovered as to understand what was said, and even to point to her heart when asked where she Suffered pain, she being at the time perfectly Aphasic.

Having given you the above sketch of this interesting case, I shall merely add that my treatment for some time consisted of the Bromide and Iodide of Potassium, good nourishment, and the occasional use of a small quantity of wine. From the day of her attack to the end of her life, which occurred 9 months and 17 days subsequently, she was always able to recognize her friends and acquaintances, and even to occasionally walk round the room dragging her palsied limb, but she never recovered for a moment from her aphasic state. I learned from her mother that about three weeks prior to her decease, she became suddenly very weak, losing the power over the sphincters, unable to retain either urine or faeces, and that she had even some difficulty in swallowing. I had not seen her for a considerable period, having expressed a wish that at her death, a post-mortem ought to be made (a request they seemed decidedly opposed to,) and which I believe deterred them from sending for me again. Dr. Ross informs me

that she presented herself at the Montreal General Hospital, but would not remain. He recognized the nature of the case also at that time, and took a great interest in her case.

Case III.—June, 1868, I was sent for to see a woman aged 32, who three months prior to my seeing her had contracted syphilis from her husband, and for which no treatment had been adopted. Her state was truly painful and wretched, she looked haggard and worn out, was quite emaciated, spent sleepless nights, and her appetite gone. She was covered with a plentiful papular eruption, glands of the neck and groin swollen, she had had a chancre on the left labium which had healed, but felt hard at the base, and lastly, an attack of iritis was commencing, very slight angular deformity existing. Her treatment consisted of mild mercurials, mercurial vapor with Iodide of Potassium and generous support. The case progressed favorably till the 8th of September, having gone out the forenoon of that day she accidentally got wet feet, was seized towards evening with a severe rigor, followed by fever, but nothing alarming occurred till 2 o'clock A.M., when I was called to see her. She was then lying in bed very pale, but conscious, completely hemiplegic on the right side of her body, with total aphasia. Her husband stated that she had fits at intervals of 10 minutes for half an hour before my visit shorter insepduration each one. She appeared very weak, but seemed much better on giving her a little brandy and water. I examined her heart, and found a systolic mitral murmur present, but could not tell how long it had existed, nor could I get any history, she had always been a healthy woman till this attack, she had had six children, and a few years previously, she aborted at the third month, being pregnant with twins. I attended her during all her confinements with the exception of the first. For a fortnight after this attack, she had lost perfect control over the sphincters, but within a fortnight regained the power. Within a period of two months she improved rapidly, the aphasic state remaining unaltered for about a year, when she was able to use a few words such as no, yes, &c. Her treatment consisted of Iodide and Bromide of Potassium, iron, quinine wine, &c. For the last two years her condition is unchanged.

Case IV.—Mrs. A., aged 56, stout build, was attacked with acute rheumatism on the 9th March, 1870, for some weeks previously she had been dyspeptic, and complaining of pains in her spine and joints. She states that fifteen years ago she had been confined to bed for a week with a similar attack. Present state—right

shoulder, elbow and wrist-joint swollen, also left knee and ankle similarly affected, slight redness, and very sensitive to touch, the pain causing inability to move, there is nothing however to note, to distinguish the present from any other ordinary attack of acute rheumatism. Her treatment consisted of bi-carbonate of potash in large and frequently repeated doses, and opium at regular intervals. Everything so far seemed to favor the idea that her recovery would be speedy, till the 2nd April, when a few moments after being propped up in bed (at 7.30 A.M.,) while conversing with her husband, and without any premonition, she was suddenly seized with a convulsion fit which only lasted a few minutes. Within half an hour I saw her. Her face was pale, drawn to the left side and expressionless, she made efforts to move her right arm and leg which seemed to be nearly from under the control of the will, and moved sluggishly. There was great debility: pulse 90 and slightly irregular; she appeared like a person as if awaking from a dream. She knew me at once, but was perfectly aphasic.

On examining her heart I found it irregular, and a systolic mitral murmur existing, this also was a new feature in her case, as up to this no lesion of that organ had occurred. She frequently spread her hand over her head as the seat of pain, which was of a dull aching character. Finding that there had been no action of the bowels for 36 hours, I administered a turpentine enema, which produced a large motion and quite a quantity of flatus, much to her relief. I ordered a mixture of aromatic spirits of ammonia to be occasionally given. At 10 A.M., I found her much better: pulse 92, fuller but slightly irregular, face unaltered, could move extremities of right side a very little better; mitral murmur the same; makes a great effort to speak, but cannot form words; pain in her head much relieved. 4 P.M., pulse 84, not so irregular; movements of right leg and arm improved, contortion of face less; makes a painful effort to speak, can utter sounds without the ability to form words. 3rd April, pulse 90, during the night a sudden improvement took place, when she began to speak this morning. 10.30 A.M., she can answer questions and tell about the pain that she suffered from in the head, but the effort seemed to fatigue her. Heart's sound the same, rather more regular, is able to take nourishment, and has nearly regained the use of her right arm and leg. 4th, pulse 80, feels much better, can converse to-day, but not fluently. 6th—Has quite recovered the use of her speech. The hemiplegia of right side gone. The left side of her face though improved, has the appearance of a person not fully recovered from facial palsy. She is free from

pain, and convalescence progressing rapidly. The mitral murmur persists.

February 20th, 1872.—Health good, peculiar expression of left side of face remains, pulse and heart's action regular, but the mitral murmur is unaltered.

It may not prove uninteresting to take a glance at the history of Embolism and Aphasia, and the gradual progress made by observers who have endeavoured to locate the faculty of articulate speech; and also to contrast the points of similarity which exist between these observations and the cases which I have brought before you.

When Gall, in 1800, first promulgated his belief that the faculty of articulate language was situated in both anterior cerebral lobes, it would appear after all only as a surmise on his part, nor did the idea seem to gain ground for 25 years later, when Bouillard made the same statement, which he tried to support and establish by pathological facts. Observing that whenever the faculty of speech had been lost, these lobes were always found diseased after death. It was not however till 1836, that another step in advance was made by Dr. Marc Dax, who announced the following idea: That the loss of the faculty of speech only occurred in injury to the left hemisphere, never to the right, and he was the first to observe that persons affected with Aphasia, were always hemiplegic on the right side. In 1861, M. Broca went still further, and stated his opinion more definitely, by locating the faculty of language in the posterior part of the third frontal convolution of the left lobe of the cerebrum, and he designated it as the "Convolution of Articulate Language," he used the term Aphemia to express the affection. In 1863, Dr. G. Dax, son of Dr. C. Dax, laboured to prove that not only is the lesion located in the same lobe as that stated by his father, but he is even more decided in defining the injury as occurring to the anterior and outer portion of the middle lobe of that hemisphere, which borders on the fissure of Sylvius. In 1864, Dr. Hughlings Jackson stated as his opinion that Aphasia with hemiplegia of the right side, is owing to obstruction of the middle cerebral artery and some of its branches, often the result of heart disease, occasionally from injury or syphilis.

It would appear that there have been a good many examples of late years to support the views put forward by those observers who labour to prove that the faculty of articulate language does exist in the left hemisphere and close to the corpus striatium. My cases Nos. 1 and 2 are, I think, striking instances of the truth of their observations, and go a great distance, not only to prove, but

sustain such an idea, in case No. 1 there exists not alone atrophic softening of the centrum ovale, but decided softening in the corpus striatum, and extending from that into the convolutions of the anterior lobe of the cerebrum. A patch of softened brain matter pale greyish white in colour, completely broken down, and having in its centre a small clot. On examining the circle of Willis, a clot is found commencing in the cavernous portion of the left internal carotid, close to its bifurcation, extending outwards into the middle cerebral, and forwards into the anterior cerebral. When you connect the post-mortem appearances with the symptoms as detailed in my cases during life (particularly No. 1.) the evidence as to the locality of articulate language appears very striking, and seems in a forcible manner to bear out the views of previous observers. Some are opposed to the idea of locating the faculty of language in the left hemisphere of the brain, considering that the right equally participates. Now if it be capable of demonstration that a difference in the two hemispheres does exist, as is definitely laid down by Todd and Bowman in their work on physiological anatomy, who state that there is not a perfect symmetry between the left and right hemispheres, and give the following remarkable fact: that the lower the brain development is, the more exact will be the symmetry of its convolutions, and give as examples children and the inferior races of mankind, then these striking anatomical facts added to the result I have already given of the postmortem, and the symptoms during life in case No. 1, should I think fully establish the point, that the seat of articulate language is situated in the left hemisphere. Gratiolet who has also investigated this subject, states that the convolutions of the anterior lobes of the left hemisphere are developed at an earlier period than the right, but this needs confirmation.

Case No. 3 is a good example of syphilitic aphasia.

Case No. 4 clearly illustrates Aphasia occurring during convalescence from acute rheumatism, and may have been excited by passive congestion or thrombosis, I incline to the latter idea from the manner and suddenness of the attack, believing that a small clot may have temporarily plugged the carotid, near the middle cerebral artery, and as absorption or solution of this progressed, all the unfavourable symptoms disappeared, and recovery ensued. Again, were it merely the result of passive congestion, I should say recovery would be more rapid.

Dr. Howard said the thanks of the Society were due to Dr. Reddy for the interesting paper he had presented, and upon the subject of which he would like to make a few observations, but

felt a difficulty in selecting the points, so much food for thought existed in the communication. The first clinical fact that struck him was that in two of the four cases just related convulsions occurred at the time of the seizure. Now the tendency of recent opinion is to regard the absence of convul ion at the moment of the occurrence of hemiplegia, as the rule in Embolism of the middle cerebral artery, and its presence as rather suggestive of cerebral hæmorrhage. Yet, remembering that the sudden cutting off of the supply of blood to a large portion of the brain, often gives rise to convulsion, it appears somewhat singular that convulsion is not more frequently observed in Cerebral Embolism.

He would like to know if these patients had ever had epileptic fits previously to the attacks of paralysis? "*No.*" This was important, because the inspection of the first case revealed great thickening of the calvarium in the frontal, as compared with the occipital region; and in the fourth case, the power of both speech and motion returned in a few days after the seizure, as occasionally happens in Epilepsy.

A second clinical feature of these cases, was that they appeared to corroborate the view entertained by British physicians, that complete and marked loss of consciousness is not the rule in Cerebral Embolism, although the late lamented Niemeyer in his communication on the subject, written shortly before his death, had stated that it was.

On the subject of the "faculty of speech" residing in a particular spot in the *left* hemisphere, it was so opposed to the ordinary views of the physiology of the brain, as an organ consisting of two symmetrical halves, and it had been so ably controverted, that it was not necessary to discuss it. It is well known, moreover, that "Aphasia" occurs in lesions of the right hemisphere also—One fact however does appear strange, and requires satisfactory explanation, the much greater frequency of the association of Aphasia with lesions of the left than of the right side of the brain. It may be that Dr. Moxon's suggestion, that one-half of the brain is educated before the other is correct. Gratiolets' statement that the left anterior convolutions are earlier developed than the right, appears to confirm it—and just as the left motor centres of the brain in right handed persons, may be inferred to be specially educated and developed by the constant employment of the right hand instead of the left, so it may be that the centres that regulate language situate in the left half of the brain, are specially educated and developed by those centres being more early and more constantly exercised, than their associates or fellows in the right half.

This referring of defects in language to disease in the third left frontal convolution, appears to be a hasty and unreliable drawing of a general law from a few facts. Let it be remembered that a lesion of the convolutions *per se* may probably be sufficient to interfere with the faculty of language; so may a lesion of the internuncial fibres, which pass between those convolutions and the great motor centres at the base of the brain; and finally, a lesion of these motor centres themselves may, and very frequently does impair or suspend that faculty.

About three weeks ago I was summoned one evening to see a professional lecturer, who after having spoken an hour, suddenly lost his memory, and suffered at the same time impairment of speech. No paralysis of motion or sensation existed, consciousness was intact, he at first employed many meaningless words, which he repeated as though conscious that he was not understood; when told to say "chicken" he invariably said "chippen." A few days later when somewhat improved, he proposed writing down the heads of a lecture which he wanted his son to deliver, and wrote such words as "contubute," "spoking," "dispention," etc.

Now in this instance, I doubt not, the lesion was seated in the convolutions of the brain, and involved neither motor nor sensory centres. In Dr. Reddy's first case hemiplegia co-existed, with the loss of speech, and softening was found in the motor centre or corpus striatum. And who can say that in many of the cases of Aphasia, in which the lesion obviously affected the third left frontal convolution, that it did not also, though not perceptibly to the eye involve the adjacent motor centre—the corpus striatum. The whole subject is one of difficulty, and we still want an explanation of the more frequent association of impairment of language with lesion of the left than of the right side of the brain.

Dr. Fenwick stated in reference to the question of loss of speech occurring in connection with lesions of the left side of the brain, he would mention a case which came under his observation some years ago, and which was subsequently published.

A patient was admitted into the Montreal General Hospital, suffering from slight symptoms of fever. On the morning of the attack from which he died, he sat on the edge of his bed, and helped himself to his medicine: while in the act of pouring out the medicine he fell to the ground, though he did not lose consciousness. He had to be lifted into bed, as there was paralysis of the left side. The power of speech was entirely lost, he gradually

improved in this particular, but his speech was thick and unintelligible. Death occurred one month from the first seizure apparently from syncope.

On post-mortem examination, the middle cerebral artery, right side, was enlarged and a fine fibrinous clot was found filling up its entire calibre; the right corpus striatum was yellowish in colour and softened in texture. On examining the heart the mitral valves were found covered with vegetations.

Dr. George W. Campbell observed that he had met with one case in which there was paralysis of the *left* side, with loss of the power of articulation occurring suddenly, during apparent convalescence from acute rheumatism, in the course of which a cardiac murmur had been developed. This was now many years ago before the subject of Embolism had ever been written upon, but he had upon reflection been drawn to the conclusion, that obstruction of the vessels of the brain must of necessity have been the immediate cause of the paralysis, and that the probability was that the obstructing body had been derived from the valves of the heart. This case proved fatal, the aphasic condition remaining until the end, but no post-mortem could be obtained. Since the occurrence of Embolism had come to be recognized, he had witnessed several examples of this affection in different vessels. One notable instance he would like to mention: The patient, a gentleman of about 45 years of age, had been for some years the subject of chronic heart disease, there being distinct aortic murmurs and hypertrophy. Stricture of the aorta had also been diagnosed. Whilst travelling in the States, he was seized with violent pain in the left foot, which was at first looked upon as an attack of gout, but having been seen by an eminent physician of Philadelphia, and told by him that he believed that the artery of the limb was plugged, he was advised to return at once to Montreal where he resided. Here the previous diagnosis was fully confirmed, and a few days subsequently he was seized with most severe pain in the right arm, which rapidly became perfectly white; a firm elongated clot could now be distinctly felt in the axillary artery. He died soon after, and upon examination entire obliteration by firm clots was found in the right brachial (for the clot had been forced onwards) and in the left posterior tibial artery.

PERISCOPIC DEPARTMENT.

Surgery.

CASE OF AVULSION OF THE RIGHT ARM AND SCAPULA.

By J. J. Charles, M.A., M.D., M.Ch., &c., Demonstrator of Anatomy, Queen's College, Belfast. Read before the Ulster Medical Society, Feb. 3rd., 1872.

The following case is instructive, as exhibiting the extraordinary powers of nature in sustaining life after severe mutilation.

On Sept. 14th, 1870, I was called to Tintagh, about six miles from Cookstown, Co. Tyrone, by Dr. Otterson, of Moneymore, to perform an operation on a boy, named Stephen M., who had met with an accident in a scutch mill. The patient was ten years of age, and of a healthy constitution. About 11 A.M., he was carelessly handling the wooden rollers in the mill, when, his right hand having been caught between them, the limb was dragged in, and almost completely torn from his body before the machinery could be stopped. Considerable hæmorrhage was said to have occurred, but I have good reason for doubting the statement. The boy was carried to a neighbouring house, as his home was at a considerable distance.

On examination at 4 P.M. the boy was found cold and weak, yet suffering less than might have been expected from either pain or constitutional depression. The right limb presented a frightful appearance. The integument was stripped from a considerable portion of the side of the chest and front of the shoulder, leaving a large and very irregular wound, which extended downwards from the acromial end of the clavicle for several inches. But the soft structures behind the shoulder-joint served to keep the limb still attached to the trunk, and, strange to say, were remarkably free from injury. The greater part of the upper third of the humerus and the whole of the scapula were torn away, and some of the boy's friends stated that several pieces of bone were seen lying on the floor of the mill beside the rollers. The outer extremity of the clavicle, having lost its scapular attachment, projected from the wound; and the axillary vessels and nerves were torn across at distances varying from one to three inches below

the first rib. The pectoralis major muscle, which, at its outer part, lay fully exposed, as if it had been dissected, was intact, and its tendon still remained firmly connected with the outer bicipital ridge of the humerus, which had been detached from the rest of the bone; thus affording very strong evidence of the intimate union subsisting between tendinous fibres and the bone into which they are inserted. The lower part of the humerus, and the radius and ulna, as well as many of the bones of the hand, were extensively comminuted; while the soft parts covering them were contused and lacerated to a shocking extent.

The patient having been partially chloroformed, the limb was separated from the body by cutting as large a flap as possible from the soft structures which had covered the scapula and the outer part of the shoulder-joint. The cords of the brachial plexus were then cut short; and the axillary vessels, though already occluded by the natural process, were ligatured, and about an inch of the protruding end of the clavicle sawn off. After "trimming" the soft parts, the large flap was attached to the integument on the front of the chest by means of four sutures and a few strips of adhesive plaster. Lastly, the wound was covered with water dressing, there being no carbolic acid at hand. Directions were given to keep the dressings in a cool and moist condition by the occasional application of cold water.

On the next day (Sept. 15th) the boy's parents, being desirous of having their son more immediately under their own care, conveyed him home without our permission. He was taken on a cart over a hilly road, a distance of more than two miles. During the journey wine had to be given him on several occasions to prevent syncope.

On the following day (Sept. 16th) he was much improved. Carbolic acid lotion was now applied by Dr. Otterson to moisten the dressings.

September 18th.—To-day, in company with Dr. Otterson, I visited Stephen M. for the first time since the operation. He was in moderately good spirits, and complained of little save want of sleep. Tincture of opium ordered to be given at night if required. The wound was granulating freely, though the edges were in some places quite black. The parts in the neighbourhood were considerably swollen, and some portions of the skin presented an unhealthy blush. Most of the sutures were removed; but the ligatures, not being easily detached, were allowed to remain on the vessels. One strip of adhesive plaster was carried across the middle of the wound to prevent retraction of the edges; and pieces of lint, moistened with carbolic acid, were

applied. After this I saw no more of our patient; but I have learned from Dr. Otterson that, about three weeks after the operation, he had almost regained his strength and activity, and that the wound was nearly healed. I hear that he is at present attending school.

A case almost precisely similar to the above is described by Dr. King, of Glasgow, and in his paper he alludes to three others of a like character.* Sir W. Fergusson, in his excellent work on "Practical Surgery," gives an interesting account of the nature and treatment of such accidents, and refers to most of the cases which have been recorded.†—*Lancet.*

WESTMINSTER GENERAL DISPENSARY—TREATMENT OF SYPHILIS BY MERCURIAL FUMIGATION, WITH A DESCRIPTION OF A NEW AND CHEAP VAPORISER.

Under the care of Mr. CHURCHILL.

Cases of accidental inoculation of syphilis upon the hand of the Medical attendant, though fortunately rare, deserve to be recorded as beacons to warn the unsuspecting of the danger they incur by neglecting to use proper precautions to protect themselves from the possible absorption of syphilitic material through a crack or wound of the hand.

T. L., a Medical student, was attending occasionally at the Westminster General Dispensary, for the purpose of receiving instruction in the dispensing of medicines and the treatment of disease. He was particularly anxious to obtain some information with regard to the pathology and treatment of syphilitic disease, and with this view he had been allowed to watch the progress of treatment in selected cases, with the endeavour, if possible, to discover the changes in character of the primary sore. He had been in the habit of manipulating the sores, hoping to satisfy himself as to the distinctive differences between the Hunterian and the soft or non infecting chancre, and to ascertain how far it was possible for a soft chancre to become indurated, so as to resemble, if not to constitute, a true infecting chancre. It has been asserted by some authorities that a soft sore under irritation may become indurated, and, as such, a focus of constitutional infection. Those who discredit the dual character of the syphilitic poison also assert that a hard sore may produce a soft chancre on an uncontaminated subject, depending to a great extent upon the temperament or

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* Cormack's Monthly Journal of Medical Science, p. 96, 1845.

† System of Practical Surgery, p. 302, 1870.

constitution of the individual infected. The assertion that hard sores are much rarer in females than males would seem, if true, to justify to some extent the doctrine of the unity of the syphilitic virus. All observers admit that sores which are to all appearance soft are occasionally followed by constitutional symptoms, and that sores of the true Hunterian type are not always followed by secondaries. Also, in syphilised subjects, inoculations with matter taken from a hard sore will occasionally produce a sore resembling a soft chancre, but this the dualists affirm is not identical with the soft chancre. Supporters of the other doctrine admit that the poison of syphilis has developed into two well-marked varieties, which, as a rule, "breed true." "The two diseases are, for all practical purposes, entirely dissimilar, differing in symptoms, in prognosis, and treatment." (*Vide* Mr. Bradley's "Notes on Syphilis and on the Unity of the Syphilitic Virus," p. 38.) The only point that remains to be determined is, how far these two diseases, "entirely dissimilar," have divaricated, according to the evolutionary hypothesis, from a single original stock. That gonorrhœal urethritis is, and always has been, a distinct disease. seems to me as certain as the admitted distinctions between acute and croupous laryngitis, although, according to some evolutionists, a "traumatic urethritis" was the parent of all forms of venereal disease.

The account T. L. gave of himself, referred to in the last issue of the *Medical Times and Gazette*, was as follows:—In addition to the ordinary routine work of a medical student in the dissecting-room, he had undertaken to assist the pathologist in post-mortem examinations; and while others carefully sucked or cauterised wounds inflicted during dissection, it was his boast that no harm had ever come from previous wounds. He supposed that his system was innocuous to the intrusion of septic particles or other products of decomposition. He had witnessed in others the poisonous effects of the absorption of deleterious matter; and though aware of the risk he incurred by dissecting with open wounds, he was, like many others, indifferent, because fortifying himself by a false hope. Surgeons of far greater experience, and maturer years, in their zeal to instruct, are perhaps unmindful of the potency of the syphilitic poison. Too great care cannot be taken to guard against the possible entrance of syphilitic matter by such unexpected channels. That the disease was not contracted by venereal indulgence was evident by the appearance of the primary sore on the palmar surface of the thumb, and the implication of the axillary glands on the left side, as also by the absence of any scar or mark on the penis and of inguinal

glandular swelling; last, but perhaps not least, was the evidence of the patient himself, who most positively denied that he had exposed himself in any way to the possibility of infection by impure or muliebral contact.

Unaware of the cause of the small blister on the palmar surface of the thumb, T. L., in his attempt to heal the sore beneath by bland ointments and lotions, was really fostering the development of constitutional symptoms, little suspecting that he would have the opportunity of studying (!) in his own person a disease the cause of which he was hoping more fully to investigate in others. He went to the sea-side for change of air, hoping that the follicular ulceration of tonsils and palate and the sore on thumb would heal as his health improved. It was not until his return to town that his suspicion was aroused as to the specific nature of the disease. It should be mentioned that he consulted about this time some surgeons of eminence; but whatever their suspicions may have been, no specific treatment was adopted. He was afterwards advised to take fifteen grains of iodide of potassium and four grains of Plummer's pill daily, and to dress the sore with black wash. About this time ulcerating tubercles appeared on the legs and back; an eruption appeared also on the scalp, and he lost a good deal of hair. The sloughs on the tonsil and palate were some time separating, and he suffered for about twelve months from sore throat. T. L. consulted Mr. Henry Lee, who advised the mercurial fumigation treatment, which was commenced at once—*i.e.*, as soon as the eruption became fully developed. He continued this treatment every night for three months, when it was omitted in consequence of all sores having healed, as also the sore throat. It was now the middle of winter, and he was unable to carry out effectively the mercurial treatment, on account of early lectures at the hospital requiring him to expose himself to the cold morning air. The sore throat returned, and he resumed the fumigation for another two months, when he was pronounced to be cured of the disease. For the successful administration of mercurial fumigation so much self-denial on the part of the patient is required, that he too freguently stops the use of the bath before the disease has been entirely eliminated from the system. Such a partial employment of the mercurial bath has given rise to a scepticism with reference to its efficacy as a powerful anti-syphilitic remedy. T. L, fully aware of the danger of partially curing his disease, carried out the treatment most systematically, and is now rewarded by the comforting assurance of a renovated constitution.

The plan adopted of administering the baths under the bed-

clothes, has two important advantages not possessed by the ordinary method of administration under a cane chair—viz., 1st, that the patient's body is placed in a mercurial atmosphere so long as he remains in bed: 2nd, that he is enabled to apply the fumigating process to the throat, larynx, nasal passages, and bronchial mucous membrane, by respiring the vayorised air for a limited time under the bed-clothes: 3rd, that the luxury combined with the greatly increased warmth obtained by this method of administration commends itself to the approval and satisfaction of the patient, not enjoyed by other methods. As a corollary, patients have been more ready to carry out to successful termination this method of treatment by mercurial fumigation. A cradle is necessary to support the bed-clothes, and raise them from the bath. For poor patients, unable to purchase a vapour bath, I have had constructed a metal tray for holding the water, with a raised portion in the centre, surrounded by water, on which the calomel is deposited. The tray fits into a watchman's "candle-lamp." A spirit-lamp may be fiited into the socket made for the candle; and the

apparatus is complete. Hitherto, the expense of the apparatus has seriously interfered with the introduction of this powerful anti-syphilitic remedy among the poorer classes of society, who are, perhaps, more subject to the ravages of this destructive disease. The difficulty having been overcome, it is to be hoped that

the method of treatment will be more universally known and adopted. I have used this method of fumigation, and found it most successful in cases where the wife has contracted syphilis from her husband, and *vice versâ*. The process of cure may with advantage be carried out simultaneously. This vaporiser will no doubt prove of great service in the sick-room, and in pulmonary complaints, for fumigating purposes, and for volatilising drugs previous to inhalation. The apparatus complete, as shown in the figure, may be obtained from Messrs. Baker, surgical instrument makers, High Holborn.—*Medical Times and Gazette.*

Medicine.

THE USES OF THE UVULA.

By Sir G. Duncan Gibb, Bart., M.D., L.L.D.

It may be taken as an axiom in the animal economy generally that nothing has been created without a purpose and a use, although to our comprehension the use of many things may seem inexplicable. Nevertheless, when carefully examined and studied, bodies of trivial importance, and seemingly existing for symmetry or harmonious unity, in the mesial line especially, are invested with a good deal of interest and really practical importance. Such a one is the uvula.

Of this body we hear but little, unless it becomes the source of trouble through elongation or its participation in some neighbouring disease—such as inflammation and swelling. It was probably better known and appreciated as a part of some importance amongst the ancient Greeks and Romans, from the terribly severe measures resorted to when it became the object of medical interference.

In all anatomical and physiological works the uvula comes in for a very small share of consideration, a few lines sufficing to describe it as a small rounded process or conical prolongation of the mucous membrane, forming a sort of cul-de-sac hanging perpendicularly from the middle of the inferior border of the soft palate, the velum pendulum palati, or velum molle. Perhaps more could not be said; but we look into its *composition*, its *situation*, its *relations* as a muscular body to neighbouring muscles of high importance, and its true functional uses—which have never yet been wholly understood,—we do not find it meets with the consideration it really merits.

We will first speak of its *composition*. Notwithstanding that it is spoken of by many persons and writers as simply a prolongation of the mucous membrane, it is a true muscular body, covered with the former, but having the remarkable peculiarity, in a considerable number of individuals, of possessing this membrane elongated at its terminal end, resembling somewhat the finger of a glove, partly off and partly on the finger of the hand to which it belongs. This becomes an abnormal condition which influences the voice, especially in singing, as much so as if it were a disease; yet it cannot be denied that sometimes, though very rarely, the true muscular end becomes elongated. The muscle which forms the substance of the uvula is known to anatomists as the levator or azygos uvulæ, and consists most generally of two distinct muscles (notwithstanding its name) placed side by side in the middle line of the soft palate, although sometimes it is single. The latter is exceptional, for a distinct muscle of a fusiform fleshy character in some persons, in others a narrow slip of muscular fibres, is found to exist very distinctly on both sides, and to become blended at the terminal point of union at the tip of the uvula. Whether single or double, the origin is invariably from the spine in the centre of the posterior border of the hard palate and aponeurosis of the tensor palati; the fibres descend vertically close to its fellow in the median line, upon the nasal surface of the velum, and are inserted into the cellular tissue at the terminal end of the uvula. Its origin from the spine of the palate bones, or rather, as it is described by some anatomists, from the palatine aponeurosis, or *fibrous continuation of the septum narium*, necessarily invests it with considerable strength and powers of resistance, as shall presently be shown. It is, however, the most superficial of the palate muscles, situated on the posterior or nasal surface of the soft palate, and, with some mucous glands and cellular tissue, forms the uvula.

Such is a description of the uvula, which in structure is clearly muscular, separated in the origin of its two muscles above by a slight interval, which would give them together the shape of a long spear. In stout fleshy persons I have frequently found distinct adipose tissue, in more or less abunandance, situated at the tip or terminal end. When the uvula is bifid, the insertion of the muscle is separate and distinct in each terminal point.

The *situation* of the uvula perpendicularly in the centre of the soft palate corresponds with the depression at the root of the tongue known as the foramen cæcum or frænum, between the valleculæ, its point being in front of the epiglottis. It is not in contact, but still exceedingly close to the tongue. Yet in many

persons in whom the soft palate is more depending than is natural the uvula touches the tongue; and if its terminal end becomes elongated, it hangs into the larynx, or so tickles the epiglottis as to cause it to become more or less pendent, when it then rests upon its lingual surface. There is a difference in the relative position of the soft palate and uvula in breathing by the mouth and the nose. When breathing by the latter, with the mouth shut, the situation of the uvula is pretty much as has been described; but when by the mouth, the soft palate is a little more elevated, and the tip of the uvula hangs perpendicularly over the centre of the opening of the larynx. This has been determined very accurately by a series of examinations and experiments upon various healthy persons; and, as I shall presently show, *vocalisation exerts a decided influence upon the position of both the soft palate and uvula.*

In its *relations* the uvula is connected anteriorly with the tendinous expansion of the levatores palati which spread out in the structure of the soft palate as far as the middle line, and posteriorly with the mucous membrane covering that part of the soft palate. It is also indirectly related to the tensor palati through its expansion in the tendinous aponeurosis, which is partly inserted in the raphe in the median line, in front of the levator palati. It is also continguous to the palato-pharyngeus, although not directly in relation with it.

Uses of the uvula.—According to the action of the muscle it is an elevator, and consequently shortens the uvula, and nothing more is said of it by anatomical writers. It is, however, a sentinel to the fauces, especially in the act of deglution, for the moment that any substance comes into contact with it, whether saliva, fluid, or alimentary bolus, it excites to action all the surrounding muscles, until it is got rid of and the passage clear. But it possesses a function of certainly not less importance in *holding the soft palate tense and firm in the mesian line against the wall of the pharynx during the act of deglutition itself*, and thus prevents the passage upwards of any fluid or solid substance into the posterior nares. This might be considered a mere assumption were it not supported by the most convincing proof, as there is no opportunity of confirming its truth by inspection through the mouth. But it is otherwise when seen through the nose, and it was determined in the following manner:—A female, aged 36, lost the nasal bones, right turbinated bones and vomer, with part of the cartilaginous septum of the nose, through disease, leaving an external opening which she generally concealed with cotton wool and lint; the nose itself was otherwise natural. Through this opening a large cavity

was exposed, which permitted of a perfectly good view of the action of the soft palate from its nasal aspect during the act of deglutition, with or without food. Under either circumstance a double arch was seen, in the form of two convex swellings, held in a state of firm tension by the action of the uvula pressing down the centre of the soft palate, with its end resting flat against the wall of the pharynx. Here was the motor uvulæ muscle, situated superficially, like a distinct band tied round the soft palate in its most important resisting part, to prevent the possibility of food passing upwards; and in this it was supported co-ordinately by all the neighbouring muscles concerned in the act of deglutition. This phenomenon was perhaps more perfectly visible during the swallowing of fluids than solids, yet it was always distinct with the latter or when no food was in the mouth, only in the last the prominence of the two arched swellings was not quite so great.

A number of observations were made, and experiments performed from time to time, yet they all tended to the same results, thus proving incontestably what was not hitherto known, that the uvula acted as a *point d'appui* in holding the soft palate tense in the middle line against the pharynx during the act of deglutition, at the same that it acted as a compressor of the soft palate itself. Its tension ceased the moment that the constrictors of the pharynx had fully exerted their influence over the fluids and solids swallowed. The strong attachment of the muscle in its origin from the palatine aponeurosis, or fibrous continuation of the septum narium, will readily explain the power the muscle possesses in compressing the soft palate, and meeting sometimes very considerable resistance in the passage of the alimentary bolus, or, may be, a large gulp of liquid. This compressing power would be incapable of exertion were it not the terminal end of the uvula strongly fixed against the wall of the pharynx.

Whilst the uvula thus has its special uses in the act of deglutition, it exerts a not less decisive influence upon the voice when uttered in a very loud tone, or in singing the higher registers, whether contralto or soprano in females, and tenor and barytone in males; *then* is its character as a *levator* or shortener clearly exerted, a use indeed that any one can readily demonstrate in his own person who has sufficient command over the muscles of his throat to allow him to see it. If this power of shortening or elevation is impaired by the removal of the whole or greater part of the free exposed *muscular* end of the uvula, then are the singing powers so seriously damaged that instances are known where a professional life has been ruined in consequence. Indeed, every true

singer is instinctively afraid of any measure being performed upon the uvula that will damage the true elevating muscular power which it is so well known to possess over the soft palate in association with the levator palati muscles.

In uttering the higher singing notes with the mouth open, not only is the uvula seen to be drawn upwards, so as to become almost invisible, but the soft palate is drawn backwards and upwards, diminishing the space between its posterior border and the wall of the pharynx, so that nothing can occur to interfere with the passage of the expired air in its readiest and most conveniently harmonious manner through the mouth. The movements of the uvula are exceeding rapid, and vary with the continuous or quavering character of the singing notes; in the shakes of the voice it is seen to be undergoing a series of short *ups and downs*, and at every inspiration in singing it descends, and as rapidly ascends, and keeps up until the note, prolonged or otherwise, is finished. These observations have been confirmed by me over and over again upon some of the first vocalists of the day. In females who possess the very highest singing compass, the uvula and soft palate are small relatively, and so exquisite is the power over the uvular muscles that the very point can scarcely be recognised when the highest scale is reached.

On the other hand, my observations upon the position of the epiglottis have shown that, if the expired air in vocalisation is directed *behind* instead of in *front* of the soft palate and uvula, through pendency of the cartilage, thus diverting the course of the current of air, harmony, power, compass, and range of voice in singing are domaged most seriously. The elevating motor power of the uvula scarcely or not at all exerts itself, because the proper and natural respiratory influence is not exerted.

The uvula, therefore, besides the important functions it possesses in the act of deglutition, has also its special uses in regulating the voice, and this by no means is an unimportant manner. That it does do this latter in an eminent degree is readily proved by what has been related, and confirmed incontestably—as, indeed, every singer well knows and fears—by the damage to singing powers when its free muscular end has been taken away. And here a few words may be said upon *elongation of the uvula*. As has been already stated, the true muscular end of the uvula very rarely indeed becomes elongated, but the terminal membranous end, containing mucous glands, and occasionally adipose tissue, does so frequently, giving rise to a set of phenomena which need not be described here. They are wholly removed by the operation of snipping off the superfluous membranous end, and no incon-

venience has followed in my experience of between four and five hundred instances. It is otherwise if a portion of the muscular end of the uvula is taken away; for if a single arch now exists as a consequence from one pillar of the fauces to that of the opposite side, instead of the heretofore double arch, then is the singing voice altered, and in deglutition occasionally fluids, and even solids, get up into the posterior nares, thus proving the correctness of the views already enunciated, that one of the uses of the uvula is to hold the soft palate tense against the wall of the pharynx during the act of deglutition.

One of the effects of an elongated uvula, whether composed of membrane or muscle, is an unnatural drooping of the soft palate, which hangs upon the tongue, the power of the tensor and levator palati muscles being somewhat impaired. The constant dragging of the end of the uvula downwards in deglutition, which is continually occurring involuntarily, independently of the act of eating, is one at least of the causes of this; and that it is so is proved by the removal of the loose, flabby, membranous end, which is followed by the elevation again of the soft palate. The removal of the whole free muscular end of the uvula will not, in itself, give rise to a nasal twang in a speaking voice, however mischievous it may be to the singing voice. If a nasal twang is noticed coincidently with such a removal, it will be found to depend upon some other cause altogether.

The speaking voice is modulated by the soft palate and uvula, ond the motor power of the latter is unquestionably exerted in pronouncing the letters k, q, and x, with their associations, more especially the gutturals of various languages.

The *uses* of the uvula may be summed up as follows:—

1. It acts as a sentinel to the fauces in exciting the act of deglutition when anything has to be swallowed.

2. It compresses the soft palate, and holds its posterior free border firmly against the wall of the pharynx in deglutition, so that nothing can pass upwards.

3. It modifies speech in the production of loud declamation and the guttural forms of language, by lessening or diminishing the pharyngo-nasal passage, when it acts as an elevator.

4. Its elevating power is increased to the most extreme degree in the highest ranges of the singing voice, and is very moderately exerted in the lower ranges.

5. Therefore, in its uses, deglutition and vocalisation are the functions that are intimately associated with the uvula, and both become impaired more or less if it is destroyed, wholly removed, or seriously injured.—*Lancet.*

Bryanston Street, Portman Square, Jan. 1872.

Canada Medical Journal.

MONTREAL, MARCH, 1872.

SANITARY REFORM.

In view of the present state of the country generally, which is acknowledged to be far from healthy, we have been induced to take up the subject of our sanitary condition chiefly with the object of drawing attention to the best measures for remedying the evil. It is needless our attempting any reform in separate localities, because any action however wise, or however forcibly backed up by scientific opinion, yet lacking the authority of law, cannot be enforced.

It appears to us that what we need is legislation, without which our hands are tied, and we can stand and look on at the spread of epidemic disease, but are unable to arrest its progress. It is humiliating to make such an admission in this 19th Century, but however humiliating it is nevertheless true. True as regards our country Canada, and why? because we possess no restrictive enactments, no system of registration, no compulsory acts, no nuisance removal acts, nothing in fact which civilized communities generally seek for and obtain, the benefits of which have been fully recognized by mankind since the days of Moses.

We have received a private letter from an esteemed confrere in St. John, N.B., in which amongst other matters he observes:

"I am glad to see by your last Journal, that you are discussing "the propriety of having a General Board of Health for the Do- "minion. One is much wanted. We had an excellent Health "Law for this Province before Confederation, but after the Union "the quarantine regulations were taken out of the hands of the "Board of Health, since which a good deal of confusion has "arisen. I need not say to you that *all* sanitary matters should "be under the Board of Health. As it exists in St. John, such is "the case, except—as I said before—the quarantine regulations. "But we have not power to enforce a registration of Births and "Deaths, which is much wanted."

This we fully endorse, and we think that before attempting reforms which are needed, we must first obtain from the Legislature the power of enforcing them.

Our registration system is defective, in fact absolutely useless. In Montreal we have had a Sanitary Association, composed of

Physicians, Builders, Architects and Artizans, and the only result which has followed the deliberations of that body was the assertion that Montreal was the most unhealthy city on the continent of America. Although we have not fully acknowledged the correctness of the views set forth by that association, yet we freely admit that there is a larger mortality in our city than there should be, and further that under other conditions much of the disease is preventible. To arrive at the causes of our mortality, we have to examine the condition of our people, and more especially that of the labouring classes.

Montreal is built on a series of terraces which gradually rise from the river side to the foot of our mountain, an ascent in the aggregate of over 400 feet. So that as far as drainage is concerned it possesses in this respect every natural requisite. We are not cramped for room, as the island of Montreal is some 35 miles in length, with a depth varying from six to twelve miles, and we are surrounded by the Ottawa River, which is broad, rapid, and in many places of considerable depth. During the past few years the city has grown rapidly, and the capital of our moneyed class is embarked in industry, and factories of all kinds are to be found giving employment to thousands. But if the men of capital have in the proper spirit of enterprise started factories, they have failed to provide the means of properly housing their employees. In consequence of the greater opportunities of getting employment a large number of skilled labourers have been attracted to our city, but finding it difficult to procure dwelling locations at prices within their limited means they are forced to crowd into tenements which have been erected in back yards, where the light of the sun seldom makes its way, and in some instances has never shone, or perhaps in cellars, which were never built for any other purpose than for storing wood or coal, but which are found to be more remunerative to the owners as human habitations.

What is the result? to the operative such a condition of things is sufficiently injurious, but inasmuch as he does not occupy his lodging more than one-third of the natural day and 24 hours, the effects on his constitution are more slow in their development, but equally certain—he eventually breaks down and dies of Phthisis or some other form of disease induced by want of a pure and healthy medium wherein to breathe. To his wife and little ones however such surroundings are more rapidly fatal, and they sink exhausted for the want of the pure air of heaven, which is in such abundance, and has been vouchsafed to us all. But this is not the only source of death and disease in our city, although we believe it to be the chief source of our infant mortality. Take a child

suffering from exhausting diarrhœa, during the process of dentition, and simply send it across the river to one of the country villages, and mark the change even within a few hours. What is a source of misery to the poor man, must affect the rich, and hence we observe that:

> "In the perfum'd chambers of the great,
> Under the canopies of costly state,"

the grim messenger will occasionally make his appearance, and claim his victim.

But as we observed, there are other sources of disease or rather other causes of mortality in disease than overcrowding.

Some little stress has been laid on the lack of sewer ventilation, and we think there exists good grounds for complaint. The question of sewerage has always been a perplexing one, and how to dispose of sewage in large towns. We should fancy that a large river like the St. Lawrence, in front of Montreal, which runs at the rate of five miles an hour, is not likely to be affected by the sewage of the town if it were three times the size; but independent of the injury likely to accrue to the river, people will estimate the immense loss of valuable irrigation matter which is simply got rid of, and which might be utilized—true, but then this system of utilizing sewage cannot be carried out without danger, as has been proved at Croydon, in the vicinity of London, and other localities. This is a subject in itself so vast, that we cannot go into it at the present time, besides it is somewhat foreign to our argument. We have started with the purpose of trying to ascertain the causes which affect our mortality, and especially the infant death rate which is unquestionably high.

The high rate of death amongst infants in this city, appears to be due to our generally defective sanitary condition, and not to any one of the numerous causes which have from time to time been alleged. Over-crowding in the houses of the poor is a fruitful source of the death rate, this is more especially observed in the houses of the poorer class of French Canadians. The existence of defective drainage in certain localities, or of old cess-pools, or even where neither of these conditions is met with, as in some of the better class of houses, the sewerage pipes actually worn out, and if examined would be found in a honey-combed state.

From a recent paper published by Dr. Andrew Fergus, of Glasgow, it would appear that the duration of a leaden soil pipe to the ordinary water closet varies from a minimum of eight to a maximum of twenty years. Dr. Fergus has during a series of observations extending over 15 years, proved that leaden soil pipes become perforated along their upper surface—this condition he

found was occasioned by the action of noxious gases from decomposition of excreta generated within the pipe, the perforations are invariably situated above the water line. "The practical lesson to be drawn from this," observes Dr. Fergus, "is that any house no matter how well and carefully built, may become unhealthy from this source, and that wherever there are cases of typhoid fever, diphtheria, diarrhœa, &c., the pipes should be carefully inspected."

From the paper above referred to, Dr. Fergus states that the diseases arising from a defective state of soil pipes are Typhoid Fever, Diphtheria, Scarlet Fever, Diarrhœa, Cholera, and furthermore that every case of the above diseases which he has recently attended, when a thorough inspection was made, he has been able to trace either to this source, or to some other form of excremental pollution. As a remedial measure he suggests the following :—

"1st. That all soil pipes should be carried up to the roofs of the houses, and left quite open to the external air, and, if possible, the soil pipe should also be used to carry off the rain water from the roof. The landlords would be more than compensated for this expenditure by the increased duration of the soil pipes.

"2nd. Water for domestic use should be taken from the main.

"3rd. Where cisterns are still in use, a charcoal cage, to be refilled from time to time, should be placed in the overflow pipe; or, better still, the overflow pipe might be carried to the outside of the house, and not pass into any drain.

"4th. All over the city, and specially at the higher levels, the sewers should be connected with the furnaces of some of our large public works. More than three years ago I proposed that this should be done, so that all the foul air from the sewers might be burned.

"But all these would be mere palliatives. I hold that the only true sanitary solution of the question is, that provision be made that all excreta and organic refuse shall be kept out of the sewers and water courses."

Obituary.—It is with deep regret we notice the death of William Lovat Fraser, Esq., L.R.C.P. Edinburgh, and L.F.P. & S., Glasgow. This sad event occurred at Bussorah, Turkey in Asia, on the 28th December last, and we believe the particulars have so far not reached his family.

This promising young man was the son of Dr. William Fraser, of our city, the learned and respected Professor of Institutes of Medicine, McGill University, and we tender our worthy colleague and family a true heart-felt sympathy in their bereavement.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Valedictory Address to the Graduates in Medicine and Surgery, McGill University. Delivered on behalf of the Medical Faculty, at the Annual Convocation, held in the William Molson Hall of the University, on Thursday, 28th March, 1872. By Joseph Morley Drake, M.D., Professor of Clinical Medicine.

Gentlemen Graduates in Medicine,—It is, believe me, not in mere compliance with an established custom, with no vain formula of idle words that I, on the part of my colleagues and myself, offer you our most cordial congratulations on this occasion. You have just received the highest honour this faculty has to bestow—the degree for which you have so long and so earnestly laboured, and which you have at length fairly and honourably won. May it acquire fresh honours in the possession of each and every one of you, and thus deserve to be regarded with ever increasing esteem by your successors. Together with that friendly interest and sympathy which all right minded persons must feel, on witnessing the setting forth on life's journey of so many youthful pilgrims. We, as your teachers, experience much personal pride and satisfaction, as we wash our hands of a task, which though laborious enongh at the time, promises a most pleasing reward in the future. Most or all of us no doubt, will watch your career in a spirit not altogether unselfish in its character, triumphing in your success and sympathizing in your trials. With an earnest desire for your welfare, I would wish to offer a few words of parting counsel, which I trust may be neither useless nor altogether unacceptable.

You have chosen a profession whose duties are indeed arduous and responsible, but a profession which is second to none in point of usefulness. "Ennobled by endless examples of the most heroic "self sacrifice, and offering full scope for the exercise of the high-"est intellect, the purest philanthropy, the proudest ambition." There is perhaps no other calling which should in itself tend to

elevate and refine its followers—to make them ensamples of good to all men—so much as that to which you have devoted yourselves, and indeed it is not going too far to say that in this respect it is incomparably superior to most other professions. Your prospects of material success depend as a matter of course very much upon the exercise of qualities, which are essential to success in any and every walk of life. Integrity, industry, energy, and temperance in all things, must form part at least of the basis on which to build a lasting superstructure. Without these we have too often seen the most brilliant talents prove useless and unproductive, but possessing these qualities, and with such a knowledge of the principles of your profession as you undoubtedly have, you may confidently expect to achieve a position alike honourable to yourselves and useful to society.

That much of your prosperity, and still more of your comfort, will depend upon the adoption of business-like and methodical habits at the outset of your career, is a statement so obviously true, that it must needs meet your approval. Yet unfortunately, though all admit its truth, we are obliged to admit that comparatively few of us are as methodical as we ought to be, and a very large minority, to speak mildly, appears to get along in a "happy go lucky" sort of way, ignoring method and business habits altogether.

The medical man labours under rather exceptional difficulties in this respect, since he is liable to long and frequent interruptions at all times and seasons. He must constantly be prepared to forego his sleep, his meals, his business, study or pleasure, at the call of suffering, and must exercise the most watchful care to avoid falling into slovenly and unsystematic habits; to say nothing of the very injurious effects which may in consequence, and indeed notwithstanding all care, often do result to his health, and thus impair his usefulness, mar his fortunes, and even shorten his days —the absence of system or method often leads him to neglect or hastily and discreditably perform collateral but less urgent duties. For example—his accounts are badly kept, correspondence deferred, study neglected, often alas entirely discontinued, and what is of almost equal importance, his notes of cases are if taken at all, either recorded so imperfectly, or preserved in so slovenly a manner, as to render them practically useless for future reference, and thus the experience and observations of a lifetime, often valuable in themselves, or rich in suggestions, become all but fruitless of result either to himself or others. Take careful notes of all the cases which come under your care from the very first—regard this as a duty, and not merely as a matter of taste or inclination—

at first you may find the task rather irksome, but presently it will grow into a confirmed and not unpleasing habit. The importance of this proceeding to yourselves, and to those under your charge, can scarcely be exaggerated. As a mental exercise, the necessity of accurately and decisively expressing what you observe from day to day, will enable you to form far more clearly defined opinions of the nature and progress of a difficult case, than if you should trust merely to memory, and having the facts always ready for reference, may obviate the necessity for repeating questions formerly answered, and save you from the imputation of carelessness or forgetfulness. The value of such notes in legal enquiries which may arise, the satisfaction of being able at any time to refer to former details of treatment, or to give precise information as to other matters connected with past illness, and the scientific value of such records are obvious enough, and besides the possession of a trustworthy health record of the families you attend, becomes often of great practical value in subsequent illness by reminding you of important circumstances which else would have been overlooked or forgotten. It is I trust unnecessary to caution you to refrain from conduct which may injure the honour and dignity of the profession you represent, to abstain from newspaper advertising in the shape of puffing notices of wonderful operations and miraculous cures, and to strongly discountenance the well meaning, but indiscreet efforts which your friends may sometimes exert in your favour to induce patients to change their physician.

Speaking to gentlemen, it is also unnecessary to enter into detail on the subject of what your conduct should be to your patients. Self interest, if no higher motive should induce you to avoid whatever might sully your good name, or injure you in the confidence of those whose lives and honour are entrusted to you—strive to preserve within you that—

> "Peace above all earthly dignities,
> A still and quiet conscience."

In your intercourse with the sick you must of course expect much that is annoying, much that is unjust and unreasonable, which you must nevertheless bear with philosophic Christian equanimity, content to know that you are doing your duty faithfully. It is I believe a very common opinion that the doctor has but little feeling for or sympathy with suffering. That there is nothing either in the nature of our studies, or in the practice of our profession to warrant such an assertion, I need hardly say. That familiarity with sudden and frightful accidents, with disease and misery of all kinds, enables us to view such scenes with calmness and self possession, is very true and very necessary also. Dr. S.

Johnson who was no great admirer of physicians, and who defined their profession as a melancholy attendance on misery, a mean submission to peevishness, and a continual interruption of pleasure, was nevertheless pleased to admit that every man has found in physicians great liberality and dignity of sentiment, very prompt effusion of beneficence, and willingness to exert a lucrative art where there was no hope of lucre. Indeed there is no calling which more constantly demands the exerciae of sympathy, and in which it is more freely yielded then in ours, and complaints of want of sympathy are most commonly heard from those who least deserve it. What can be more trying than to be obliged to listen by the hour—when pressed perhaps by important business to the lugubrious outpourings of some malade imaginaire, whose chief ailment consists in the fact of his having no other subject than himself to think about. Wrapped up in himself he lies "like a porcupine rolled the wrong way, tormenting himself with his prickles." But to the true physician, the sufferings arising from a perverted or even from a depraved imagination, are diseases as real as those depending on more obvious physical alterations, and equally demand the exercise of his skill, and call forth that sympathy and pity which droppeth as the gentle dew from heaven upon the place beneath, and by its moral effect is of as much real benefit in many cases as more potent medicines. If the physician possesses gentleness of manners, and a compassionate heart (says Dr. Gregory) and what Shakspeare so emphatically calls the milk of human kindness, the patient feels his approach like that of a guardian angel, while every visit of a physician who is unfeeling and rough in his manners, makes his heart sink within him as at the presence of one come to pronounce his doom. Towards your brother practitioners you cannot be too scrupulously careful in your behaviour. Ever bear in mind the golden rule, 'To do as you would be done by.' It will not unfrequently happen that you may be called upon to supersede a fellow practitioner, and then, more especially if he be personally obnoxious to you, the utmost caution is required in order to avoid inflicting an additional injury upon him by seeming to give your sanction to and concur in the complaints of inefficiency or ignorance which disappointed patients frequently make. I do not mean to imply that any consideration should interfere with your duty to your patient, or that gross ignorance or carelessness should go unrebuked, but I do say, be slow to receive such complaints, remembering that at some time or other you may be placed in a similar position yourselves, and endeavour to act in that large hearted spirit of charity which is kind, which vaunteth not itself, and thinketh no evil. Above all

things scorn with the true spirit of a man to make use of idle gossip or calumnious reports, even against your bitterest foe. Although to-day's ceremonial invests you with the doctor's robe, and puts a period to your college career, I would yet remind you of the imperative necessity of continuing to be earnest and industrious students of all that relates to your profession. Every day additions are being made to the already large stores of knowledge we possess, and you cannot remain stationary without discredit to yourselves and injury to your patients. As a matter of duty, no less than of interest therefore, you must keep pace with the progress of science, and read with care and attention the medical journals and other publications of importance. Hitherto the medical profession of our country has had but little share in furthering the progress of science, and but very few have achieved more than a local reputation at best. There are good and sufficient reasons for this of course, but we should look forward to the time when we may proudly point to names as great as any that have made themselves renowned in the old world. To our Symes, our Fergusons, Jenners and Pagets. This may appear like boasting, but I would ask does any one believe the fields of science are exhausted, or that treasures great as any hitherto discovered may not await us in the future? I dare say if a polished Roman philosopher had been told the day would come when his countrymen would be glad to sit at the feet of teachers from savage Albion, he would have listened with disdain. Astronomers tell us that the face of the heavens is slowly but ever progressively changing. That even those bright stars which by their apparent fixity in space, serve as a type of immutability, are notwithstanding their apparent unchangeableness, pursuing their solemn march through space, towards their ultimate removal from our view, and that other stars now only visible as faint specks to the curious eye of the philosopher will take their place. So likewise the great universal law of progress seems to be acting ever in the world of thought. Great luminaries of science which served for centuries as centres around which lesser minds were contented to revolve, have passed away and other and brighter constellations have appeared from dark distant regions barely known, or even dreamed of in the old time, to enlighten, and instruct, and guide the nations of the earth. May we not then without temerity entertain the hope that this great country of ours, but just emerging from the reign of barbarism, is yet destined to furnish minds which shall by their heaven implanted wisdom, add new glories to the firmament of science, and yield us truer and more enlarged conceptions of that wisdom and power which climb as

high as we may we can never fully comprehend, " because the " scale is infinite.

The prizes which appertain to our profession are not numerous, neither are they in a worldly or selfish nature very remunerative. We do not look for decorations, titles, wealth or ease, or even for the far more deservedly coveted honours which attend the possession of high scientific attainments, unless in very rare and exceptional instances.

The lot of by far the greater number of us is cast among the humbler classes, and it is often among the very poor that our charitable and helpful offices are chiefly needed. The busy practitioner wholly occupied with the faithful discharge of his fatiguing round of daily duties, has small chance of distinguishing himself in the field of special science, however devotedly he may employ the few hours of leisure which remain to him, and however well qualified he may be by nature, education, and taste for competing with those placed in more favourable circumstances. But we may, and we ought to expect to make a fair and competent income, and perhaps to lay up a little for future need, and it should be our ambition to add something however small, to the general stock of knowledge. For the rest, our chief reward will be found in the belief that we are promoting the comfort and well being of our fellow-men, in honestly and manfully labouring for the advancement of our useful and benevolent calling. Gentlemen,—Fare you well.

Abdominal Abscess with Fistulous Opening into the Intestines. Reported by R. A. Kennedy, M.D., Professor of Anatomy University of Bishop's College.

It was not until the 3rd of February, that I thought of reporting this case, previous to that the record is from memory.

On the 22nd of January last, I was requested to visit a boy in Philips Street, who had been ill for some time.

When I first saw him, he was sitting on the bedside, the hands crossed over the abdomen, and from his appearance in great pain. The face wore a peculiar expression, somewhat resembling the "Facies Hippocratica," and there was considerable emaciation of the body. He was 10 years of age.

I may premise further remarks by stating, that the father has lateral curvature of the spine, with excessive bulging of right ribs ; a very large head and scrofulous features. The mother has a "goitre," which has existed for many years, and is slowly in-

creasing; is very deaf and stupid looklng. The family, a large one, having generally a scrofulous appearance.

On placing the boy on his back, I found him unable to extend his legs, the whole abdomen being tense and brawny with protrusions, and slight redness of the umbilicus, but no feeling of fluctuation; no difficulty in breathing, but it hurt him to cough; pulse weak, quickened and compressible, not wiry; tongue slightly coated and headache.

There was no history of a blow or other injury to the abdomen, but from the evident scrofulous condition I judged it to be a case of idiopathic abdominal abscess. I directed a large linseed meal poultice to be applied over the whole abdomen. To have nourishing diet, cod liver oil, and syr. ferri iod. A dose of ol. ricini to be given immediately, this latter moved him on the following day.

26th—Four days after, the abscess had burst at the umbilicus, the pus being thin and extremely fetid; abdomen less tense, but still much pain.

28th—Discharge was altered in character, semi-fluid; of a yellowish tinge and very fetid, showing that the intestine was perforated; at each inspiration this substance exuded. As the parts were still inflamed, the poultice was continued.

29th—The umbilical opening larger, and intestinal contents freely passing outwards. Emaciation increased, a slight hectic cough; tongue clean and moist. The bowels not having moved since the 23rd, ordered ol. ricini.

30th—Inflammatory condition of umbilical opening being removed, and seemingly but little purulent matter exuding with intestinal contents, the poultice was removed, an oiled pad applied to opening, and an abdominal bandage drawn tight, to prevent if possible the passage of the intestinal contents, but this completely failed to accomplish that object. The ol. ricini not having operated "per anum" but escaping at the opening, I directed them to give an injection.

February 2nd—He appeared brighter in countenance than I had at any time before seen him; tongue clean; pulse weaker, but emaciation greater, takes considerable food, but refuses the cod liver oil. Umbilical discharge more feculant, very offensive, and when he gave a slight cough spurted upwards from the opening for over two feet, it was ichorous in character, as the skin was slightly excoriated where it had been in contact. The enema his father told me had not brought anything away, it was ordered to be re-administered.

3rd—Great emaciation, pulse weak and small, dry hectic cough,

tongue dry, and slightly glazed in centre. Still takes considerable nourishment. As there was still no operation "per anum" and doubting if the injection had been properly given, I personally administered one of soap and water, this brought away a large quantity of fœces. On examining the abdomen, there was but little matter on the cloth covering the opening, even the effort to expel the fœces not having caused any to exude; the cloth had not been changed for four hours, the opening appeared smaller and hoping to facilitate its closing, I put on an oiled pad, drew straps of plaster tightly over it, and over all a larger pad and abdominal bandage. To be given a dose of ol. ricini, and in addition to diet, half a grain of quinine three times a day.

4th—Had been suffering great pain in the abdomen all morning. No operation of the oil from the bowels "per anum." On examining the abdomen, found that the pad had not prevented the outward flow, it was removed, and at once over a quart of semi-fluid matter came away, the result of the operation of the oil, the abdominal pain also ceasing. Nothing apparently had passed into the intestine below the opening. Another injection was given but no feculent matter obtained. An oiled pad and bandage was applied, but not to oppose the flow from the intestine.

5th—Intestinal contents still continuing to flow through umbilicus, but darker in colour, nothing passed "per anum." The boy is gradually sinking.

6th—Death occurred this A.M.

His father would not allow a post-mortem examination on any consideration, thus preventing me from ascertaining the condition of the parts. From the discharge and rapid emaciation I should judge that the opening was high up in the intestinal canal.

Hour Glass Contraction—Unique Case in Midwifery. By P. R. Shaver, M.D., Stratford, Graduate of McGill College.

Mr. H. S., who resides a few miles from Stratford, sent for me on the 15th, to see his wife who was in labour with her fifth child.

When I arrived about 11 A.M., I ascertained the woman had been in labour some forty-eight hours, and for the last twelve hours there had been no advancement of the head, which was low down and resting upon the perineum.

After a careful examination of the position of the child, and after a careful investigation into the condition of the mother, I found her pulse rather feeble and quick, some thirst, respiration slightly hurried, and the pains very feeble, in fact absolutely gone.

After waiting some time, I determined to apply the forceps,

which was very readily accomplished, and the child most easily and expeditiously extracted, the mother declaring that she scarcely felt the child being born.

After the child had cried lustily (fine large boy) it was handed to the nurse, and I waited a short time to see if the uterus would resume its action, and in placing my hand over the abdomen, the globe of the womb seemed large and somewhat elongated, and in introducing my finger into the vagina I could feel nothing, neither placenta nor uterus.

I endeavoured to excite the organ to action, by grasping it firmly and strongly, but never succeeded in getting any contraction of the muscular fibres.

I then introduced two of my fingers, thinking I could by passing them as high as the promontory, certainly be able to detect something, but the result was alike negative.

I then waited an hour, hoping the uterus might assume some action after this long respite, but the inertia was as marked as ever.

I then informed the patient that I believed there was a second child in the uterus and that it was impossible for me to reach the presentation with my finger, and as I had now waited so long, and there had been no action, I deemed it proper to introduce my hand into the vagina to ascertain the position of the child, or in the event of no child, to extract the placenta, as it was evident the uterus unaided could not throw it off.

The mother most persistently denied the existence of another child in the womb, saying she was always as large with her other chlldren before the placenta was detached. However, after refusing a long time, she most reluctantly allowed me to introduce my hand, which I did very carefully and cautiously, and as I passed my finger high above the promontory of the sacrum, I then detected the head of another child, completely closed in a cavity by itself. The orifice through which my finger passed to reach the head was about the size of a half crown in diameter, and the fibres of the ring were as rigid and firm as sole leather.

I then kept my hand *in situ* for a few minutes, to fully satisfy myself of the mysterious state of things, and then carefully withdrew it.

I then told the friends there was another child, and I looked upon the case as one of the most remarkable in the annals of surgery. The case was one of hour glass contraction, in which the uterus was divided into two compartments, one portion for each child.

I then sent for my friend Dr. Frazer, a recent graduate of McGill, and when he arrived, he thought I might possibly have made a

mistake in thinking I had detected a second child, as it might be a case of hour glass contraction with retained adherent placenta. However, I requested him to introduce his hand, which he did, when he immediately exclaimed, "you are correct in your diagnosis, there is another child with hour glass contraction of the uterus."

Shortly after this some hæmorrhage began to manifest itself, which told upon the patient's constitution, whereupon we administered large doses of ext. Ergot, but it had no effect in producing uterine action, and we then insisted that the patient would allow us to deliver her immediately, but she most obstinately refused, saying—"there was no second child, and if we would only allow her to remain quiet, she would soon be better, when the after-birth would come away of itself."

We urged and remonstrated with the patient on such folly, as her life was now in great jeopardy, and her only hope was in speedy delivery; but she would not consent, and after waiting about 12 long hours she reluctantly allowed us to proceed.

Dr. Frazer administered the chloroform, and I carefully introduced my hand up to the stricture, and by gentle but persistent pressure, I succeeded in passing my hand through it, and with some difficulty secured the feet, and delivered without much trouble.

There were two placentæ—one in the lower segment, and the other in the upper chamber. I introduced my hand and found the lower one detached, but the upper one was adherent, and required great care and patience in pealing it off.

The uterus slightly contracted upon my hand, when I gently withdrew it.

There was no post partum hæmorrhage, and in an hour the patient had somewhat rallied under stimulants administered *ad libitum*, and felt comfortable. I may state *en passant* that the second child was quite softened and in a state of decomposition.

The patient remained quiet and calm for seven or eight hours, when she wished some arrangement to be made with her bed, she then turned her face to the wall, and in a few minutes *passed away to that undiscovered country from whose bourne no traveller returns.*

This was one of the most extraordinary and unique cases which it has ever been my lot to witness, for I have not heard, neither have I ever read of such an anomaly. For here we have a case of the uterus assuming an hour glass condition, retaining the second child the same as the placenta is retained, in an ordinary hour glass contraction. And here we have the uterus unable to expel the first child owing to its division into two chambers. I regret to say that the friends would not allow a post-mortem.

London Practice. By James Perrigo, A.M., M.D., M.R.C.S., Eng., Demonstrator of Anatomy, University of Bishop's College.

No. IV.

At the Samaritan Female Hospital, I had the privilege of seeing Mr. Spencer Wells operate for Ovariotomy nine times. He advises the operation to be performed as early as possible, as then the tumour is less vascular, and consequently there is less likelihood of there being adhesions. He invariably brings the pedicle to the surface,and secures it there by the clamp. Mr. Wells has now operated 400 times, and as he finished each hundred, he brought the results before the Medico-Chirurgical Society.

In the 1st	hundred,	34	died.
In the 2nd	"	28	"
In the 3rd	"	23	"
In the 4th	"	22	"

Of the last hundred, 44 were in the hospital, and 56 in private practice. He has hopes of reducing the mortality to ten per cent. He adds that the mortality in hospital and private practice is about the same. In his his opinion, tappings do not considerably increase the mortality, and sometimes is of benefit in giving time for the health to improve, or in lessening shock by having fluid removed a few days before. I may state, that when the pedicle is of sufficient length, the clamp is always preferred. Mr. Gant, who is senior surgeon to the Royal Free Hospital, thinks the probability of success is nearly doubled, where the length of pedicle permits of this arrangement.

At the West London Hospital, I saw Dr. Wiltshire amputate the vaginal part of the cervix uteri in two cases. The cervix in each case was enormously elongated, so much so, as to protrude to the vulva. They both did well. The instrument employed was the ecraseur, but instead of being armed with the chain-saw, it had a single wire. It is much more easily used, makes a cleaner cut, and prevents bleeding as effectually.

At Moorfields Ophthalmic Hospital, a person can have every facility in studying eye cases. Every surgeon has on an average 100 to 150 out-door patients to prescribe for, and there are four of them busy doing so, every morning from nine to noon, after which there is always some operation to be performed. A stranger there is treated with all possible kindness, and every attention is shown to him in explaining things in the ophthalmoscopic room. This room is quite a large one, darkened and fitted up with nine stalls, each of which is furnished with a gas burner, two chairs, and a small table. Some days, during the out-door hours, there is

hardly one of these unoccupied for a moment. There are many Canadians, who, no doubt will remember with gratitude the great kindness there exhibited toward them; even sometimes firm and lasting friendships are formed. It was so in my case, and in after life, I shall always look back upon my visit to London with pleasure. I was fortunate enough to be allowed to examine a case of opaque optic nerve fibres, a condition that is not to be seen every day. Tonics, rest and fomentations, formed the general run of treatment. Rheumatic Ophthalmia is more common in England than here. It is treated chiefly with Aconite and Colchicum, along with the Bi-carbonate of Potash. Mercury is given largely in syphilitic iritis, just as long as any lymph is formed. Von Græfe's operation for cataract is the favourite method. About 75 per cent. of the cases do well.

In visiting any of the London Hospitals, one is astonished with the neatness and regularity with which everything is done. All the hospitals have assistant physicians and surgeons to attend to the out door work. The posts of house physicians and house surgeons have to be competed for by examination, and they are not held longer than six months. All the nurses are trained by the sisters of St. John, and the hospitals, that take nurses from this institution, pay it so much a year. Charing Cross pays £500. In addition, there is a sister to each ward with a nurse under her, and over the whole hospital is a sister who looks after the diet and wine cellar.

A great deal of the treatment in the London hospitals is highly experimental. Calabar Bean was tried for chorea at the Children's Hospital, Great Ormond Street. As might be expected, it produced no effect on the disease, but strange to relate, it dilated the pupil. Bromide of Potassium is now given for profuse menorrhagia, instead of other remedies. Since my return, I have tried it successfully in one case. The galvano-cautery is now pretty generally employed, and I have seen it used for those little vascular tumours at the meatus urinarius of the female. Carbolic acid, as a dressing, is extensively used in some of the hospitals, but the cases are better chosen for its application than I have seen elsewhere. Holmes Coote will not allow any of it in his wards, and there are a few others who will not use it. Craniotomy is now being gradually supplanted by cephalotripsy. In displacements of the uterus, Grailey Hewitt's ring pessaries are almost universally used, as they can be bent to any desired shape. Lallemand's porte-caustique is now improved by Sir Henry Thompson and Erichsen. Their instruments are so made, that caustics in a fluid condition can be applied. There is very little difference between

Sir Henry's and Erichsen's. Each consists of a catheter, the lower portion being perforated by minute holes. In it is a stilette having at the bottom a sponge fitted on a spring attached to the slilette: the sponge is pressed upon, and the fluid is squeezed out.

Some of the professional men in London, after their appointment to an hospital, however small an institution, consider it their duty to write a book for the edification of their less fortunate brethren. The result of this is a vast amount of medical and surgical literature that falls still-born from the press.

The amount of money given to charitable institutions in Great Britain is almost incredible. Much of it is mis-applied. There is a multiplicity of servants at the hospitals. It takes two or three porters to do work that could be performed here by one, and other items are nearly in proportion. In some institutions, the board meets once every quarter, and sits down to a sumptuous dinner, the expenses being defrayed out of the Infirmary's income. At one of these board "feeds," of which I was myself cognizant, the wine alone cost £27. There are many other things of a like character that remain unknown to the public. This was also the case with the Red Cross Society; a society that did much good, and yet was much cheated. Some of the London instrument makers were enabled to sell a lot of old stock, useless for any practical purpose, to agents of the society who had not the slightest idea what instruments were required.

Comparing the profession in Great Britain to that in Canada, I think we have nothing to be ashamed of. We have everything to encourage us, when we consider the differences of advantages; how wealthy their institutions are, and how poorly ours are endowed. They have one advantage over us, their men are generally better educated before they enter upon their professional studies, and in proportion to the number of schools, there are fewer testing bodies.

There are also better supporters of professional periodicals, and so far as I could judge, there seems to be a greater unanimity and esprit-de-corps, in striving to raise the standard of the profession. The various "pathies" are let alone. Homœopathy, for instance, is never mentioned and is not noticed at all.

Gratuitious advice at the different hospitals has been abused to such an extent, that steps have been taken to have it remedied. Dr. Meadows and others, relate cases where persons have dressed themselves in their servants clothing, and have presented themselves for advice at the out-door departments. Well-to-do farmers come to London for the same purpose. I know of some far-

mers on the Island here, who do the same thing. Recently, a society has been formed, called the Charitary Organization. The committee rooms are in St. George's Hanover Square. All suspected cases are referred to them for investigation. The University College Hospital has already referred a good many suspicious patients to the committee, and many glaring cases of imposition have been exposed. When it was discovered that these patients could well afford to pay for medical advice, they were referred to the general practitioners in the neighbourhood of their abode. Some such arrangement might with propriety, be instituted in Montreal.

MEDICAL STUDY IN LONDON.

As referring to the above we extract the following letter from the *Medical and Surgical Reporter* of Philadelphia:

"London, February, 1872.

"Editors Med. and Surg. Reporter:

"For the practical study of medicine London, doubtless, excels any other city in the world. The number and varied character of the hospitals, the great amount of clinical material constantly presenting itself at these institutions, and the wide reputation of the physicians and surgeons in charge, constitute for the medical student a rare *embarras de richesses.*

"After he has made his first grand round of observation, two puzzling questions come up for consideration: in what direction to first turn his attention, and how best to systematize his time, too short for the numerous demands upon it. The answers will, of course, vary with the particular objects in view in each individual case. Every one will find abundant food for either special or general study. Access is readily had to the hospitals, lectures, museums and libraries.

"The cost of living in London, for a medical student or practitioner stopping here for study, is not less than in Philadelphia, contrary to the general opinion. I doubt, indeed, whether the latter is not the cheaper city. It certainly was before the war. I have conversed on this subject with several American physicians, who have been here for some time visiting the hospitals, and they all agree that it is not possible to lodge and board for a less price than in our own large cities. This fact, to prevent disappointment, should be borne in mind by those who look forward to benefitting themselves by the immense clinical advantages of this great city.

"To the young physician of some years practice, a few months

spent in London cannot fail to be of great interest and profit. He may be quite sure of a cordial reception and open doors. It is particularly in connection with the "out patient" department of the hospitals that he will find unequaled opportunities extended him. The "out-patients" are those who visit the hospital for treatment, as distinguished from those who have beds in the hospital. They are, of course, therefore, all walking cases. Each day there is in attendance, in turn, one of the physicians or surgeons of the hospital to meet them. This physician, who is one of the most prominent men in his department in London, examines and treats, as if at his own private office, with the aid of his assistants, each patient, a task of many hours. An American of industrious habits, and possessed of some experience, can readily associate himself with the physicians of a number of hospitals, not as a spectator, but as an assistant. He will thus acquire, in a short time, a practical training, under the best auspices, in investigating cases, and a close insight into current therapeutics and surgery, which will amply repay him for his outlay of time and money in crossing the Atlantic. These remarks are especially true of new and venereal diseases, diseases of the eye, of the heart and lungs, and of women.

"The surgical clinics are conducted here, as a rule, with much less attention to demonstration than in our own hospitals and colleges. For instance, at a clinic of Sir Wm. Ferguson's, which I have just attended at King's College Hospital, he scarcely addressed a score of sentences to the class during the hour in which he operated for fistula in ano, hair lip and cancer of the breast. What little was said in each case was after the operation, which was immediately commenced, so soon as the patient was brought in and chloroformed, without a preliminary word as to the diagnosis or history. Sir Wm. Ferguson I may mention, *en passant*, most strikingly resembles, in form and feature, Professor Gross.

"The seats in the lecture and clinical theatres are somewhat differently arranged from those in our own colleges. In most instances there is no support for the back. They are all furnished with elevated seats, against which one can lean while standing, the position of most of the class during an operation.

"Details in regard to methods of medical instruction and study in London I reserve for future letters.

"GEO. H. NAPHEYS, M.D."

Valedictory Address to the Graduates in Medicine, on behalf of the Medical Faculty of the University of Bishop's College, delivered at the Convocation held April 4, 1872, by AARON H. DAVID, M.D., Edin., L.R.C.S., Edin., D.C.L., Professor of Practice of Medicine, and Dean of the Faculty.

GENTLEMEN GRADUATES IN MEDICINE,—The day to which you have so long and so anxiously looked forward has at length arrived, and you have now attained the acme of your ambition—the investiture of the doctorate in that profession to which is to be sedulously devoted the remainder of your lives. Yet, a few short moments and the link which bound us together as teachers and pupils will be broken; but you are not to suppose we wish you to consider the connection between us as severed—for it is not so. We will ever take a deep interest in your welfare, and carefully watch your progress; and we wish *you* to cherish a kindly interest in your Alma Mater, a kindly interest in her welfare and progress, and do all the good offices for her it may be in your power to do.

It is natural you can little anticipate on this happy occasion the troubles and harassing difficulties which are inseparately connected with the life you have chosen; all is present sunshine, and you look forward to a bright and happy future; and that your success in life may be equal to your expectations, I need scarcely tell you, is *our* most earnest wish. The period, however, is one of deep and anxious concern, and is taken advantage of to impart to the youthful aspirant—as a valedictory, those lessons which experience have taught—to guide him in his future course, with advantage to himself and profit to the public.

You must always bear in mind the obligation you have this day assumed—to follow an honourable and discreet course of conduct; to practise your profession in a cautious, chaste, and upright manner; to care and do all you can for the safety of those who may trust their lives in your hands; *never* to divulge the secrets your intercourse may bring to your knowledge; and, lastly, always to keep in your remembrance the University who has received you as her child, and to uphold and advance her interests in every way you can—in the words of the oath, "*Me in omni grati animi officio.*"

This last, gentlemen, you will best do by increasing your present knowledge, and keeping pace with the improvements that are hourly taking place in our profession. Your present acquirements, the knowledge you have obtained as students, will only be the foundation *on* which your professional reputation is hereafter to be built. You have laboured *hard* in the acquirement of know-

ledge, and you will find you have laid in a store that will be of incalculable service to you in the future, and you will have the satisfaction of knowing that in practising your art to your own advantage you will be useful to your fellow-creatures.

At the commencement of your professional life your time will not be fully occupied; opportunity will therefore exist to improve your knowledge on many branches to which, from unavoidable circumstances, you have not been able to devote as much attention as you have to others. You are *not* to suppose, because you have gained the highest honours it is in the power of the University to confer upon you at this stage of your career, that your studies are completed; that you are to to be exempted from the *labour*—I ought, perhaps, to say *pleasures*—of study; for if you do, you will soon find yourselves outstripped by your cotemporaries, and deservedly so.

You must pay attention to the advancement in the scientific knowledge of your profession and keep pace with its improvements, and in so doing you will unquestionably elevate yourself and bring credit on our University. You must never forget that you have undertaken a labor and privation—that a physician's work is never done, and *that* it is one of continual study. The experience of the past and the discoveries of science are at your command, and your personal observation and research *must* be compared with the research of others.

Every case that comes before you should be a subject of special thought; and although you have learned a great deal from lectures and from books—which will, undoubtedly, be of great asssistance—you will be thrown, in no small degree, upon your own resources.

There is no profession in which it is more essential that those engaged in it should combine the talent of observing, thinking and reasoning for themselves, than it is in the medical profession.

The best part of every man's knowledge he must acquire for himself. You must spend your lives in endeavouring to add to your store of knowledge, and from day to day obtain a clearer and deeper insight into the phenomena of disease—for the most important part of your education is that which you have to give yourselves, and to this there is not any limit. Whatever number of years may have passed over our heads; whatever may be the extent of our experience, every day brings its own knowledge—there is something new to learn, some deficiencies to supply, and some errors to correct.

I shall not, gentlemen, occupy much of your time in mentioning the *disadvantages* of not attending to the improvements that are continually going on around us, for you must be as well aware of

them as I am, but will only tell you it is necessary, if you would "hold your own," to keep up with the ever changing and generally improving aspect of the science. A few years of neglect throws one fearfully behind hand, and in recurring to the subject we find ourselves a stranger in the field formerly well understood. This is the case, particularly in those parts of medicine not immediately practical—as in chemistry and physiology.

Set apart, therefore, a portion of your time for self-culture; for a scholar can no longer repose upon his academical laurels, and each one should make it the object of his life to add something to his medical knowledge.

Pursue with ardour and constancy every discovery after truth. The basis on which rests the glory of the medical profession is the sterling truths of its observations. Never employ your talents in aggrandizing visionary hypothesis, as truth is alone abiding. It is not merely the *duty* of every medical man, but it is his greatest glory and privilege to declare it. Be systematic, patient and attentive and clear, in all your statements. Be affable, yet dignified.

So much as to your professional studies. Now a few words on your duties to the public:

A medical man is emphatically a public man, and should be a man of the people. His aim should be to recommend himself to all parties, to make himself useful to all, and not by active partisanship make himself objectionable to any part of the community. He should only be known as the philanthrophist and patriot in the broadest sense of the terms—devoted to the common weal and good of his patients. There is one duty you owe to society, which you should not neglect, and that is to disseminate, as widely as possible, a knowledge of the laws of Hygiene—a knowledge of the laws and conditions of health. To you, especially, will the community look to inform and enlighten it in relation to the best means of preserving health, of preventing the spread of contagious and infectious diseases, the influence of trades and occupations, the effects of different sorts of food, of dress and amusements, the nature, cause and cure of those diseases which attack the lower animals, and vegetable as well as animal life, the influence of soil and climate and season, of geological formations and geographical localities, the question of quarantine, the best mode of warming and ventilating houses, the establishment and regulation of schools and seminaries of learning. You will be called upon to instruct judges and lawyers and courts of law in relation to many important questions connected with hygiene, medicine and surgery, fractures, dislocations and poisons, and your opinions will, if well sustained, be decisive in turning the scale and shaping the verdict

of the jury. Besides this, you are to act your part as good citizens—patronizing every worthy object, aiding in all public enterprises involving the welfare of the masses, taking a special interest, especially in all improvements calculated to benefit the sanitary condition of the people, contributing freely to the support of education and religion—the great bulwarks of safety; in short, doing all that the broadest philanthropy or the most disinterested benevolence can suggest. From this you will see what a wide field the medical man has to fill.

These considerations suggest that there are duties you owe to yourselves, for the relations you are to sustain to the sick and to the public at large imply the possession, on your part, of certain qualifications that can by no means be neglected. You should never forget that to most persons a fit of sickness is an important event, the physician is associated with all its recollections, and you will best secure the confidence and regard of the patient and his friends by having helped to make those recollections agreeable, by having aided in beguiling its wearisomeness, diminishing its discomforts, relieving its anxieties, dispelling its fears, and raising its hopes.

Your duty to your professional brethren, let me tell you, gentlemen, is not the least part of what is worthy of your deep consideration, and the whole code of ethics thereon may be summed up in the words of the Golden Rule, "Do unto others as you would they should do unto you." Cultivate friendly relations with them. Never, by unscrupulous insinuations, attempt to injure their reputation, but do all that lies in your power to preserve it intact; for by so doing you elevate yourselves and preserve the honor of your profession. Therefore, leave nothing unattended to that will promote this end.

And now, gentlemen, it only remains for me to say farewell. Go forth on your mission. May your manhood be irreproachable and your character unimpeachable; and, for your success and prosperity, you carry with you our most fervent wish.

Hospital Reports.

Operations for Congenital Cataract, on Different Plans. Reported by M. O'B. Ward.

The object of these operations was to try the relative advantages of performing the operation for cataract by solution, by passing the needle through the sclerotic or through the cornea. Severe inflammation was said to follow the older method, and a plan by which this could be avoided was desirable.

The advantages claimed for corneal puncture were: 1st. The cornea being less vascular than the sclerotic, the risk of inflammation was of necessity less. 2d. The cornea being transparent, the operator could see the point of the needle, thus being better able to guide it.

Here remark how the operations for hard and soft cataract are reversed. At first, hard cataract was extracted through the cornea, and solution in the soft variety affected through the sclerotic. Now, the contrary is the rule. The hard cataract is, according to Graefe's plan, extracted through the sclerotic, while the soft kind operated on through the cornea.

To try the efficacy of both plans, and to compare their results, it was determined upon by Drs. Hingston and Desjardins, to operate upon two patients suffering from this disease, each operator to operate after his favorite plan; Dr. Hingston through the sclerotic and Dr. Desjardins through the cornea.

The patients were both inmates of the "Asile Nazareth." One was a young girl of about 12, and was Dr. Hingston's. The other, a little boy of 8, being Dr. Desjardin's.

The first operation was performed on the 12th of December. Both doctors confined themselves to operating on one eye each. The following was the result:

No inflammation whatever in the eye operated upon through the cornea, and severe inflammation in the one operated upon through the sclerotic.

A second operation was performed on the 17th of January, Dr. Desjardin repeating his operation on the same eye as before, while Dr. Hingston operated on the other.

The object of the latter for not repeating the operation on the first eye was, as he said, that the lens continued to be absorbed for a considerable length of time after the operation, and by refrain-

ing from operating on it, nature as well as art, had a hand in the cure by allowing it to be absorbed as much as possible.

This time Dr. Hingston tried the corneal method and the result was most satisfactory, no inflammation ensuing in either eyes, which fact, as well as the previous one, seemed to be greatly in favor of the corneal plan.

The last operation was performed on the 31st of January. Dr. Hingston operated this time on the first eye, and Dr. Desjardin on the second.

Dr. Hingston tried the new way a second time, but the result for him was not as satisfactory as before, great inflammation setting in, which resulted in the loss of the eye.

This left the dsputed point just where it was.

The inflammation in the second eye may have depended upon the previous inflammation, causing the eye to be more vulnerable, but whether this explains matters or not the result was all the same. The slight vascularity of the cornea caused a more severe inflammation than the sclerotic, thus proving that the amount of vascularity in the part has very little to do with the success of the operation.

The remaining eye is now healed, and so are the ones operated upon by Dr. Desjardin.

I shall again give the result of the operation on the other eyes.

Reviews and Notices of Books.

General Surgical Pathology and Therapeutics, in Fifty Lectures; a Text Book for Students and Physicians. By Dr. Theodore Billroth, Professor of Surgery in Vienna. Translated from the fourth German edition, with the special permission of the author, by Charles E. Hackley, M.D., Surgeon to the New York Eye and Ear Infirmary, &c., &c., with 152 illustrations on wood; 8vo: pp. 676. New York: D. Appleton & Co., 90, 92 and 94 Grand street, 1871. Montreal: Dawson Bros.

The subject treated of in this work is more that of systematic surgery, or principles of surgery, than true surgical pathology; although the pathological part illustrates that accuracy of observation peculiarly German. The work consists of twenty chapters divided into fifty lectures. The author commences with an introduction, and draws attention to the intimate relationship between medicine and surgery; showing how necessary to ensure success

is it, for the practitioner to be acquainted with both sciences. Here the author gives us some idea of the German method of instruction, which, if it has not given to the profession generally better practical men, has, at least, brought out and developed men like Virchow, Niemeyer, Rindfleisch and the very eminent author himself.

Chapter 1st is devoted to simple incised wounds of the soft parts. This subject is treated of in nine lectures. In the first lecture we have the mode of origin and appearance of these wounds. Hæmorrhage and its varieties, parenchymatous hæmorrhage, and also that from the pharynx and rectum are considered as also that peculiar condition known as the hæmorrhagic diathesis. The constitutional effects of severe hæmorrhage is likewise touched upon.

In the next lecture we have the subject of arrest of hæmorrhage dwelt upon. The author resorts to very definite directions, even to the tying of a knot, which is, we have no doubt, necessary to be understood, but does not speak much for the intelligence of his auditors. Here the author alludes to the lack of common sense on the part of non-professional people in seeking to arrest bleeding in cases of accident, by the application of spider-webs or other nostrums, instead of using the simplest of all methods—compression.

On referring to acupressure the author states that he has in several amputations, even of the thigh, seen no objection to this method of arresting bleeding, but he does not believe that this means of securing bleeding vessels will altogether displace the ligature. He describes a method of applying acupressure which is novel and, we should imagine, original with him. He says: "In amputations I prefer acupressure by torsion. I pass the "needle transversely through the" (mouth of the) "artery, which "is drawn forward, and, with the needle, make a half or whole "rotation in the direction of the radius of the surface of the "flap until the bleeding is arrested, and then insert the point of "the needle into the soft parts." Various hæmostatics are referred to, and also the subsequent treatment by transfusion of blood. Specific rules are laid down for performing this operation, and the quantity to be injected should not be more than from four to eight ounces.

The next seven lectures are devoted to the various methods followed by nature in the healing process of wounds and the means used by the surgeon to that desired end. These processes are illustrated by microscopic drawings which give a fair conception of the changes which occur.

In chapter two we have discussed some peculiarities of punctured wounds. In this the subject of traumatic aneurism and aneurismal varix is touched upon.

Chapters three and four consist of contused and lacerated wounds. On the latter subject the author mentions several cases which came under his observation where fingers had been torn from the hand, the tendons remaining attached to the severed member. Several cases of this kind have come under our own observation. One, the case of a groom to a celebrated stock horse. While taking out the animal for exercise, in arranging the bit the horse seized the man by the end of the thumb, raised him from the ground and swung him from side to side until the member was severed from his hand and he dropped on the floor. On recovery he observed that his thumb had been bitten off, as he supposed. He experienced pain in the hand and a numb, dead, aching sensation in the forearm. On making search for the fragment he found it with two long tendons attached. The first phalanx of the thumb had been fractured about the centre, and the tendons of the muscles inserted into the second phalanx had been drawn out from the forearm. Amputation had to be performed at the metacarpo-phalangeal joint and the man made a good recovery. The end of the thumb, with the tendons attached to it, is in the museum of McGill University.

Chapters five and six, with an appendix, are devoted to the subject of fractures. We observe at the commencement of chapter six, and, in fact, as the heading of that chapter "Open Fractures and Suppuration of Bone." This term, "open fracture," is made to signify what is recognised by all surgeons as compound fracture, a term of time-honoured usage, and whether it is from habit or some other cause we must observe that we regard it more favourably as indicating the condition of the injury than the novelty "open fracture." We notice the term "compound" is used on several occasions. This is apt to lead to confusion which is to be regretted.

The process of repair in fracture is fully treated of and amply illustrated. In the appendix to chapters five and six the subject of ununited fractures is considered, and the various methods resorted to by the surgeon in seeking to relieve false joints. The treatment of malposition in united fractures is also referred to and fully explained.

The next chapter is taken up in discussing injuries of joints having more especial reference to dislocations and the results of wounds of the articulations.

After the discussion of gunshot wounds, burns, scalds, frost

bites and acute non-traumatic inflammation of the soft parts, in chapters eight, nine and ten, the author next considers acute inflammation of the bones, periosteum and joints. The subject of gangrene is next in order, and then follows accidental traumatic inflammatory diseases and poisoned wounds. To this four lectures are devoted. Chronic inflammation of the soft parts is next taken up, in which the various changes or alterations of the tissues, the result of chronic inflammatory action is referred to. The author alludes to the empirical notions about diathesis and dyscrasia.

Chronic inflammation of the periosteum, bones, necrosis and chronic disease of the joints form the next subject under discussion; and, lastly, tumours are considered. Altogether, this work must be regarded as a valuable addition to our surgical literature, and the translator deserves commendation for having placed it within the reach of the English reader.

Medicine.

ALCOHOLIC PARESIS AND PARAPLEGIA.

By J. Lockhart Clarke, M.D., F.R.S.

The habitual and excessive indulgence in the use of alcoholic drinks is so frequently followed by partial or complete paralysis of the lower extremities, that no doubt can be entertained that alcohol and paraplegia do often stand to each other in the relation of cause and effect. Many striking cases that have come under my own care support this inference in a very convincing way, so that I think Drs. Handfield Jones and Wilks have done service in bringing the subject prominently before the profession.

On examining the bodies of persons who died either in a state of intoxication or during a course of excessive indulgence in the use of alcohol, particularly in its undiluted state, almost every organ and tissue is found to be more or less altered in appearance. The mucous membrane of the pharynx, œsophagus, stomach, small intestines, and bronchial tubes is red and injected. The liver and kidneys, the substance and membranes of the brain and spinal cord, are in a variable state of congestion. In chronic cases of alcoholism we find more or less atrophy of the cerebral convolutions, and effusion of fluid on their surfaces, with thickening and adhesions of the membranes.

On examining such persons during life, we find a train of symptoms that are quite in accordance with these post-mortem appear-

ances. The mucous membrane of the fauces is unusually red and injected; a viscid, tenacious, or cream coloured mucus hangs about the back of the pharynx and soft palate, exciting vomiting on rising in the morning; a sensation of rawness or heat is sometimes felt along the œsophagus, particularly on drinking warm or spirituous fluids; the stomach is irritable and vomiting is easily excited, A viscid and tenacious mucus collects during the night on the membrane of the bronchial tubes, causing more or less shortness of breath or oppression of the chest on waking in the morning, and exciting cough, which is frequently attended by vomiting. The skin has frequently a dirty yellow tint, although sometimes a remarkable clearness and freshness of colour is preserved, especially in fair persons. The conjunctivæ are often thick, injected, and dirty yellow.

Different individuals suffer from a variety of nervous symptoms —from giddiness; a sensation of being lifted from the ground, or "taken off their legs," as I have heard them express the feeling; an alarming sensation of choking or suffocation on dropping off to sleep at nights; occasional numbness or "pins and needles" in the fingers and toes; or acute pains beneath the nails; a dull, aching pain across the loins, or an acute pain on bending or on rising from the sitting posture; a darting or lacerating pain in the lower extremities during the act of progression.

The muscular system is more or less affected by weakness, by spasm, or by the withdrawal of voluntary control. The hands and arms, and sometimes the whole body, are tremulous, with frequent fibrillar quivering of the muscles, particularly about the face. Voluntary movements are improperly or awkwardly performed. Even when there is no tremor of the hands, delicate operations—such as writing—are clumsily performed, and are irksome or distressing. The walk is more or less unsteady; and I have often noticed that in progression each foot is alternately carried inwards, and almost in front of the other. The articulation is sometimes peculiar and indistinct from partial loss of control over the muscles of the lips. The individual losses his accustomed energy, is careless of his own interest, and feels himself unfit for the performance of his ordinary duties, until he has resorted to his usual potation, or obtained from the druggist a "pick-me-up." For this distressing state I have found nothing so useful as full doses of nitro-hydrochloric acid, with a little of Battley's sedative solution; two or three doses, even, sometimes act like a charm After relieving the bowels by saline aprients, I combine the acid with quinine, perchloride of iron, or small doses

of strychnine. The occasional use of the Turkish bath is also beneficial.

If the individual persists in the excessive use of alcoholic drinks, partial or complete paralysis, and particularly paraplegia, not unfrequently results. I will only briefly mention two or three of the most striking cases out of a number that have come under my care.

A cab proprietor and his wife, both remarkably fine and naturally healthy persons, between thirty and forty, were addicted to the most immoderate abuse of neat spirits. The wife, after two or three years of excessive indnlgence, with many of the symptoms above described, became very fat and bloated, and one morning found that she had complete paralysis of the lower extremities; sensibility was also almost entirely abolished. At the end of ten weeks she quite recovered, and I subsequently lost sight of her, but heard, after a renewal of her old habit, she died of some stomach or bowel affection. Her husband, who, as I was told, would drink daily as much as a quart of gin, had only paraplegia, with great numbness and pains in the legs. Unlike his wife, he became thin and sharp-featured; and I have seen this originally powerful and magnificent man, who was six feet two inches in height, look down upon his tottering and wasted legs, and burst into tears at the recollection of what he once was; and yet he has straigtway gone to raise his spirits by a repetition of his accustomed potation. He went to Bath for the waters, and died there.

Another striking case was that of an old sergeant who had served through the Peninsular war—a tall, stalwart Yorkshireman, seventy-two years of age, who assured me that for the last twenty years he had never taken less than three-quarters of a pint, and sometimes a pint of rum daily, besides sundry glasses of gin and beer. He smoked, also, almost incessantly from morning till night. One day he lost the entire use of his lower extremities without much impairment of sensibility. In six weeks he quite recovered, and became much more moderate in his habits; but two years after I saw him again with almost complete paraplegia. He had frequent vomiting, a brown, parched tongue, with that peculiar smell of breath which so often precedes dissolution, and at the end of a week he died.—*The Lancet.*

Harley Street, W., March, 1872.

SKETCHES OF SUCCESS AND FAILURE IN MEDICINE.

BEING THE SUBSTANCE OF THE LUMLEIAN LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS IN 1862.

By Charles J. B. Williams, M.D., F.R.S.

Pleurisy, a local inflammation producing its effects by its effusion, liquid and solid; Varieties; Serous; Empyema; Euplastic, Cacoplastic, and Aplastic Lymph—Treatment of Pleurisy—When, why, and how the chest should be tapped—Cases requiring operation—Successful cases without operation.

Pleurisy has by no means the same relations to the blood which I have pointed out to exist in pneumonia. Pneumonia is essentially a blood disease, although attacking a particular organ. Pleurisy is essentially a local disease; and its relations to the blood are incidental on the extent of the inflammation and the amount and quality of the effusion which it produces. We may further trace out the evils and dangers of pleurisy in connection with these results under four heads, (1) the quantity of the liquid effusion, (2) its quality, (3) the quantity of the solid effusion, (4) its quality.

When the quantity of liquid effusion is moderate, it is remarkable how little inconvenience it causes. After the pain (if any be present) subsides, which it commonly does in a few hours, or in a day or two, the patient often thinks himself well, till he finds on exertion his breath short than usual. Thus it frequently happens that the existence of the effusion is not discovered until long after it has taken place. Its easy detection by auscultation constituted one of the earliest and most striking triumphs of that mode of examination.* But if the effusion is very copious and rapid, the functional disturbance may be very great, in consequence of the

* *Note added in* 1872.—I take this opportunity to remark that some of the most recent writers on pleurisy seem neither to appreciate nor to understand the nature and value of the physical signs of pleurisy, which were, nevertheless, sufficiently explained and defined more than thirty years ago. In my lectures on "The Physiology and Diseases of the Chest," published in the *Medical Gazette* in 1838; in the article "Pleurisy" in the "Library of Medicine," vol. iii., 1840; and in the last edition of my "Pathology and Diseases of the Chest," 1840, (now long out of print), the physical signs previously known were carefully considered, and new ones described with a precision that removed much perplexity from the subject, and made the diagnosis of pleurisy, with all its results, sufficiently plain to anyone who would take the trouble to master it. Although so many years have elapsed since the date of those publications, I have met with nothing in my own longer experience, or in the writings of others, to invalidate the statements there made. There may be found the first complete description of the varieties and signs of partial effusions in the pleura; the true nature and signification of ægophony; and the first announcement of trachael and tubular sounds of precussion, the discovery of which Trousseau and others ascribe to Skoda, whose pretensions to it are of a much more modern date. My acoustic explanations of the noisy bronchophony and loud amphoric breath sounds of pneumonia are quite different from those of Professor Skoda. They were annually given in my lectures in University College before 1850; but as I hardly published anything on diseases of the chest for twenty years after, I do not think they appeared in print until I mentioned the subject in a note in the chapter on physical signs in our recent work on "Pulmonary Consumption," p. 171.

extent to which the lungs, heart adjacent organs, and chest-walls are pressed on and displaced. The symptoms are those of oppressed and restricted breathing, quickened, partially impeded, and weakened circulation, and deficient and depraved secretion; and, if these are not soon relieved, they may end in suffocation or exhaustion. Fortunately, in a large proportion of cases, medicinal treatment does bring relief; so that fatal cases of pleurisy with serous effusions are rare, and it is not often necessary to resort to the operation of tapping the chest.

The case is quite different when the effusion into the pleura is either purulent at first or is so charged with protein matter that it becomes purulent in the course of the malady. Pus, when once formed, is rarely dispersed or largely absorbed; and it remains in the pleural sac, not only oppressing and displacing organs by its bulk, as serum does, but also doing mischief, both by its solvent and irritative operation, exciting supurative inflammation in adjoining parts, and tending to find vent through them. and also by its influence on the system through its partial absorption, causing irritative fever and other concomitants of pyæmia. It is very obvious, therefore, that the prudent quality of the effusion in the pleura increases greatly the gravity of the case, so that failures or imperfect recoveries are likely to occur if early relief be not given by tapping the chest. It is quite true that recoveries do take place, especially in young subjects, without any operation, by the matter making its way through the lung into the bronchial tubes, or outwardly through the walls of the chest; but in the first case there is great distress from the violent prolonged cough and expectoration, which must harass the patient for a long time, and cause much risk of permanent disease of the lungs; and in the latter case the matter often burrows in the walls of the chest, doing them more or less injury, before it is discharged through the surface. I have known several cases of empyema complicated with caries of the ribs; and in a few of these it has been difficult to say whether the caries was the sequel or the cause of the empyema; but in some it was clearly the former, and, by long maintaining an offensive wound in the chest-walls, materially retarded the local and general improvement.

In different cases of empyema there is some variety as to the quantity and quality of the pus formed. In some cases the quantity is large and continually increasing, so as to cause much pressure, displacement, and oppression in a short time, and if it does not speedily make its own way out, leaves no alternative between an operation and a fatal result. In other instances the matter is more slowly formed, with much less pressure and dis-

placement, giving time for deliberation and hope that the effusion may be simply serous, until after the lapse of several weeks the frequent pulse and hectic symptoms, perhaps with some local signs of pointing in the walls of the chest, give evidence of its purulent nature. Again, in some cases the matter is inodorous—"laudable"—not differing from that of healthy abscesses; in others it is highly offensive, with the rotten-egg or sulphuretted-hydrogen stench characteristic of decomposed pus, quite distinct from that of fetid abscess which I have before described. Sometimes this fetor seems to be caused by diseased bone, but it certainly occurs also independently of that cause. I have known it in several instances follow the operation of empyema, where the admission of air was not prevented; but I can also recall several cases where no fetor ensued, although air was admitted. This offensive character of the matter must be regarded as unfavourable, both as applying its instability or proneness to decomposition, and also because the sulphuretted hydrogen evolved it deleterious in its influence on the animal economy. Nevertheless patients do sometimes recover, both where the matter originally discharged was offensive, and where it became so after the operation.

I have mentioned varieties in the quantity and quality of the *solid* effusion as tending also to affect the results of pleurisy, favourably or otherwise. When the lymph thrown out is in moderate quantity and of good quality (*euplastic*, as I term it), it is either absorbed, or forms soft, flexible, membranous adhesions between the pleuræ, which little, if at all, interfere with the movements of the lungs. This is a favourable result. But when the fibrinous exudation is very abundant (I recollect a case in which it was from half an inch to an inch thick on the inflamed pleura), it can neither be reabsorbed nor can it be so highly organised: it has more or less of the *cacoplastic* or contractile character, shrinking and becoming dense as it is organized—and, binding down the lung and drawing in the walls of the chest, causes those permanent contractions which are sequels of severe pleurisy. Again, in highly scrofulous subjects we may have the inflammatory lymph entirely *aplastic*—thrown out in a curdy mass, devoid of all organisability, and yet in such abundance as nearly to fill the pleura. I remember the case of a boy aged 10, whom I saw twenty years ago, who was attacked with right pleurisy, and lingered for several months without any return of resonance or respiration on the affected side. After the death the plural sac was found full of soft, solid cheesy matter, not at all purulent, the

lung being partly compressed, as is usual in pleurisy, and in other parts in a state of caseous consolidation.

The treatment which is successful in a large proportion of cases of acute pleurisy is chiefly antiphlogistic, and more local than in pneumonia. Venesection is required only in the plethoric and robust, and then only in the earliest stage of the sthenic form; but leeches or cupping may be used with advantage so long as there is pain with increased temperature. In very many cases there is little or no heat of skin; and in these I prefer a large blister at once, keeping it on not more than six or eight hours, and following it with a large poultice covered with oiled silk. This promotes the discharge from the blistered surface, and, acting as a comfortable fomentation on the side, may well be continued till the parts are ready for further blistering, should it be required. Of internal medicines, mercurial and saline diuretics are the best for the early stage of the inflammation. If there be severe pain, I give a few doses of calomel combined with morphia, till the pain is relieved, and then substitute small doses of blue pill, with squill and digitalis, two or three times a day, until an effect is produced on the bowels, kidneys, or gums. Salivation is by no means necessary or desirable, the best operation of mercury being on the liver and kidneys; and when these are brought to act freely, the effusion, if serous, generally is stayed, and will diminish —quickly in some cases and very slowly in others—without any further active treatment. Saline diuretics of citrate and nitrate, or acetate, of potash are useful in most cases. In mild forms of the disease mercury is not necessary; blisters and saline diuretics are sufficient, and may soon be changed for iodide of patassium in a bitter infusion, with daily painting the affected side with tincture of iodine. But sometimes we meet with cases of extensive pleuretic effusion, which, either from original intensity or from not having been treated soon enough, will not yield to any or all of these remedies; and whenever the effusion is so much as to cause such distress in breathing as to interfere with the comfort of the patient, and especially to prevent sleep, there should be no delay in puncturing the chest. We may be more confirmed in recommending this treatment if the symptoms render it probable that the effusion is purulent, and we may often guess this to be the case when there is general pallor, with partial hectic flush, alternations of chills and sweats, very frequent pulse, much weakness and tremulousness of movement, and more than usual tenderness and puffy feeling of the walls of the affected side.

I must admit, however, that I have noticed tenderness and even swelling of the integuments of the walls of the chest in some

cases which yielded to treatment without tapping, and probably was not purulent. Still the symptom is suspicious, and, if in conjunction with others above-mentioned, may be taken in favour of the effusion being purulent. In doubtful cases the grooved needle may be used to settle the point, if there be any question about the propriety of operating; but I would repeat that when there is great and continued oppression—such as to prevent sleep—I think the operation should be performed, whether the effusion is purulent or serous only. In case of serous effusion, tapping to the removal of two or three pints may be enough to relieve the oppression; the respiration and circulation being thus set free, the rest will probably be absorbed. But in cases of empyema it is desirable to evacuate more matter, and we may require repeated operations. As it is impossible to evacuate all the matter, a long time is required for the lung to re-expand, and for the pyogenic membrane to become covered with lymph, which obliterates the cavity by the adhesion of the pleural surfaces.

I do not propose to dwell on the details of the operation of tapping the chest, but I must remark that my experience is in favour of avoiding the admission of air if possible. I know that cases have done well where no attempt was made to exclude the air; but these were healthy subjects, in which the matter resists decomposition, and whose constitution supplies a healing power in spite of difficulties. On the other hand, I have seen several instances in which serous effusion has become purulent, and purulent matter has become fetid, with the evolution of sulphuretted hydrogen, so shortly after the admission of air, that it was impossible to doubt the injurious influence of the air in those cases at least. In young subjects the walls of the chest are somewhat compressible, and by pressure steadily applied whilst the fluid is flowing, and continued till the puncture is closed, it is quite possible to prevent the admission of air without any special apparatus for this purpose. In older patients, in whom the chest is more rigid, this is less practicable; and of the various contrivances to prevent the admission of air in such cases, the simplest and most effectual is the attachment to the canula of the trocar of a few inches of a perfectly flaccid tube, such as a rabbit's intestine, or soft, thin indiarubber, which permits the liquid to flow downwards freely, but, collapsing as the current flags, effectually prevents any air from passing upwards.*

The treatment after the operation, as well as for all the more

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* *Note added in* 1872.—The more modern improvements in the operation introduced in the last ten years will be noticed in the next portion of the lectures.

chronic forms of pleurisy, should be of a sustaining and corroborative kind. The solid products of inflammation are the more in proportion as they degenerate: and they are more likely to be absorbed or to form harmless adhesions if the body is well nourished and under salubrious influences. A course of cod-liver oil with a small tonic, a generous but not too stimulating diet, and moderate exercise in a healthy air, greatly conduce to convalescence, and may prevent many evil consequences. In cases of empyema with a permanent opening in the chest, little improvement may take place till the patient goes to a healthy country place or to the sea-side; and then the discharge soon begins to diminish, and the health and strength are simultaneously improved.

On turning to my case-books to illustrate the successes and failures in the treatment of pleurisy, I find the cases successful without operation so numerous and commonplace that it would be superfluous to dwell upon them. As samples, two cases will suffice—one in a young subject, the other in advanced age. The latter and a third case—which exemplifies an imperfect success, which is not uncommon—have been added since the lectures were delivered.)

Case 1.—December 11, 1850.—A young gentleman, aged 13, eight days ago, after long riding in the wet, was attacked (in the country) with sharp pain in left side, sickness, occasional fits of cough, short breath and fever, with quick pulse and hot skin. Two days ago he was brought to town, and has been under the care of an eminent physician, who prescribed only salines. The breathing has become worse, pulse 124, urine very scanty and high-coloured; pain less, and skin cool. Complete dulness and absence of breath and vocal vibration throughout the chest, and extending an inch to right of sternum, including dorsal spines, and pushing the heart two inches to right of sternum. Ægophony in mild regions. Breath-sound puerile on right side. Blister six inches square to left side. Blue pill, squill, and digitalis, and an effervescing saline every six hours.

14th.—Pain and breathing better; pulse 69; urine free, alkaline. Motions being loose and bilious yesterday, grey powder and Dover's powder given thrice daily instead of pills. Signs the same, except that the heart is three inches to right of sternum, and tubular voice and breath are heard in left upper front.

16th.—Breath better, but is faint from sitting up; urine alkaline. Dulness and displacements continue, but ægophony heard lower down in the back, and bronchophony within left scapula. Another blister six inches by three inches. Iodide and nitrate of potass in orange and cascarilla infusion substituted for the citrate

of potass mixture. The blister rose well, and next day the gums were slightly affected. From this time the patient made a speedy and complete recovery, being convalescent in a fortnight. Examined four years after, the chest showed no signs of disease or contraction.

Case 2.—A distinguished Physician to the navy, aged 72, consulted me on November 15, 1863; subject to bronchitis in winter. Ten days ago, after exposure and chill, had sharp pain of right side, cough, short breath, restless nights, scanty urine; pulse 90, weak; respiration 30. Dulness from second rib down whole right front, and throughout side and back below spine of scapula; no breath-sound or vocal vibration; ægophony in mid-regions of side and back up to spine of scapula, where, and above second rib, bronchophony and tubular stroke-sound; heart-apex below left mammilla.

A blister six inches square to the right side; blue pill, squill, and hemlock three times a day, with effervescing citrate of potass; nutritious diet, with a moderate amount of stimulants.

The kidneys soon acted freely, and breath and restlessness were relieved. In a week another blister was applied, and iodide of potassium in a cascarilla mixture substituted for the saline and mercurial. After this the signs of effusion gradually diminished, and the health and strength were re-established in a few months under tonics, cod-liver oil, and country air. I did not see this patient after 1864, but I heard of him as pretty well in 1867, although suffering from cough. He died in 1868. This case shows that advanced age is no bar to success in the treatment of subacute pleurisy by the recommended means.

Case 3.—Master H., aged 10, June 26, 1863; previously delicate, but not ill till a fortnight ago, when he fainted at church. Since weak, with slight cough, pain in the chest, and shortness of breath, which has much increased in the last two days, and the left front of the chest is swollen. Complete dulness, without breath-move ment or sound through the whole of left chest and to right of sternum and dorsal spine; heart two inches to right of sternum; bronchophony above left scapula; protrusion and tenderness of intercostals about mammilla.

Citrate and nitrate of potass were prescribed, but I considered the case so urgent that I arranged with my friend, Mr. T. Tatum, the following day, to tap the chest. When he came we found the swelling and dyspnœa less, and, as the boy was very timid, it was agreed to postpone the operation, and try a blister in addition to the saline diuretic and a few nightly doses of blue pill. This treatment proved successful in removing the liquid effusion in

three weeks, but the side contracted, and the penetration of air into the lung was imperfect. In the following August, under the constant use of cod-liver oil and tonics, with regulated exercise and diet, the lung expanded, and the youth outgrew the deformity, so that, in 1865, he was in good health, with little remains of the contraction. He continued well till 1867, when, at Harrow, he had another attack of inflammation of the left chest, which has recurred since repeatedly, and has induced chronic phthisis. He is still living, but in an invalid state.—*Med. Times and Gazette.*

NOTE ON A CASE OF ATHETOSIS (?)

By C. Currie Ritchie, M.D., Physician to the Hulme Dispensary, Manchester.

In his treatise on disease of the nervous system, Dr. Hammond, of New York, has lately described an affection to which he has given the name *Athetosis* (from ἀθετὸς, without fixed position), and which is "mainly characterised by an inability to retain the fingers and toes in any position in which they may be placed, and by their continual motion." The following may prove of interest, taken in connection with a similar case under the care of Dr. Clifford Allbutt, which was reported in this journal for January 27:—

J. G., an engineer, aged 59, consulted me on October 10, 1870, in consequence of his having been for some time previously subject to involuntary movements of the extremities. He was a short, thin man, with sallow complexion and somewhat anxious expression. He had, however, always enjoyed good health till about three years before, when he began to suffer from occasional headache and giddiness. One day in November, 1868, when about to sit down to dinner, he suddenly lost consciousness, and fell to the ground. No account of involuntary muscular movements during this seizure could be elicited. He remained insensible for about ten minutes, and was then put to bed, where he continued for five days. His speech was impaired for about three months afterwards. About this period (February, 1869) he noticed a slight sensation of numbness in the right arm and leg, accompanied by severe pain, which began to occur in the fingers and toes of the right side; these were at first slight and under the control of the will, but they had gradually increased, and were now quite involuntary.

When I saw him, he could not flex the fingers of his right hand without the aid of his left, and even with this assistance seemed to have considerable difficult in doing so. On desiring him to keep the right hand flexed and still as long as he could, in a few seconds, in spite of his efforts, his fingers became extended and

assumed a variety of curious movements, which were continuous and somewhat complex in their nature. They began when the patient held out his arm before him, and took place slowly and deliberately; he could stop them by placing his right arm by his side and firmly grasping the wrist with his left hand. The movements usually consisted of alternate abduction and adduction, combined with partial flexion and extension; no regularity, however, was observed in their occurrence, and frequently the hand assumed a "sprawling" appearance, from the simultaneous abduction and partial extension of the radial and ulnar portions of the hand; sometimes the thumb would remain in a state of extreme abduction, while the little finger was semi-fixed and drawn across the palm. These movements were accompanied by afe eling of numbness and pain. The toes were almost always in a state oi flexion, having their tips pointed to the ground. When he wished to extend his toes, he had to plant his heel firmly on the ground, and gradually draw his foot backwards, at the same time raising his heel. During these movements the muscles of the forearm and calf were hard and rigid. The tactile sensibility of the affected arm and leg, and also the temperature, were less than in the others. He suffered frequently from headache, which was always relieved by sleep; tongue tremulous; complained occasionally of vertigo, and "flashes of light" before his eyes; articulation normal; intelligence fair. He had been a temperate, steady man; no history of tuburcle or syphilis, congenital or acquired. There was no tenderness or pain on percussion over the spine. He was ordered ten-grain doses of bromide of potassium three times a day, and requested to see me again in a week, when, if there was no improvement in his condition, I proposed to employ galvanism for his relief. When he came to me on October 22 (twelve days after I first saw him), he told me that he had been able to do a little work, which he had not done for six weeks before, on account of the pain in his hand, which was now much relieved; the movements were not so troublesome and he was able to sleep much better. He was recommended to continue the use of the bromide. I regret that I did not see the case again, in consequence of the patient having changed his place of residence; but, as it corresponds closely to the description of athetosis as given by Dr. Hammond, I venture to submit these details, imperfect as they are.—*Medical Times and Gazette.*

Midwifery.

ACTION OF QUININE ON THE UTERUS.

M. Monterverdi communicates to the *Nuova Liguria Medica* the results of a series of experiments he has made on this subject. He has invariably employed the sulphate of the alkaloid. He finds that quinine exerts a general tonic influence on all the organs of the body, but especially upon the uterus. In the course of half an hour after it has been administered, short contractions occur in the uterus, unaccompanied by pain; and these gradually become longer and stronger, with distinct intermissions, so as to resemble closely ordinary pains of labour, the effect lasting for about two hours. In order to effect the expulsion of the fœtus and of the placenta, he believes that doses of about four grains will be found the most appropriate. Quinine appears to be preferable to ergot, because it exercises no injurious influence either on the mother or child, because it is very certain in its action, because the contractions it induces are very regular and natural in their character, and because it is free from danger at whatever period of pregnancy it is administered; or in cases of contracted pelvis, incomplete dilatation of the os uteri, and antecedent to the escape of the waters. He finds that it is of service in the metrorrhagia of pregnancy, in amenorrhœa in consequence of a torpid condition of the uterus, and in puerperal fever, as a consequence of its tonic action. He considers quinine to be indicated in all diseases of the digestive organs, and of the urino-genital system dependent upon atony of the various organic constituents. M. Monteverdi gives a caution in regard to the use of quinine in pregnancy complicated with any disease requiring its administration, lest abortion or premature delivery be induced. In cases where quinine proves too energetic in its action, he recommends opiates to diminish its effect. He considers quinine to be contra-indicated, as a general rule, in hysteria.—*Lancet.*

Canada Medical Journal.

MONTREAL, APRIL, 1872.

SANITARY REFORM.

We can only look on and contemplate the good things in store for Great Britain, as we observe that Mr. Stansfeld's Bill, with certain modifications and suggestions, will be up for discussion before the British Parliament, with every chance of a useful and beneficial measure being adopted. Such action is not likely to be taken by our House of Commons; and if a Bill is submitted it will, in all probability, pass over several sessions before it becomes law. Unfortunately we are on the eve of a parliamentary break-up, and it appears to us that the members of the Canadian House of Commons are more interested in the possible chance of having to engage in an election contest, than in devising measures for prolonging the lives, health and prosperity of their constituents. That Sanitary measures will be earnestly gone into we make no doubt, but we fear that procrastination will be the role until forced to adopt some definite course in actual self-defence.

There are several noticeable features in Mr. Stansfeld's Bill to which we desire to allude. In the first place, it is proposed to appoint a central medical authority, such medical authority to be constituted by Parliament. Here we have a body, so appointed or constituted, to regulate and direct the details necessary to be carried out, and responsible for its acts to the Executive of the country. Its duties consist in the superintendence of medical relief to the poor, the registration of sickness, improvement in the registration of births and deaths, and the causes of death, and the qualifications and duties of medical officers of health—and generally to direct the administration and carrying out of Sanitary measures.

Medical officers of health are to be appointed by the local justices, subject to the approval of the Central Medical Board. The duties and qualifications of such medical officers of health shall be determined by a general regulation to be issued by the Government board. Every medical officer of health shall be required to relinquish private practice, and devote the whole of his time to matters affecting the public health, and report thereon to the county authority. The Central Government Board are to have the general direction and supervision of Sanitary matters, and

should any local authority neglect to carry out prescribed improvements which are deemed essential for the public weal, it will simply be done for them under the authority of the Central Government Board, at the charge and expense of the local authorities.

It will be readily conceded that such action is necessary under certain circumstances, and if in Canada there had existed, recently, a central board, with similar powers, we would not have suffered the humiliation of being forced to a compromise in the matter of establishing a small-pox hospital in our own city. The fact that the usefulness of our general hospitals has been marred, by having attached small-pox wards in connection with these institutions, has been a matter of great concern. In the Montreal General Hospital small-pox has, on several occasions, broken out in the general wards, and persons who were afflicted with other maladies have taken that disease, and in some instances it has proved fatal. Such being the case, the governors, on the advice of their medical board, determined to close the small-pox wards, and thereby throw upon the city the onus of securing an isolated building for small-pox patients.

This action on the part of the authorities of the Montreal General Hospital led to a general meeting of the Health Committee of our City Corporatian, presided over by the Mayor. The debate at this meeting was, as might be expected, in many respects undignified; questions of nationality and creed were allowed to enter into their arguments, the speakers forgetting that both the Hotel Dieu and the Montreal General Hospital receive persons, suffering from disease, independent of country or creed. But, what was the result of these deliberations? Why, that the same state of things is to remain; that the City of Montreal is to pay the Community of the Hotel Dieu fifty cents a head, *per diem*, for all small-pox patients admitted, the Hotel Dieu taking all cases of small-pox sent for admission; (a like sum was offered by the City to the Montreal General Hospital, for similar service but was refused); and to secure, as far as possible isolation, the Ladies of the Hotel Dieu have arranged that the small-pox patients shall to be placed on an upper flat of their hospital.

At a subsequent meeting of the Health Committee it was ascertained, and the authorities of the Montreal General Hospital were *kindly* informed that by the Act 24 Victoria, Chapter 24, "No "warrant shall hereafter issue for the payment of any sum of "money granted by the Legislature to any hospital, unless and "until a certificate, signed by a medical officer of such hospital, to

"the effect that there is in such hospital a distinct and separate "ward set apart for the exclusive accommodation of patients "afflicted with small-pox, has been fyled with the clerk of the "Executive Council." There are many ways of reading or of interpreting the meaning of certain clauses in Acts of Parliament, but we take it that this shows absolutely and conclusively that the legislators of that day were fully convinced of the injury and injustice done to other patients by exposing them to the contagion of small-pox; that they expressly enacted what was supposed to be a check, viz., isolation in a separate part of the building. It was never intended to affirm that all hospitals were to have a small pox department or forfeit their grant, but that the ward for small-pox shall be distinct and separate, so as to guard the other inmates against contagion.

Is it, then, necessary to isolate and segregate small-pox patients? This all hinges on a matter of belief. Some men do not believe in their own existence; they regard themselves and all around them as a myth; but we should imagine it a very unpleasant myth to contract small-pox through the folly and obstinacy of any number of men in power. It was to prevent the chance of contagion spreading amongst the inmates of the Montreal General Hospital that the Board of Governors determined to close the small-pox wards. We regret that they have agreed to withdraw from that position even for a time. But we have cause to regret the action of the Hotel Dieu as fraught with greater danger. That hospital claims to occupy some 175 beds—out of this number let us suppose they have 30 cases of small-pox—persons not suffering from that malady are being constantly visited by their friends. These persons go abroad to their houses, after a certain amount of exposure; and although they may not suffer themselves, yet they are capable of disseminating the poison of the disease, carrying it about in their clothes.

It is well known that contagious diseases are frequently thus propagated, we need not refer again to facts bearing on this subject; we write chiefly for medical readers who are familiar with this subject; but we doubt not that, if carefully inquired into, a large proportion of the cases of small-pox in our city, outside of the hospitals, could be traced to hospital exposure, or by having the disease brought to them from the hospitals. In the case of the Montreal General Hospital the exposure is less than in the Hotel Dieu, because the small-pox patients are in a separate building, and no persons except the medical staff are permitted to enter that building. In the case of the Hotel Dieu small-pox patients, until recently, were mixed with the other patients. We believe that they now occupy a separate flat, but are all under the same roof, and hence the danger of contagion to outsiders is very considerably augmented.

ANNUAL CONVOCATION OF McGILL UNIVERSITY.

The Annual Convocation of McGill University, was held in the William Molson Hall of the University, on Thursday afternoon, the 28th March, 1872, for the conferring of Degrees in Medicine and Law.

A large number of ladies and gentlemen were present. Shortly after 3 o'clock, the Members of Convocation who had assembled in the library, made their appearance in order of procedure, and took their seats. The Hon. Mr. Justice DUNKIN, presiding.

Ven. Archdeacon LEACH opened the proceedings with prayer, after which

Mr. Secretary BAYNES read the minutes of the last meeting of alumni, as also those of convocation.

The DEAN of the Faculty of Medicine (Dr. G. W. Campbell.) read the following report of the Medical Faculty for the past session :—

The total number of Students in the past session was 138, of whom there were from Ontario, 73; from Quebec, 55; Nova Scotia, 2; Prince Edward Island, 2; New Brunswick, 1; United States, 5.

The number of students who passed their Primary Examinations, which includes Anatomy, Chemistry, Materia Medica, Institutes of Medicine, and Botany or Zoology, was 36; alphabetically arranged as follows :—

Duncan A. Alguire, Lunenburg, O.; Robert W. Bell, Carleton Place, O.; Harry Brown, London, O.; William Caldwell, Brantford, O.; Duncan A. Carmichael, Beechburg, O.; Oliver C. Edwards, Clarence, O.; Saram R. Ellison, St. Thomas, O.; William Ewing, Hawkesbury, O.; John J. Farley, Belleville, O.; Lewis McC. Fortune, Huntingdon, Q.; Edwin A. Gaviller, Montreal, Q.; Thomas F. Guest, St. Marys, O.; Joseph Hills, St. Gregoire, Q.; Richard W. Hurlburt, Mitchell, O.; William F. Jackson, Brockville, O.; Montgomery H. J. Jones, B.A., Montreal, Q; Edward E. Kittson, Hamilton, O.; Bernard D. McGuire, Jolliette, Q.; John B. McConnell, Chatham, Q.; James McDiarmid, Prospect, O.; Joseph D. A. McDonald, St. Francis, Q.; James McLeod, Prince Edward Island; Robert O'Brian, L'Original, Q.; David O'Brien, Almonte, O.; William Osler, Dundas, O.; Hezekiah R. Perry, Coteau Landing, Q.; Peter E. Richmond, New York State, U.S.; Francis John Shepherd, Montreal, Q.; John A. Stevenson, Cayuga, O.; Walter Sutherland, Helena, Q.; Andrew W. Tracey, Island Pond, U.S.; Wymond W. Walkem, Quebec, Q.; George O'Donnell Walton, Montreal, Q.; William T. Ward, Stanhope, Q.; James W. Whiteford, Belleville, O.; Robert E. Young, Hamilton, O.

The number of students who passed their first examination for the degree of M.D., C.M., was 28. Their names, residences and subjects of thesis are as follows :—

Hamilton Allen, West Osgoode, O.; Arthur A. Browne, B.A., Kingsey, Q.; William B. Burland, Montreal, Q.; George Henry Christie, Lachute, Q.; William L. Copeland, St. Catherines, O.; Daniel C. Cram, Almonte, O.; George McGill Farewell, Oshawa, O.; George William Gernon, St. Laurent, Q.; Zotique Hebert, St. Constant, Q.; Harry Hethrington, Melbourne, Q.; Robert Howard, St. Johns, Q.; Albert E. Mallory, Cobourg, O.; Louis T. Marceau, Napierville, Q.; Peter McLaren, B.A., Lanark, O.; John Morrison, M.A., Waddington, N.Y.; James T. Munro, Roxburgh, O.; Wolfred D. E. Nelson, Montreal, Q.; William R. Nicol, St. Marys, O.; William Osler, Dundas, O.; Austin J. Pegg, Simcoe, O.; Henry Ross, Embro, O.; Wesley Robinson, Markham, O.; William James Sharpe, Simcoe, O.; Leonard St. John, St. Catherines, O.; George A. Stark, Milton, O.; Alexander Stewart, Hampstead, O.; Dixon A. Wagner, Dickenson's Landing, O.; William E. Waugh, London, O.

Of the above named gentlemen, two have not yet completed their twenty-first year, and cannot therefore receive their diplomas at the present Convocation. Their names are Leonard St. John and George Henry Christie. They have, however, passed all the examinations, and fulfilled all the other requirements, and only await their majority to receive the degree.

PRIZES.

The Medical Faculty prizes are three in number:—

1. The Holmes Gold Medal, (founded by the Faculty in honour of their late Dean) awarded to the graduate who received the highest aggregate number of marks for all examinations, including primary, final and thesis.

2. A prize in Books, for the best examination—written and oral, in the Final branches. The Gold Medallist is not permitted to compete for this prize.

3. A prize in Books, for the best examination written and oral, in the Primary branches.

The Holmes Gold Medal was awarded to Hamilton Allen, West Osgoode, O. The prize for the Final examination to George A. Stark, Milton, O. The prize for the primary examination to Francis John Shepherd, Montreal, Q.

The Faculty has in addition this session awarded a special prize to the Thesis of William Osler, Dundas, O., which was greatly distinguished for originality and research, and was accompanied by

33 microscopic and other preparations of morbid structure, kindly presented by the author to the museum of the Faculty.

The gentlemen in order of merit who deserve mention :—In the Final examination, Messrs. Osler, Browne, Waugh, Marceau, Hebert, Pegg, St. John and Morrison. In the Primary examination, Messrs. Alguire, Hill, Carmichael, McConnell, Ward, Kittson, and Osler.

PROFESSORS' AND LECTURERS' PRIZES.

Botany—William Caldwell and E. B. C. Harrington; Zoology—C. R. Jones. Prize for the best collection of Plants by a Student of Session 70-71, Benjamin Wales.

Practical Anatomy—Senior Class prize, Robt. C. Young; Junior Class, A. C. Sinclair.

The DEAN then distributed the prizes to the successful students.

The Graduates were then called to the front and the "Sponsio Academica" having been administered by Professor Craik, the ceremony of capping was performed by Mr. Principal Dawson, who at the same time presented each candidate with his diploma.

Dr. MACLAREN delivered the valedictory address on behalf of the students. He deprecated the view entertained by some that the medical profession may be considered simply as a means of obtaining a livelihood, and urged that the aims of its professors should be of a far higher and more philanthropic kind, namely, to heal the sick and afflicted.

Professor DRAKE then addressed to the graduates some words of parting counsel, urging them to adopt methodical habits in the practice of their profession, to take notes of all cases which came under their observation, and to be assiduous in the discharge of their duties. Referring to the circumstance that Canada had not yet produced medical men of world-wide reputation, the professor asked if we might not entertain the hope that this great country, but just emerging from the region of barbarism, may yet be destined to furnish men who will add new glory to the firmament of science. This excellent address will be found in our original department.

After the proceedings of the Law Faculty had been gone through, and an excellent address by the chairman, the benediction was pronounced by the Rev. Dr. Wilkes, and the meeting adjourned.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

The Canada *Lancet*, for April, contains an article in which, among other matter, the editor recommends the council to remit all examination of students who go abroad and take out any of the diplomas from the colleges of the mother country. We quite agree with the editor of the *Lancet* in the main features of his argument, but it appears to us that he is placing the diplomas of our own colleges and universities at a very great disadvantage.

We hold that Medicine and Surgery are as well administered in Canada as in any country in the world. And we believe that medical studies are as faithfully pursued and taught with us as abroad. It is well known that the brightest intellects amongst us have not all been able to avail themselves of the advantages held out by the larger field for observation in the hospitals and schools of Europe. We opposed the central examining system in Ontario at the time that the Bill was submitted to the Local Legislature, because we regarded it as an injustice to the schools already in existence. We would, however, advocate a general Bill for the Dominion, but we fear that such an Act is not attainable under existing circumstances.

Medical schools have, within the last few years, increased rapidly in Canada, and each one is affiliated with some University holding a Royal charter; so that, as far as the Province of Quebec is concerned, we have, at present, five independent licensing bodies. This is to be regretted, as it will tend to induce laxity in examination, and, by opening the door to incompetent men, will thereby lower the standard of medical education. What we really require is a Central Board of Examiners, before whom all comers should have to submit to examination prior to registration.

The Canada *Lancet* observes: "It is certainly most illiberal to "force these young men who have a status equal, if not superior, "to that of many of their examiners, to pass through the ordeal "of another examination, with the attendant loss of time, and "further drain upon their already depleted purses." In another portion of the article the editor says: "Surely the "Council should be satisfied with the professional status of Cana- "dian graduates who have received the additional degree of "M.R.C.S., or L.R.C.P., in London or Edinburgh. We maintain "that every encouragement and consideration should be shown "to those graduates who have the ambition, the energy and the "determination to qualify themselves so thoroughly for the prac- "tice of their profession."

It will be observed this has reference to men taking out the

degrees of London or Edinburgh. We suppose the editor of the Canada *Lancet* includes all the licensing bodies in Great Britain, though he does not so state. This being admitted as an abstract principle, then would it be better for us to close our schools and cease medical education entirely: obliging all medical students to proceed to those halls of high learning in the mother country, where they can obtain, at a trifling increase of outlay, advantages which we are unable to offer. The whole article in the Canada *Lancet* grates unpleasantly. We may be, in the opinion of the editor of the Canada *Lancet*, asses and ignoramuses, we may be far behind our fellow-men, we may have done very little for science generally, nevertheless we maintain that the larger number of our Canadian graduates will compare favorably with an equal number of those hailing from British colleges, judging from the specimens we have come in contact with, excepting always leaders in medical science and literature, some few of whom it has been our good fortune to meet.

It is unnecessary to grind all this into our ears, however true it may be. And in our opinion it ill-becomes a Canadian journalist to befoul and belittle the institutions of his own country. 'Tis passing strange, on turning to the title page of the Canada *Lancet*, the reader will there behold, "Edited by J. Fulton, M.D., M.R.C.S., England, L.R.C.P., London."

Medical News.

RULES FOR THE GUIDANCE OF PUBLIC VACCINATORS.

We publish the following rules, which were adopted by the Board of Health of St. John, N. B., during the recent epidemic of of small-pox which afflicted that city:

1. That each Vaccinator shall confine himself to his respective District.

2. That he shall keep a book and insert, under its proper heading, the date of vaccination—whether primary or secondary—and the name, age, and sex of each person vaccinated, and the result of the vaccination.

3. That he shall visit every house and room in his district, examine the arms of each and every person, and vaccinate all persons who have not been vaccinated, except those who have had small-pox; re-vaccinate all persons who have not been vaccin-

ated since puberty, and re-vaccinate those who have not good characteristic marks of previous vaccination.

4. To secure good and efficient vaccination, no lymph shall be used except such as has been taken from a *primary vaccination*, from a thoroughly characteristic vesicle, and from a perfectly healthy subject. It must be taken about the eight day, and not after the areola has been completely formed.

5. At each primary vaccination the lymph must be inserted not less than *three times*, and at each re-vaccination once or twice.

6. Each person vaccinated shall be visited about a week after the operation, to ascertain if it has taken; should it not have done so, the vaccination shall be repeated.

THE EFFECTS OF VARIOUS LIQUORS ON THE KIDNEYS AND BLADDER.

M. Kraus, of Vienna, in the *Mouvement Medicale*, treating on this subject says: "Sparkling wines are very injurious, but not in respect of their carbonic acid, which assists very materially in the elimination of phosphates. Champagne not only increases the secretions, but, in an extraordinary manner, the phosphates; and the conduct of medical men who advise its use in calculous cases is irrational and unjustifiable. M. Kraus's experience contradicts absolutely the solvent action of carbonic acid on concretions already formed. He considers that old beer is an unobjectionable drink, but that lately brewed liquor is injurious, because the fermenting particles penetrate the mucous membrane and give rise to a greater or less degree of chronic catarrh. English pale ale is open to the same objection in consequence of its richness in alcohol and the great quantity of carbonic acid which it contains; but porter, if of good quality and age, is reported by M. Kraus to be unobjectionable.—*Medical and Surgical Reporter.*

REFORM OF INEBRIATES.

The Washingtonian Home, in Boston, designed to assist inebriates who desire to reform, has been in successful operation for thirteen years, and during that period nearly four thousand patients have availed themselves of the privileges of the institution, and in a great number of cases men who had been given up by their friends as hopelessly addicted to intemperate habits, have been restored to respectability and usefulness. During the past year the number of patients under charge was two hundred and seventy-six, and the average amount of each amounted to forty-three dollars.

PRESCRIBING DRUGGISTS.

INQUESTS AND THE RATEPAYERS.

It would appear that a new element has been introduced with respect to the necessity of doing away with drug-sellers prescribing for sickness. According to the report of a late inquest in Bethnal Green, the Deputy-Coroner shrewdly illustrated the cost of ignorant and unqualified Practitioners, not only in regard to life and health, but also with reference to the pockets of the ratepayers. At an inquest held last week, before Mr. Richards, the Deputy-Coroner for Eastern Middlesex, it was shown that a boy aged three years, was taken to a "Medical Hall," that he was treated for "hooping-cough," and medicine given him for the cure of that complaint. The boy after, however, was suddenly seized with a "fit of choking," and died in ten minutes. The Medical gentleman who was called in (Dr. Bryant) said that the deceased was a fine healthy boy, and if proper Medical attendance had been forthcoming, he had no doubt, would have been alive now. There was not, in fact, any sign whatever of whooping-cough. Deceased died from croup. The Coroner, in his observations upon the case, made some sensible remarks. He said:—"The extent to which druggists infringe the provisions of the Medical Act is sometimes frightful, having regard to the fact that the lives of many persons are annually sacrificed through the ignorance of these unqualified Medical Practitioners. The consequence is that, at the last moment, a real Doctor is called in, and he refuses to certify the result before a coroner's inquiry and the waste of the county money. The want of a public prosecutor is here most manifest; but until this crying evil becomes thoroughly exposed through the medium of the public press, we may look in vain for any proper measures being taken to check the frauds which are daily perpetrated upon the true Medical Profession by men who know as much of the human anatomy as my inkstand." The Coroner's words were fully endorsed by the jury, and a verdict in accordance with the Medical evidence was recorded. We commend the sensible observations of Mr. Richards to all coroners, not one of whom throughout the country has not, unfortunately, experience of cases similar to the one recorded.—*Medical Times and Gazette.*

THE CHOLERA IN NEW YORK.

Recently in New York, an important report from the Sanitary Committee of the Board of Health, with reference to the approach of the cholera, was laid before that body. The committee seeks

neither to exaggerate nor to underrate the gravity of the situation, but desire to avail themselves of every means at their command, if possible, to prevent its extension.

To that end, they recommend a thorough cleansing of the streets and wharves, an application of disinfectants to tenements and sailors' boarding houses, and the dispersion of cellar populations to more wholesome quarters. They also urge a reissue of a circular to officers and agents of all vessels conveying emigrants from the northern parts of Europe, enforcing the necessity of cleanliness, prompt isolation, and treatment of all cases of diarrhœa, together with the free use of proper disinfectants to soiled clothing, etc. All classes of citizens here, at home, meanwhile, should co-operate for the common good.

The committee also say: "The medical history of the military posts in New York, shows that cholera, yellow fever, and kindred diseases have been brought within the city limits by the recruits taken from the vagrant population of other cities. The refusal of the Secretary of War to require returns to be made to the department of the contagious and infectious diseases occurring among troops at posts within the city limits, leaves the board powerless to protect the city against the introduction of cholera, or other contagious, infectious, or pestilential diseases, through that channel."

We beg to call attention to the following course of Lectures to be delivered in June next:

To Medical Graduates.—Dr. Horatio Robinson Storer (late Professor at the Berkshire Medical College,) will deliver his *Ninth* Private Course of Twelve Lectures, on the Surgical Diseases of Women, during the first fortnight of June, 1872, commencing on Saturday, June 1, at 4 P.M. Fee $50.

The Course is intended to cover all that is yet known of Pelvic Surgery in the female, and, while interesting both to general and to special practitioners, it commends itself particularly to those teaching, or desiring to teach, gynæcology at hospitals and medical colleges.

Applicants for the certificate of attendance will be required, as in previous years, to furnish evidence of good professional standing, as defined by the American Medical Association.

Boston, March 15, 1872.

REGISTER OF THERMOMETER AND BAROMETER

Kept by THOMAS D. KING, 26 Beaver Hall, Montreal.

FEBRUARY, 1872.						MARCH, 1872.					
Day of Month.	Ther. 8 a.m.	Ther. at 9 a.m.	Minimum.	Maximum.	Barometer, 9 a.m. corrected to sea level.	Day of Month.	Ther. 8 a.m.	Ther. 9 a.m.	Minimum.	Maximum.	Barometer, 9 a.m. corrected to sea level.
1	4	6	3	20	30 . 27	1	2	3	1	16	29 . 96
2	15	16	6	17	37	2	4	5	3	16	98
3	4	5	3	25	34	3	14	15	9	23	74
4	20	21	15	21	29 . 70	4	23	24	18	28	61
5	30	31	21	33	94	5	- 18	- 17	- 19	30	95
6	19	21	18	34	30 . 15	6	- 10	- 9	- 10	- 6	64
7	9	10	9	26	46	7	8	13	5	8	30 . 10
8	4	6	2	16	44	8	9	12	5	22	19
9	5	7	3	26	42	9	5	8	0	24	07
10	8	10	7	23	24	10	29	31	24	29	29 . 66
11	12	14	7	26	09	11	27	30	26	35	89
12	26	28	20	24	29 . 97	12	7	8	4	39	30 . 32
13	15	18	14	38	30 . 06	13	4	6	0	18	40
14	30	31	28	37	29 . 46	14	16	18	12	17	10
15	8	9	6	32	60	15	15	17	15	34	29 . 98
16	14	15	11	19	71	16	5	8	5	22	30 . 13
17	7	8	5	23	30 . 08	17	20	21	17	24	29 . 87
18	6	7	4	24	20	18	14	15	14	31	82
19	7	8	2	23	17	19	10	12	9	22	54
20	10	13	6	30	07	20	- 3	- 2	- 4	26	86
21	27	26	24	35	29 . 58	21	0	4	- 1	14	30 . 05
22	1	2	1	30	85	22	7	10	5	18	14
23	- 2	- 2	- 2	21	30 . 01	23	13	16	10	24	29 . 94
24	10	11	9	15	29 . 63	24	26	27	23	33	99
25	30	31	20	30	44	25	17	21	15	35	30 . 52
26	- 3	- 2	- 3	37	30 . 10	26	31	33	27	34	20
27	1	2	0	15	29 . 95	27	30	33	28	35	21
28	7	8	7	21	94	28	25	29	23	43	24
29	2	3	1	23	30 . 01	29	23	26	21	38	04
30						30	23	25	21	40	25
31						31	22	23	20	39	29 . 95
	11.	12.5	8.5	25.6	30 . 08		12.9	15.0	10.5	26.2	30 . 01
	Monthly Mean, at 8 a.m.	Monthly Mean, at 9 a.m.	Monthly Mean, Minimum.	Monthly Mean, Maximum.	Monthly Mean, Barometer.		Monthly Mean, at 8 a.m.	Monthly Mean, at 9 a.m.	Monthly Mean, Minimum.	Monthly Mean, Maximum.	Monthly Mean, Barometer.

In taking the Temperature the decimals are rejected for simplification.

If Thermometer more than half degree, say 10.7, it is rendered 11°, if less than half degree, say 10.3, it is rendered 10°. The mean is scarcely affected by the rejection of the decimals.

This sign (-) signifies below zero.

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

The Small-pox Epidemic in St. John, N. B., in 1871. By L. C. Allison, M.B. Read before the New Brunswick Medical Society, 3rd April, 1872.

Mr. President and Gentlemen,—There are no phenomena for which we find it harder to account than for the variations that constantly occur in the types of infectious diseases. One year a disease will appear in a particular locality, diffusing itself widely but causing few deaths and comparatively little suffering among those whom it attacks. It disappears—that is, it travels away to act in other places, for the infecting principle of such a disease being constantly transmitted from one person to another never dies out to be regenerated *de novo*, but merely alters its neighborhood and the area of its action. After a second interval it re-visits its former locality in a form so changed that it hardly seems to be the same thing. A large proportion of those who are attacked by it die, and many others escape only after a protracted and dangerous illness. The sanitary condition of the community and the general healthfulness of its inhabitants are no worse than they were before—perhaps they are better, and the infection is or ought to be the same, but the disease is very different. Last year it was not severe anywhere. This year, in every site or community it reaches; in every climate, hot or cold, moist or dry; in every neighbourhood, crowded or scattered, it exhibits the characters of intense malignity. Whence does it derive these characters? How is it that the same factors give a product in one year of four and in another of forty? We cannot tell. The question puzzles the most modern nosologists as hopelessly as it puzzled Sydenham.

The small pox of 1871 is one of these anomalous epidemics. I am not aware that its origin has, as yet, been definitely investigated; but, when this is done, I think it will be found that its

starting point was either in the beleaguered City of Paris or in the camp of the besieging army. Such epidemics are often traceable to the massing of large bodies of troops in field or in camp, and their appearance often follows at a short interval after the tidings of battles and sieges. It is probable that the small-pox of 1871 will prove to have been connected with the Franco-German campaign in the same manner in which the typhus epidemics of the early years of this century were connected with the wars that followed the French Revolution. But whether the disease acquired its virulence from germs of infection imported from beyond the channel or developed it by maturation at home, this much is certain, that during the last ten or twelve weeks of 1870, small-pox, of an unprecedently malignant type, began to show itself in London. It increased there, the deaths gradually rising from forty or fifty to two or three hundred per week, and gradually spread to some seventeen of the principal cities of the kingdom, in which, during the course of last year, it destroyed more than 13,000 people, and nearly 8,000 of them in London alone. Early in 1871 it spread westward along the principal commercial highways to New York and other new centres in North America, from which it extended itself, always travelling with the sun, until at the present date few of the larger cities of Canada and the United States are free from it. In England it seems now to be upon the decline, but a month or two ago it entered Scotland and became epidemic in Edinburgh. It will probably visit all the remaining sections of the United Kingdom before it takes its departure. Upon our side of the Atlantic it bids fair to extend across the whole breadth of the continent and renew in California the havoc of 1868. Such is a brief sketch of its geographical diffusion.

There are three points connected with the appearance of the disease in St. John to which I would like to call your attention, and these are: First, the pecular circumstances under which the disease was introduced; secondly, the measures that were employed to check its spread; and thirdly, the peculiar character of type that it presented. And first, with regard to the

ORIGIN OF THE EPIDEMIC.

On the last day of the year 1870 a man named John W—— came to St. John from Portland, Me., his history, so far as then known, being that of a sailor just landed and paid off from a long sea voyage, and wishing to spend a few days in diversion upon his way home to his friends upon the North Shore. He took lodgings in a small house near the end of Erin street, and within a stone's throw of the Marsh Bridge, where he remained about a

fortnight, "spreeing," as the phrase goes, among the ship carpenters and other pleasure-loving folks in whom the neighbourhood abounds. On the 14th January he felt indisposed, but not very severely, and kept to the house, trusting that the uneasy sensation would pass away. As he felt much worse next day medical assistance was sought from a physician who has kindly supplied me with the following particulars of the case:

Case I.—The messenger asked for medicine for a man who had lately been drinking and was then suffering from the symptoms that usually follow excesses of this kind, but chiefly complained of the vomiting. Bismuth was then prescribed, with milk and lime water, but no improvement having taken place, the doctor saw him on the following day (16th) and found him presenting the symptoms of a smart febricular attack, with incessant vomiting and pain referred to the epigastrium. Headache was present, but not very severe. All these symptoms were in perfect accordance with the previous history, and supported the diagnosis of an excess in drinking. The milk and bismuth were continued with the addition of a mustard poultice to the epigastrium. On the 17th the vomiting was relieved and the headache had gone, but a new and strange symptom had appeared—bleeding from the gums and from the respiratory mucous membrane. The blood expectorated was fresh and there was no physical sign of anything being wrong with the lung. A careful examination failed to elicit anything that could account for the mucous hæmorrhage except that during his maritime experience, which included a voyage of seventeen months' duration, the patient had suffered from a scorbutic attack. Constipation, which had previously existed, was checked by a purgative.

So far there had been nothing to excite apprehension or foreshadow the rapidly approaching catastrophe. But on the 17th January a startling change had taken place in the patient's condition. He was passing blood freely from all the mucous membranes, from two old cicatrices now broken down, from a recent scratch upon the face, and from one ear, the cuticle of which had begun to peel off in consequence of a recent frost-bite. The surface of the body was covered with ecchymotic spots, which were largest and best marked upon the limbs; those on the body being smaller and brighter in color. On the tongue these spots assumed the appearance of blood-blisters, which constituted the only elevation of surface that could be seen anywhere. The pulse was rapid, very soft and feeble, and the whole appearance was that of a man rapidly sinking from some form of malignant blood-poisoning. A consultation was held. Beef-tea and brandy were

freely administered, with the effect of somewhat raising the sinking pulse, but the improvement was slight and transitory, and between 9 and 10 p.m. the patient died.

During the last hours of the illness some facts came out that had previously been kept secret. After landing from his seventeen months' voyage, and being paid off at Queenstown, he had come out to Portland in the Allan steamship "Moravian," arriving on the 2d December. Four or five days previous to her arrival small-pox had broken out among the passengers, and the vessel had, in consequence, been quarantined and fumigated after the sick had been removed from her. One important part of the fumigation had been omitted, as I shall soon show, but this last fact was not known then. In the meantime there was nothing to attract much attention to the account or to lead the gentlemen concerned to suspect, for one moment, the nature of the horrible case they had just witnessed. The story did not appear to throw much light upon it. The vessel had been duly quarantined and fumigated, and the man had been more than *three weeks* away from her, leading all the while an active and vigorous life in the open air. Neither the symptoms of the illness nor the antecedent history favored the diagnosis of small-pox; but, taken together they appeared to preclude it. Small pox, without eruption, can be demonstrated only by tracing it to the infection of small-pox, or by tracing the infection of small-pox to it, and in this case the antecedent proof seemed to fail.

From the 23d December, the day on which W—— left the "Moravian," to the 14th January, when he fell sick, twenty-three full days had elapsed, or more than three weeks. Now, of all zymotic diseases, small-pox is that which is most regular in the length of its period of incubation, which is never many hours less or more than thirteen days.* In W——'s case we must suppose either that we have the incubation lengthened by fully nine or ten days—an observation such as has never previously been recorded—or that he contracted the infection from his own clothes. We must inevitably come to the latter conclusion, for it is quite evident that the clothes of the "Moravian's" passengers were not thoroughly disinfected. Those which W—— brought with him from the steamer retained the creases and the peculiar sea-smell in which they had been packed. The invariable period of incubation just mentioned will lead us to the day of his landing in St. John, as that upon which he received the infection. On that

* Marson in "Reynold's System of Medicine," i, p. 434-5. Barensprung in "Amalen des Charite Kranken," xix, p. 103. The eleven cases infected by W—— followed this rule exactly.

day, his long voyage being at an end, he must have taken off his sea-clothes, put on others which he took out of the trunk, and received the infection from the latter. Thus by a series of little circumstances, all perfectly natural if you will, but all beyond recognition by any human knowledge at the time of their occurrence, a disease of great malignity and infecting power obtained a footing in a neighborhood highly calculated to encourage its spread.

It could not but spread. The people who live about the Marsh Bridge are very sociable and gregarious in their habits, and at the time of which I speak very few of them were vaccinated. The family with whom W —— lodged had their own visitors, and there were others who came to see the sick man. Punctually at the fortnight's end, the Board of Health were disagreeably surprised by being notified of the simultaneous appearance of eleven cases of small-pox, all situated within a few hundred yards of the unlucky house, and having a traceable connection with it. The infection was evidently virulent. Six of the cases were confluent, one copious, and only three discreet. The remaining case was hæmorrhagic, and as I have never seen a clinical description of this form of small-pox in print, I shall give the notes which were kindly furnished to me by the physician who attended it.

Case II.—28th January, 1871. In the morning I was asked to see John McE——, who was said to be suffering from febrile symptoms. Being engaged at the time I could not go, but sent him a febrifuge mixture. As he grew worse they sent for me again and I saw him. His skin was dry and hot; his pulse 84, full and bounding. There was intense pain in the back, and pain also in the forehead. He was very despondent and kept saying that he was going to have the same disease that W—— had had, and to die in the same manner.* The bowels were constipated, the urine smoky and scanty. There was incessant vomiting and precordial pain. Gave him a dose of calomel and potash, and continued the febrifuge, which contained a diuretic and a diaphoretic, increasing the former ingredient. Ordered ice to be sucked to relieve the thirst, and a mustard poultice to be applied to the epigastrium and back. After the bowels had been relieved he was to take *gr.* xx of Dover's powder. He did so and passed a tolerably easy night. The vomiting ceased, but the thirst remained, and he still had great fear and depression. 28th January, A.M., pulse 84; skin moist; urine increased to perhaps ℥xl, but still

* This poor fellow had been an intimate friend of W——'s, and had attended closely on him during his illness. The attending physician had not seen or heard anything of W——'s case.

dark colored, and looking as if it contained blood derived from the kidneys. On the back a mahogany-like discoloration, sprinkled with black spots, varying in size from that of a bean to that of a ten cent piece. There was no elevation of the cuticle, and I supposed the discoloration to be the effect of the mustard applied to a congested skin. Two o'clock—Continued the ice. Evening—The mahogany discoloration had spread over the whole surface of the body, still mixed with purpuric spots, larger in size, and, if anything, deeper in colour than those which had been previously observed. Urine decidedly bloody; pulse soft, quick and feeble. He continued despondent and comparing his case to W——'s. 30th January, at 7 A.M., he died.

In comparing his case with W——'s, you will notice in each the sthenic symptoms speedily replaced by those of depression, the purpuric blotches and mucous hæmorrhage following upon the cessation of the vomiting and epigastric pain, and the total absence of papules or of any attempt at eruption. Lumbar pain was present in one case but not in the other.

I shall next speak of the progress of the epidemic and of the measures that were adopted to check its spread.

The measures which the Board of Health adopted upon the appearance of the disease were as follows:

The doors of the infected houses were placarded, and all communication with the inmates was forbidden, save the visits of the medical attendant, of those whose own houses were infected, and of those appointed to bring the necessary provisions. These last were supplied at the public expense to such families as had not the means or credit to supply themselves. At a meeting of this Society, held upon the 31st January, it had been resolved to recommend that the Board of Health should appoint a physician to visit the sick, and should procure a temporary hospital to accommodate such as required it. Both these recommendations were forwarded to the Board of Health and attended to by that body. A physician was easily found, but in spite of what could be done nearly three weeks elapsed before a hospital could be obtained, during which interval the cases had increased to the number of about sixty, and the fright and clamor had arisen to a very discreditable pitch indeed. Small-pox at all times makes more or less stir in the community, but on this occasion the malignant type and high mortality of the disease, so different from what had been observed during any previous epidemic, excited the liveliest alarm, and the accidental circumstance of the physician first employed having been infected before he entered upon his duties, and consequently attacked before he had been long engaged in

them, added, in some measure, to the panic. I cannot say that the tone adopted by the public press made matters any better. From an early period our editorial friends had made up their minds to insist upon three demands, which the authorities concerned, as I think, with very proper firmness refused to grant. These were: first, that the names and residences of the sick should be published; secondly, that the Board of Health should submit the details of its proceedings for public criticism; and thirdly, that the patients in the City Hospital should be removed to the Alms House, and the former building converted, for the occasion, into a small-pox hospital; or, according to the elegant phrase then current, a "pest house." These demands were steadily resisted. The first concession would have increased concealments, and so helped to spread the disease for the mere gratification of an idle curiosity. The second would have subjected the Board of Health to the dictation of the public, which is exactly the reverse of what the mutual relations of these two ought to be, if such a Board is to be of any use. With regard to the dispute between the public press and the Hospital Commissioners, I think that the press was decidely wrong upon that point also. No unprejudiced person, who knows anything of the matters referred to, can doubt the propriety of providing separate hospital accommodation for infectious and non-infectious ailments, or suppose that a costly institution, supported by a permanent tax, was set up for the accommodation of diseases which do not appear amongst us as often as once in ten years. Those who wish to see a full statement of the reasons upon which the Hospital Commissioners grounded their refusal to admit the small-pox cases, will find it in an able report which these gentlemen presented to the County Sessions on the 15th of last April. It will be sufficient here to say that an arrangement was finally made with the Directors of the Female Reform Society, by which the Board of Health obtained the temporary use of their building for a small-pox hospital. Possession was given upon the 20th February.

It was generally believed at the time that if the first set of cases reported had been removed into a hospital at once, the disease would have been stayed. I am quite confident that it would not. There were then four-and-twenty other cases in progress of incubation, and had the course recommended been followed, nearly all these cases would have been concealed, and the cases infected by them would also have been hidden until the number of the sick had become so great that no hospital would hold them. It would be far better to let isolation take care of itself altogether than, by a series of indiscriminate removals, to

bring about such a state of matters as this. A state of warfare between the infected families and the rest of the public. At that time, however, the public mind was possessed by exaggerated ideas of the extent to which a hospital could be made useful, as a means of checking the spread of small-pox. Of course we all know that there is but one certain method of effecting this desirable end, and that is *vaccination*. Attend to it carefully and you will arrest the diffusion of the disease, no matter how numerous and widely scattered the centres of infection may be. Neglect it, and two or three cases will be sufficient to poison a whole community with infection, in spite of every other sanitary precaution that you can adopt. The popular theory seems to be that, having once obtained an hospital, you can easily put an end to your epidemic by removing to it—*vi et armis*, if necessary—every case of the disease that shows itself. I need scarcely say that this is a fallacy, and that any attempt to stop an epidemic after this fashion will only lead to worse mischief. You will never be able to collect all the infection within the walls of your hospital; but, this is not the chief objection to the plan. Once let the people thoroughly understand what you mean to do, and every case will be hidden until it has done mischief enough to render its removal a matter of comparatively little moment. It must not be forgotten that the chief object of hospitals for infectious diseases is not to protect healthy people, but to accommodate a certain class of the sick, whom it would be impossible, or very inconvenient, to take care of elsewhere. A servant in a family; a lodger in a boarding house; any person who cannot get friends to take proper care and keep proper quarantine of him where he lives, if attacked by such a disease, must go to an hospital, and there certainly ought to be an hospital (and a separate hospital) for him to go to. There are also cases in which it is very advisable that a member of a family should go. A poor man who, even under ordinary circumstances, lives pretty near the edge of his income, cannot keep a case of small-pox in his family without making up his mind to undergo much hardship and suffering. He has no money, but he must give up all his employment. His neighbors are not always charitably inclined, but if they should be so, they cannot visit him to relieve his necessities. His house is small and he cannot isolate the sick person or prevent the disease from more or less endangering every member of his family. Some persons will prefer facing all these hardships and others, *quæ nunc linguæ*, to parting with their relatives; but, they should never be able to say that such a terrible situation was thrust upon them by the negligence of the authorities. Moreover, under some circumstances we are justified

in resorting to removal, irrespective of personal considerations. When a solitary case appears, surrounded by a crowded, uncleanly, unvaccinated and ignorant population, it is wise and proper to remove that case and whatever may follow it, as long as by so doing you can keep the neighborhood clear of infection. By following this rule during the last epidemic the northern, southern and south-eastern portions of the city were kept clear of the disease until sufficient time had been gained to allow the vaccinators to go over the whole community. After this had been done no further forcible removals were made, for the only circumstances that would justify them had ceased to exist. It is highly necessary that the authorities should have the power of forcible removal, but the useful and necessary power must not be employed indiscriminately or it will become, to the public, a source of danger instead of an instrument of safety. In all cases where people (after thoroughly understanding what the consequences will be) prefer to keep their relatives with them, it is both cruel and unwise to force them away, unless you feel satisfied that the disease will spread beyond the family if they remain, and disappear altogether from the neighborhood if they go.

I trust, gentlemen, that you will not consider these few remarks upon the function of small-pox hospitals misplaced or superfluous. Very different views from those which I have just been stating, found favor with the public last year. They were loudly pressed upon the authorities by some of the public prints, and claimed to be supported, to a certain extent, by medical opinion.

The measures which the Board of Health adopted for quarantining and disinfecting the infected houses have often been sneered at as inadequate. They are not perfectly protective, and, indeed, no human measure can be, yet they evidently produced some good effect. The district in which the disease first appeared, and to which it was kept chiefly confined, is bounded by Brunswick street and by portions of Erin and Brussells streets. It presents many obstacles to the enforcement of any kind of sanitary regulations, and contains, for its size, a good many inhabitants, very few of whom, at that time, either were vaccinated or wished to be. Up to the middle of March I kept finding unvaccinated people in it who had been living, week after week, within a very short distance of the infection, before it found an entrance into their houses. Notwithstanding all sorts of local furtherances, the disease, even in this infected district spread but very slowly from one house to another, and never became localized anywhere else, although solitary cases appeared at intervals in almost every part of the city. Clearly, McBurns, with his placards and fumigations,

played no contemptible part in suppressing the epidemic. But, the most careful attention paid to infected houses, coupled with the most judicious series of removals to hospital, could not have eradicated the disease, had it not been for the district vaccinators.

As early as the 2nd February, the Chairman of the Board of Health had written to the editor of the *Morning Telegraph*, a letter, in which he dwelt upon the impossibility of using the public infirmary as a small-pox hospital; the hopelessness of expecting to extirpate the disease through the medium of any hospital, and the pressing necessity of attending to private vaccination. This last piece of advice was much needed, for, as it afterwards turned out, there were then in the city more than 6,000 unprotected people, or about one-fifth of the entire population.* The necessity for a public vaccination soon became apparent and pressing. Owing to various causes, the chief of which was the absence of a compulsory vaccination law—a defect which, I regret to say, still remains unremedied—there was a great scarcity of lymph in the city. Moreover, there are, in every large community, a certain class of the people who will not look after their own protection as they are influenced by a dread of vaccination, the combined result of ignorance and quackery, which nothing short of the fear of imminent death can overcome. Lastly, the poorer people, who need vaccination most of all, can never be properly attended to by private practitioners. In view of all these considerations a public vaccination was instituted, and to this wise and prudent measure we owe the speedy extinction of the disease that followed. Without it we might have been, at this present moment, sharing the fate of many large cities of Europe and America, which have had the disease domesticated among them for many months, with lamentable waste both of life and public and private expenditure.

The city was divided into ten districts, and to each of these was appointed a physician to inspect its inhabitants and vaccinate or re-vaccinate such of them as he might find unprotected. The undertaking was commenced upon the 3rd March, and completed in the course of a few weeks, 5,379 people being vaccinated, or re-vaccinated, at a cost to the public of a little over sixteen hundred dollars. Never was public money better invested.

The new cases which, in February and March, had been occurring at the rate of two or three a day, declined, in April, to three or four a week, and by the third week in May the disease had

* Between 10th February and 19th May there were vaccinated or re-vaccinated: By the District Vaccinators, 5,379; at the Board of Health office, 875. Total, 6,254. Besides what was done in private practice. and what Dr. Holden and myself did among the infected families and their neighbors.

almost disappeared from the city, but at that date it received, from three concealed cases, an impetus that one might call a second epidemic. Eighteen or twenty new cases appeared, nearly all unvaccinated people, who had either lately arrived from the country or been accidentally overlooked in the district visitations. The disease had lost none of its malignancy. Two of the cases were hæmorrhagic and two petechial, and seven, or more than a third of the whole number, died. The fact that all this mischief arose from three concealments shows what a dangerous thing concealment is, and how strenuously we ought to avoid anything that may tend to encourage it. The new outbreak thoroughly tested the efficacy of the district vaccinations, for I believe it infected every unprotected person that was to be found within a large radius from the site of its appearance. It was dealt with in the manner that I have already described. By the end of June the city was clear of small-pox and it has since remained so.

I may here say a word or two upon the subject of

THE SMALL-POX HOSPITAL.

Irrespective of other recompense, the public owes its thanks to the Directors of the Female Reform Society for affording it the use of the Home, which, as regards site and internal conveniences, is, I believe, the best building in the city that could have been procured for the purposes desired. I make this acknowledgement all the more cheerfully because, at the time when we most needed co-operation and good will, it was almost impossible to hire anything for the use of the sick. Whatever we wanted we could only have by buying it altogether, and, cramped as we were for funds, this was a serious inconvenience. I have already mentioned that there was some unavoidable delay in getting possession of the building, but when it was finally handed over to me in a very unfurnished state, the cordial co-operation of Dr. Bayard and the Hospital Commissioners enabled me, in the course of a few hours, to fit it up for the accommodation of some eight or ten patients who were all that then required removal. We were soon ready to receive about eighteen more, or eight and twenty in all, had circumstances required it, but the actual number in hospital at one time never exceeded fourteen, exclusive of a matron, two men servants, and a female nurse, all permanently employed by the Board of Health. Besides these we had other assistance. Certain relatives of the sick who were properly protected, were allowed to enter the hospital and attend upon them if they wished it, on condition of assisting, if required, to look after the other patients, without demanding any wages beyond their board and lodging,

and leaving the hospital with the patients that they had accompanied thither. The plan seemed to work very well, and we had always one or two of these volunteer nurses on hand. If I thought it would please any of them to have their names mentioned I could do so, and commend their kindness and diligence as well. Neither were the permanent servants wanting in these respects. The food and all the other supplies were good, and to shorten a long story, if I had been taken sick I would have gone there myself. I mention all these things because within three days after the hospital had been opened it was asserted in public print, not only that the place was ill-provided and ill-managed, but that the sick within its walls were treated with gross inhumanity. I contradicted these statements at once, but they produced a bad effect. Up to the 23rd February, the date at which they were published, I had not met with a single concealment. In the course of the week immediately following I found *nine*. All this shows how careful the press ought to be in seasons of public panic, and furnishes an excellent commentary upon the popular notion of combating the disease through the medium of the hospitals.

I have now, gentlemen, explained to you the plan which was adopted in dealing with the disease, and the results which followed it. The plan, I think, was sound and the result good, but I leave them both to your criticism. I hope that the details have not been tedious. I have judged it necessary to go into them because their expediency was much questioned at the time, and may, perhaps, be doubted still, a fact which, at least, ought not to be due to a want of proper explanation. That explanation, which for obvious reasons could not be given then, I think it only right to give now. And before leaving this part of the subject, I shall not be deterred, by any fear of misconstruction, from offering a small tribute of approbation to our worthy ex-President of the Board of Health. I have no private interests to serve with that gentleman. I have not even acquainted him with the fact that I intended, upon this occasion, to make use of his name, lest his modesty should have shrunk from even this small acknowledgement of the very great services for which the public is indebted to him. I am not about to allude to his merits as a private gentleman or as a medical practitioner, which have long been recognized both in the profession and outside of it. It is only of his public actions that I am free to speak; of valuable services long and cheerfully rendered to the public, in posts whose only salary is the consciousness of being useful, in the face of all manner of personal annoyances, both great and paltry; of an hospital

established for the poor, and defended for them against the clumsy manipulations of shallow municipal economists; of the lives of citizens preserved; of a man's duty manfully done, with the sacrifice of all personal and selfish considerations, and in despite of that great modern bugbear of popular clamour which has so often driven incompetent officials to mischief. It is an invidious action for a junior practitioner to pass an opinion upon the conduct of a senior, but the fear of personal misrepresentation shall never deter me from doing an act of justice.

CHARACTER OF THE EPIDEMIC.

I have now to lay before you some of the satistics of the epidemic. The cases, so far as made known to the Board of Health, were 205 in all; 98 males and 107 females. Of these, 32 males and 39 females died; 71 in all, or nearly 34 per cent. of the whole number attacked. This heavy mortality was chiefly due to three circumstances, each of which claims a word or two for itself. 1st, The neglect of vaccination; 2nd, The large proportion of those who were attacked during the early months of life; and 3rd, The great malignity which has everywhere characterised the epidemic of 1871.

1st. *Neglect of Vaccination* in every small-pox epidemic is the chief cause of both the extension of the disease and its fatality. I need not waste time in dwelling upon truths which have been ten thousand times told, and fifty thousand times demonstrated during the past eighty years, although it seems that there are some people who can never be induced to realize them. No epidemic could confirm them more forcibly than that of which I am now speaking. Of 138 unvaccinated people who took the disease here last year, only one escaped with a varioloid attack, and 69, or just half of them, died; twenty-five, or not far from half of these, again, had either hæmorrhagic small-pox, which is invariably and speedily fatal, or the petechial form, which, though a little more protracted in duration, is hardly less deadly. All the rest, except some eight or nine, had confluent or copious eruptions which, even in epidemics of the ordinary type, prove fatal to a full third of those who exhibit them. On the other hand, 67 vaccinated people took the disease, and 30, or nearly half of them got off with varioloid attacks. Only *two* of them died, or about 3 per cent., which is just the usual mortality of small-pox after vaccination. This furnishes us with an important addition to the argument in favour of vaccination, which I have not found dwelt upon as strongly as it deserves to be by any of our authorities, *i.e.*, that *the malignancy of the epidemic does not*

raise the percentage of mortality amongst the vaccinated. While the mortality from the natural disease, never lower than 12 *or* 15 *per cent, may be swelled to* 50 *per cent. and upwards, by an increase of malignity in the type of the epidemic; small-pox, after vaccination, is, on the contrary, an uniformly mild disease, and attended with an uniformly low rate of mortality, whatever the type of the epidemic may be.* I have already shown you how the district vaccinations extinguished the disease among us in less than three months. I wish that these facts could be carefully considered by all who have any lingering doubt in their minds that there is but one method, and that, happily, an infallible method, of dealing with that formidable and loathsome disease; or, who think that any amount of squabbling about "isolation" and "the liberty of the subject" will enable us to avoid the necessity for a stringent Vaccination Act. I have seen people, protected by vaccination only, come out unharmed, after living for weeks together in atmospheres of which the inhalation by the unprotected was certain infection and probable death. I have known vaccination resist all these influences, and that of accidental inoculations as well. In the face of all that I could tell you upon this point, and all that you know yourselves, it does seem a most reprehensible thing that our Legislature should have burked the Vaccination Act that we sent them last year, because they could not decide whether the vaccinators ought to have five cents or fifty cents per head for their vaccinations, or whether they ought to be ordered to perform them *for nothing.* I hope that this matter will be kept before the public, and not suffered to fall into oblivion until another epidemic calls attention to it in the same melancholy manner as that of last year.

With regard to the *Ages of the Patients*, thirty-five, or rather more than one-sixth of those attacked, were under five years of age, and only three were less than a year old—a circumstance which could not fail to add to the mortality. In treating these little people we thought ourselves uncommonly fortunate to save three out of the nine and sixteen out of the thirty-five. The youngest patient was the child of an infected mother, at the full time, and was born jaundiced. It was vaccinated at once, but seven days after birth it showed the eruption of confluent small-pox, and died five days afterwards. Another female infant showed a copious eruption on the tenth day after birth, in spite of an ineffectual attempt that had been made to save it by vaccination. The vaccine vesicles, two in number, ran their course along with the eruption, and though they did not modify its maturation, I am inclined to think that they may have lessened its amount and

in some measure mitigated the secondary fever, for this infant lived longer than any other fatal case, and at one time I almost indulged the hope that it would recover. It died on the twentieth day exhausted and with paralysis of the soft palate and œsophagus.

A child, four years of age, was apparently well and hearty two days after small-pox had appeared in the family. On the third day, about six p.m., it suddenly sickened, complaining of pains which it could not precisely localize, and laid down. It sank rapidly and died in about four hours. I could not get down to see it during life. The body presented no characteristic external appearances, and I had not then time to make a post-mortem examination, nor do I think that the parents would have permitted one. In such a case the cause of death must remain an open question, but I returned it as a death from small-pox, having little doubt that the infection had proved sufficiently powerful to cut off the child before any special symptoms could be developed. If this were so it is the most rapidly fatal case upon my list. The youngest patient that recovered was two and a half months old, and had varioloid; but another male infant, aged fourteen months, recovered from a confluent attack, followed by an abscess in the zygomatic fossa, which retarded his convalescence by several days. It is seldom that we have to record such a fact, or notice the appearance of small-pox pits upon so young a face.

The two oldest patients attacked were two men, aged respectively sixty and sixty-seven; both of whom had the hæmorrhagic form and died within three days. Three women, aged sixty, sixty-five, and fifty-seven, recovered; the first two from varioloid and the third from the form called "horn-pox," the only case that I have ever seen. The eruption remained papular and took nearly forty days to disappear. The accompanying fever was quite moderate.

To conclude with regard to age, you will see by the accompanying table,* that the lowest death rate—28 per cent.—was met with between the ages of five and twenty.

3rd. The *Malignity of the Epidemic* has been noted during the last two years in every locality where the epidemic has shown itself. It is evinced in the large number of hæmorrhagic and petechial cases, both of which are usually great rarities; in the copious amount and unfavorable character of the eruptions, and the comparatively unfrequent occurrence of the milder form of small-pox among the unvaccinated; in the severity of both the initiatory and suppurative fevers; the large number of deaths,

* [This will appear in the next number of the journal.—*Eds. C. M. J.*]

and the early period at which they occur. This last point is worthy of special notice. Gregory, averaging from a very large experience, found the eighth or ninth day after the eruption, *i.e.*, the eleventh or twelfth day of the disease, to be the most fatal, and Wood says that most deaths occur between the twelfth and eighteenth days, or, roughly speaking, within the third week of the disease. By the accompanying table of the duration of the fatal cases that occurred here last year you will see that twenty-six, or more than a third, died before the fifth day, only seventeen survived the tenth, only one lived beyond the nineteenth, and that the average duration of the whole seventy-one cases was but seven days and a fraction.

The same virulence has characterized the disease in other places. Last year, in England, where they have a Vaccination Act which, however imperfect, protects thousands of the population, small-pox destroyed, in seventeen large towns, 13,174 people, including 7,876 in London alone; while the average mortality among the unprotected has varied from about 40 per cent. to more than two-thirds. It has sometimes been observed that the virulence of small-pox epidemics abates after the first month or two. In our half year there was no such abatement, the virulence remained unaltered to the last. The last who were attacked suffered as severely as the first, and of the last six deaths recorded, one died on the second, another on the third and two on the fifth days.

I have to add a few remarks upon the different forms of small-pox that were observed, and their treatment.

HÆMORRHAGIC SMALL-POX.

I have failed to find an exact description of this form of the disease in any of our standard authorities. Aitken says nothing of it. Trousseau speaks of two patients "whose bodies looked as "though they had been rubbed over with the juice of mulberries "or the dregs of port wine." Sydenham, whose opportunities for observation of the malignant varieties of small-pox were ample and well used, gives a very good description of the petechial form, noticing its frequent association with the symptoms of bloody urine, but is not explicit as to true hæmorrhagic small-pox. The only good accounts of the latter that I have found are those of Gregory and Marson, who describe the mucous hæmorrhages and vibices, and mention the fact, the importance of which we have already seen illustrated, that even in the adult this form may give rise to uncertainty in the diagnosis by proving fatal before the eruption has had time to appear. But they agree in stating that it generally proves fatal upon the fifth day of the eruption—

i.e., the seventh or eighth day of the disease. I do not know from what number of cases they took this average, but the eleven cases that we saw here were closely alike in their symptoms, and not one of them presented anything that could be called an eruption at all, while in only one of them, and that a peculiar one (of which I shall shortly speak again), was death deferred beyond the third day. In short, as I have already said, this form of small-pox has no symptom in common with any other, and its identity can be shown only by tracing the cause which produced it and the effects which it produces. From the observations of these ten cases I would describe it as follows:

It results from the action of a very malignant virus working upon an unprotected subject, and seems to require, also, the pre-existence of some debilitated state of the constitution. It commences with a smart febricular attack. Mental depression may or may not be present from the beginning, but the first symptoms are always of a sthenic kind. The pulse is hard and quick. The most distressing symptoms are headache and vomiting. The former is frontal and usually very severe; it is rarely relieved before the first symptoms of sinking appear, and always lasts longer than the vomiting. The latter is severe—sometimes almost continuous, always frequent and associated with epigastric pain, almost as if some irritant poison had been received into the stomach. The heat of the surface at this time will attract special attention; it is, I believe, greater than that which attends on the commencement of any other disease. I regret that I had not an opportunity of instituting a proper set of thermometrical observations upon this point, but, judging roughly from the sensation communicated to the hand, I would estimate it at not less than 108° or 110°. On the second day these sthenic symptoms subside into those of great mental and physical depression. The vomiting stops and is at once succeeded by the formidable and, I would say, fatal symptom of mucous and subcutaneous hæmorrhages. In the cases which I saw these extravasations occurred first in the conjunctiva and in the urinary and intestinal mucous membranes; these soon give way and exude blood which is dark coloured and forms but a loose and scanty coagulum. The natural secretions of the membranes first become tinged and then deeply coloured by this dark blood, and finally almost wholly replaced by it. Superficially the extravasations take place in the subcutaneous cellular tissue, and are also infiltrated into the substance of the derma, giving rise to the appearance of the dark-red patches and blotches which Trousseau has likened in colour to the lees of port wine. These patches may be associated with large and numerous petechiæ, but the cutaneous

appearances are not invariable; either patches or petechiæ may be present alone, or the skin may merely present a diffuse, brawny swelling, somewhat heightened from the natural colour. An ulcer is sure to become the seat of hæmorrhage; a cicatrix or a recent scratch will probable bleed also. Anything that renders the capillary circulation especially active, at a particular point, tends to cause hæmorrhage from it. The patient sinks on the third day.

There is another form of small-pox closely related to this, but attended by an eruption, and differing somewhat in the intensity and duration of its symptoms—the

PETECHIAL SMALL-POX.

Here the premonitory fever is of an asthenic type from the first, and on the second and third days there is a strong tendency to mucous hæmorrhage, especially from the gums and kidneys. Numerous petechiæ appear, and are soon followed by the eruption, whose papules, instead of being small and acuminated, are large, broad and flat, and of a dark purplish-red colour. If the patient survives long enough they become flat, confluent vesicles, irregularly shaped and dotted with small black umbilici, as in the bad, confluent forms of which, indeed, this is the worst kind, the patient usually dying on the fifth or seventh day of the eruption. Sydenham dwells upon the prognostic value of *colour* in small-pox eruptions, a point which modern authorities have disregarded, I don't know why. In this respect the favourable eruption differs most markedly from the malignant one at every stage. In the former, the papules are bright red, the vesicles pearly and translucent, the pustules yellowish white or bright yellow, and the crusts a decidedly reddish brown. In the latter, the papules are purple or claret-coloured, the vesicles an opaque, dirty white, the pustules dark brown, and the crusts (if the patient lives long enough to form them) almost black. The petechial small pox is closely related to the hæmorrhagic form which I have just described, but as the latter has well-marked characters of its own, especially that of being a essentially non-eruptive form, I would class the former with confluent small-pox, between which and the hæmorrhagic variety it forms a sort of connecting link. Petechiæ and bloody vesicles are not absolute criteria, but only indices of malignity. When the type of the epidemic is virulent we may see them sometimes present in small size and number even in the company of discrete or moderate eruptions. Their value in diagnosis and prognosis is not absolute but comparative. Yet, when they are at all numerous or large, and precede a dark-coloured flat eruption, attended by vibices, hæmorrhage from the gums, or bloody urine, the case will almost certainly prove fatal, and when the vibices are large and the

hæmorrhages free, the result will seldom be delayed beyond the third or fourth day from the commencement of the attack. When the petechiæ are less numerous, the papules somewhat larger, and the hæmorrhage not so free, the case may last a few days longer, and the eruption advance through some of its stages before death occurs. To sum up with regard to malignant small-pox: There are two distinct forms; one characterized by hæmorrhages without eruption, the other by petechiæ with a dark-coloured eruption which tends to become confluent if developed; but these two forms are closely related to each other, and may, in individual cases, be found, to a certain extent, combined—the hæmorrhages associated with a certain number of petechiæ, or the petechial eruption with a certain amount of mucous hæmorrhage. Both are, so far as I know, inevitably fatal. I saw one hæmorrhagic case in which life was prolonged for ten days, and in one very anomalous case of small-pox, after vaccination, which recovered easily and quickly, there were scarcely any symptoms beside the eruption, which consisted of varioloid papules associated with numerous and well-marked petechiæ on the legs and arms. But such cases must be very exceptional.

(To be continued.)

Proceedings of Societies.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

MEETING HELD APRIL 20TH, 1872.

The Society met in their rooms, the President, Hector Peltier, Esq., M.D.Ed., in the chair. After preliminary business, E. H. TRENHOLME, M.D., read the following paper on *Irregular Uterine Contraction.*

The subject of this paper is of such practical importance that I have thought it might not be uninteresting to briefly bring it before you. Observation alone can satisfy each one as to the accuracy of what is stated, and now that the subject is taken up I hope that it will be thoroughly and impartially investigated by you all.

Spasmodic contraction of the uterus is naturally divided into *irregular* contraction during the birth of the child, and *irregular* contraction during the delivery of the placenta.

1st. Irregular contraction of the uterus, during the expulsion of the fœtus, is known by short partial spasms of the uterine walls, which accomplish but little in the way of dilating the os or advancing labor.

These contractions do not occur regularly, either in respect to the space of time intervening between their return or their duration. By placing the hand upon the abdomen, over the uterus, we can frequently detect irregular and partial contraction of the organ. These pains are of a short, sharp and painful character, and usually cause intense anxiety and distress to the patient.

Upon making a vaginal examination you will detect but slight bulging of the membranes during the pains; also, not unfrequently an unequal dilatation of the muscular layers of the os or cervix uteri. The internal layer is the least dilated; sometimes to not more than half the extent of the external layer. By the way, I may say that the diagnosis of this condition is not so easy as one would naturally suppose, as the internal layer of muscular fibres is thin and might be mistaken for a thickened decidua.

When the finger has reached the os and is attempted to be passed between the neck and the membranes, we encounter adhesions more or less firm and extensive between the internal surface of the muscles and the decidua.

When the adhesions are on one side the os is drawn away from the median line and toward that side to which the decidua adheres. As a necessary consequence of such a condition of things, there are obliquity of the womb and irregular oblique presentation of the presenting part at the brim of the pelvis, and retarded engagement and its consequent results.

The existence of these adhesions are ascertained with little difficulty, for, in addition to the facts already mentioned, we have palpable and ocular demonstration of the attachment of shreds of muscular fibre to the decidua. In these cases the membranes are felt to be thickened, and with a little attention this thickening is recognized as due to shreds of muscular fibre adhering to the surface. I have on several occasions removed, by my finger nails, portions of these shreds from the decidua, both during the dilatation of the os and after the removal of the placenta, and found them composed of fibrillae of unstriped muscular tissue. *(See plate.)*

The adhesions are also recognised by this additional fact, that after such adhesions have been broken up by the finger, the protruding portion of the membranes rapidly increases in size; the uterus, which was before oblique, soon returns to its central position; the presenting part engages; the irregular, ineffective, spasmodic contractions become regular and powerfully expulsive; and a tedious, lingering labor becomes a normal one, and is speedily brought to a satisfactory conclusion. I have but little doubt more correct and extensive observation will demonstrate that the great

majority of oblique presentations will be found to be due to this cause.

The manner in which these abnormal adhesions are produced, and their *modus operandi* in causing irregular spasmodic contractions of the uterus, and its consequent results, will now be considered. In speaking of this matter we can arrive at probable conclusions only, and I shall therefore submit that these adhesions may be due to:

1st. A pathological condition of the inner surface of the uterus, existing previous to gestation; or,

2nd. To injuries received during gestation; or,

3rd. Result from partial, instead of complete separation of the decidua having taken place before term, *i.e.*, that the ripening of the decidua has not been uniform; or,

4th. To a combination of two or more of these causes.

We will now consider the value of these different hypotheses.

1st. In favour of the idea that these adhesions may be due to a diseased state of the internal surface of the uterus, existing previous to gestation, we have the well-established fact, that a part or tissue once the seat of disease or injury, seldom or never regains its original state of perfect health, and is liable to subsequent diseased action. Experience teaches us to be careful in effecting the delivery of the placenta in those cases where we have encountered strong adhesions in a previous labour, as we know that those who have been troubled with such adhesions are obnoxious to them on subsequent occasions.

2nd. Adhesions may occur during gestation as a result of local extravasation of blood, or liq-sanguinis; either from shock; a plethoric state of the system in general, and the uterus in particular; or, by direct violence applied over the parts affected, as by a blow upon the abdomen; or, possibly, by injury to some part of the neck or lower segment of the uterus, upon the brim of the upper strait of the pelvis. Such an injury as this might be caused by a false step, jump, or fall. For my own part, I am of opinion that this is a not uncommon cause of such adhesions. This view is confirmed by the fact that in most of the cases of retarded labour, due to irregular uterine contraction, that I have met with, the adhesions were situated within a short distance of the os.

3rd. The adhesions may be due to partial ripening or want of that cell maturation, by means of which the decidua is separated from the internal surface of the womb at term in natural labour, and which, by the way, is, in all probability, the determining cause of

labour, as lately suggested by the present Professor of Midwifery in Edinburgh—Dr. Alexander Simpson.

The strength of the attachment will determine the extent of the irregular contractions, and consequent delay, &c., in parturition.

The induction of labor at all, where adhesions exist, is probably due to the separation already spoken of having taken place, to a sufficient extent to produce uterine irritation and subsequent muscular contraction of the uterus. In this class of cases we need not look for, or suppose a pathological state of the membranes or uterine surface, but regard it simply as due to a lack of that perfected developement of the mucous membrane of the uterus, which is usually accomplished about the end of the ninth month.

4th. Lastly, these adhesions may be the result of two or more of the foregoing causes. There may be a predisposing plethora of the vascular system, accompanied by shock or blows; or, a weakened state of the uterine walls, the result of former disease or injury, and this, by a subsequent injury, may be the cause of local inflammation, effusion of plastic lymph, and subsequent adhesions.

The causes of these adhesions having been spoken of, we will now look at the manner in which they probably cause irregular spasmodic contractions of the uterus and retard labour.

The fault may be in the nerves or in the muscular structure.

1st. The nerves may be at fault, *i.e.*, there may be hypersthesia of some branches of nerves, thus inducing hasty, irregular action; or, there may be paralysis of some of the nerves which supply to the parts, and thus occasion irregular muscular action; or,

2nd. The cause of the spasm may lie in some abnormal condition of the muscular tissue, apart from any fault in the nerves; or,

3rd. The cause may be adhesions between the decidua and the uterus. Thus the decidua, being closely applied to the muscular surface and the adhesions preventing the membranes from protruding, might act in a mechanical way and thereby check the shortening of the muscular fibre, the attempt at contraction being met by the counter extension of the decidua; or, perhaps, the muscular structure, connected at the points of adhesion, may, by being lacerated or irritated during the pains, cause unequal and undue tension of some muscular fibres, the parts injured acting as direct excitants, and in this manner causing that unequal, short, spasmodic form of uterine contraction which characterizes tedious labour.

Of these hypotheses I am inclined to think that the last is most probably the correct one.

I suppose it will be conceded by every one that the whole uterus responds equally and regularly to the stimulus that induces labour,

unless there is some abnormal condition of the organ, such as defective innervation, excessive innervation, or muscular change of some part of the organ, as already mentioned.

As to defective innervation I shall not speak. The fact that these kinds of labour occur with women who both before and afterward have natural labour, shows that it cannot be due to disease of the nerves or muscles of the uterus.

Where one good and sufficient cause for the production of any phenomenon is known to exist there is no need to go beyond it, and recognized tension and laceration of the inner layer of muscular fibres, at the points of adhesion, are enough to account for irregular action of the uterus. The effect of these adhesions when they exist, say on the right side and near to the os, is to interfere with the regular action of the muscular contractions, for the reasons already mentioned, and at the same time cause a very incomplete and imperfect expulsive effort. The steady, protracted bearing-down pains, so desidera ted, are wanting, and grinding pains take their place. We all know that the decidua, with its contents must be elongated, in order to adapt itself to the diminished capacity of the uterine cavity during the spasm, that the waters must escape, or the membranes be protruded through the os and a pouch of fluid occupy the vagina before any progress is made toward the delivery of the child.

This being the case, lateral adhesions must interfere with the descent of the membranes and cause that the bag of waters be formed at the expense of the membranes which slip down from the side where there are no adhesions. The formation of this pouch in this manner, in its turn, necessarily, carries the lower segment of the uterus with the os, toward the side on which the adhesions exist.

Thus in a first vertex or breech presentation of this kind the left side of the presenting part would be driven into the cavity of the pelvis and made to occupy a lower level than the corresponding parts on the opposite side.

The expulsive force of the uterine effort is lost to a great extent, on account of the fœtus not being made to engage in the axis of the brim of the pelvis. When we consider the irregularity of the contractions, and the great disadvantages under which the expulsion of the fœtus has to take place, we find abundant cause, not only for the prolongation of the labour, but also for the anxious and exhausted state of the patient herself. The labour pains in these cases are most severe, and this, in my opinion, is due to the muscles acting contrary to each other and tearing themselves

asunder, as has been already mentioned, when speaking of the unequal dilatation of the os.

It is this form of pains that most authors recommend to be treated by bleeding, when the patient is plethoric, and when weak and nervous by tepid baths, warm injections, sedatives, opium, Belladonna, &c.

The irregularity of the contractions continue till the adhesions are separated; or the dilatation of the neck has been slowly and painfully accomplished by the inoperative contractions of the organ; or until the membranes have been ruptured, so as to permit the child to glide over the membranes, seeing the membranes will not glide over the surface of the uterus, as they should do, to allow the child to be born.

To break up the adhesions is an easy matter in those cases where they are situated near the os. The finger gently introduced around the neck, between the membranes and the uterus, readily accomplishes the desired result. Where the adhesions are beyond the reach of the finger I do not think it advisable to attempt the separation by instrumental means, but rather to rupture the membranes at once, as by this means we effect the chief thing to be desired, viz., the supervention of normal labour. In some cases, after you have broken up the adhesions as far as the finger will reach, you will often find that the os will rapidly dilate, and in a few minutes the finger can be still further introduced and the detachment completed.

I give the following case—one out of many—by way of illustrating what has been said:

Mrs. L. aged 20, first pregnancy; has been in labour last four and a half hours; pains irregular and spasmodic, and accompanied with intense suffering. On examination found os dilated to the size of a twenty-cent piece; membranes adherent on the right side, and neck of uterus turned that way. A somewhat thick layer of muscular fibres, covered the membranes, spread over the dilated part of the os. As I could not reach all the adhesions the membranes were ruptured, after which the pains became regular and powerfully expulsive, the os dilated rapidly, and the child was born in less than two hours.

By way of illustrating another class of adhesions I may state that during the past week I attended a Mrs. R., aged 21, in her first confinement. On examination found womb almost upon the floor of the pelvis, and os dilated to the size of a twenty-cent piece; has bad, grinding pains; little expulsive power for last eight hours. On introducing the finger could feel no adhesions between the mucous membrane and uterus. Being somewhat in

doubt as to the cause of the irregular contractions, I examined more carefully, and then found that there were tolerably strong adhesions between the posterior part of the neck of the uterus and vagina. The adhesions did not exist over the anterior third of the neck. The separation of the parts was easily accomplished, when the expulsive power of the pains was greatly increased, the os dilated more rapidly, but the membranes did not protrude. With the dilatation of the os the womb descended more upon the perineum, and I then found adhesions between the mucous membrane and the uterine surface, which, when broken up, the labour progressed more rapidly, but I finally was obliged to deliver by the forceps, as the head presented in the third position, and the woman was too weak to complete the labour alone.

This case is mentioned not only on account of its unusual character, but also beeause it shows that external adhesions may interfere with labour as well as adhesions between the mucous membrane and the inner surface of the womb.

Before leaving the subject it might not be amiss to say that the cause of gestation being of shorter duration in first pregnancies is probably due to a more rapid maturation of the decidua, combined with a very sensitive state of the muscular surface of the uterine cavity, which favours the induction of muscular contraction before the decidua is thoroughly detached.

It also explains why we have trouble in delivering the placenta in many instrumental cases. The adhesions render the contractions abnormal and inefficient, and this condition renders the forceps necessary to complete the delivery, while the adhesions remain, as before stated, to give us further trouble.

The effects of adhesions upon the delivery of the placenta deserve some consideration, but as I have not had any cases illustrating my views upon the subject, I shall not longer occupy your attention.

We would have no difficulty in attributing hour-glass and spasmodic contractions of parts of the uterus upon the placenta to the same cause that induced such contractions during the first and second stages of labour. In addition to the cause of such contractions, which have been spoken of already, there is the possible irritating effect of the placenta when adherent to the uterus. The mass of the placenta being somewhat firm, and the uterus contracting upon it, might easily cause laceration of some muscular fibres, and thus originate the hour-glass contractions. Also, the contractions might be due to the effect of lacerations of the tissue of the surface during labor, which had left the parts irritable and ready to contract as soon as opportunity offered.

As to treatment of retained placenta I have nothing special to say. We should follow the recognized mode of dealing with such cases, and, when possible, effect the detachment and removal of the entire mass, with its membranes.

Victoria Square, Montreal, 19*th April*, 1872.

Medicine.

OBSERVATIONS ON SEA-SICKNESS, AND ON SOME OF THE MEANS OF PREVENTING IT.

By Sir James Alderson, M.D., D.C.L., F.R.S., Consulting Physician to St. Mary's Hospital.

Some remarks which I published lately through the medium of the *Journal* were not intended to be an exhaustive statement of my views on the subject of sea-sickness. I propose, therefore, to consider a few points which I intentionally postponed for a future occasion; and I may at the same time briefly allude to certain objections which, though courteously offered, have, as I believe, been made without a sufficient apprehension of my view of the subject, and of the scientific basis on which it is founded.

The chief points which I omitted to consider are, the immunity of certain individuals from sea-sickness, and the relief which is usually experienced after a certain time spent at sea. But, before entering on these special topics, I wish to enlarge a little further on the connection of sickness and vomiting with brain-disturbance. It is well known to pathologists that, of all the causes which act sympathetically to induce vomiting, affections of the head are the most common; nothing can affect the sensorial functions without in some way disturbing the stomach. The experience of all practical men testifies constantly to this; but if reference to published authority be desired, I may quote undeniable testimony in a valuable paper in the *Transactions* of the Royal Medical and Chirurgical Society, by Sir Benjamin Brodie (vol. xiv., p. 339). In treating of concussion of the brain, he says, that "sickness and vomiting, for the most part, are early symptoms." Now there can be no doubt that the effect on the brain produced by the blood during the descent of the ship is of the character of a slight concussion. It is in the less severe forms of concussion that sickness and vomiting most certainly occur. In the graver forms of head affection, such as apoplexy, it is not so often found, because it requires a certain degree of excitability of the brain to

induce the act of vomiting, and that excitability has been destroyed by extreme pressure.

I pass now to the immunity of certain individuals from attacks of sea-sickness. This, at first sight, seems an anomaly, and presents a difficulty in accepting the theory which I propose, as well as every other theory which may be brought forward. I can only suggest, as a solution of the difficulty, that there are constitutions so formed as to be very slightly subject to sensorial impressions. The same inequality subsists between different individuals in their capacity of being emotionally affected; some are unmoved by the most distressing subjects; some have their feelings easily excited. It must be borne in mind that the argument as to exceptional immunity is equally applicable to all methods of explaining the existence and causes of sea-sickness.

In regard to the recovery from sea-sickness, there is much to be said without abandoning the theory of the original cause. A wonderful and instinctive power of accommodation to circumstances is possessed by the human frame. In the course of time, the sensorium is able to adapt itself to unusual circumstances; and on this point again we may refer to the same paper by Sir Benjamin Brodie, who, to his statement, "that sickness and vomiting are early symptoms," adds "that they seldom continue after the patient has recovered from the first shock of the accident." I may add to this, that, when organic change has taken place in the brain, as in the presence of a clot of blood, from the rupture of a vessel, there is, on reaction taking place, a cessation from sickness and vomiting.

That brain has an extraordinary power of adaptation to circumstances, is evidenced by recovery from hemiplegia, as well as by numerous recorded instances of foreign bodies, such as bullets, etc., being lodged in the brain with subsequent recovery. As an auxiliary to the power of the brain to accommodate itself to the motion of a ship at sea, I must refer to the instinctive act of inspiration, of which I have already spoken, as a great adjunct to relieve the brain from an undue supply of blood.

It must be remembered that recovery from sea-sickness during a voyage, in most cases, takes place after one or two days; by which time the sufferers, now convalescent, have exchanged the short choppy waves of the English channel for the totally different seas of the Atlantic Ocean or North Sea. Having myself several times crossed the Bay of Biscay, and having been once three months on board a sailing vessel, I am quite aware of the entirely different kind of sea to be met with outside the Channel; and I can conjecture that any relief which took place in the broad swelling

waves of the Atlantic would not have been experienced if I had been still pitching about between England and France.

As to my suggestion, I must remark that it was intended to prevent sea-sickness, and not as a remedy to relieve it after it has been once set up. It is offered as a means whereby the action on the sensorium shall never be induced. After that has once taken place, the effect cannot be expected to subside immediately from the mere avoidance of further exciting cause.

I am afraid that some misunderstanding may have arisen from the use of the word "towards" instead of "in the direction of" the bows of the vessel. I could not have meant to indicate the forward part of the vessel as desirable for the recumbent position; because, the centre of oscillation of a ship being the point about which all its parts may be supposed to oscillate, whether in pitching or rolling, it will be in the midships that the least motion will exist; and it is obvious that there, or as near as may be, the berths or sofas should be placed, especially those for the ladies, who, from delicacy of organisation, are the most easily affected.

I must just allude to a suggestion that "precaution as to diet" is of great importance in preventing sea-sickness. Of course, before going on board, any excess or change of usual habits would be obviously inexpedient; but no rules for a particular diet before going on board can possibly be suited to all habits and constitutions: that which would be suitable for strong men would be very ill-adapted for delicate constitutions. There is evidence that the contents of the stomach have very little to do with the sickness, which is secondary only to a disturbance of the sensorium. Vomiting and retching equally take place after the stomack has wholly emptied itself; and this is a distinctive difference between vomiting which arises as a consequence of cerebral disturbance and that from disordered stomach.—*British Medical Journal.*

Chemistry.

ON THE "CARBON CLOSET SYSTEM." *

BY E. C. C. STANFORD, F.C.S.

I am induced to bring this subject specially before this Section because I consider its merits have never been properly brought under your notice and fully discussed. It has been so fashionable

* Read before the Mechanical Section of the British Association at the Edinburgh Meeting.

to consider the water-closet system as the perfection of sanitary skill, particularly among engineers, who generally look upon it as the *only feasible* means of house excreta removal, that it requires some hardihood for a chemist to urge here a totally opposite opinion. The fact is, however, that by putting this noxious and yet valuable materiable in the sewers the engineers have removed it from the power of the chemist to bring his science to bear on it. All proposals to deal chemically with the enormous dilution of town sewage have hitherto failed; nor, as far as we know, is there the least probability that anything effectual or profitable can be done in this direction.

Now I have always held that if we are to do anything to assist sanitary science we must begin with the noxious material at an earlier stage of excreta removal than as town sewage. Moreover, I consider that the system by water carriage is founded on error. To accomplish the required result and enormous proportion of water is necessary; no doubt it was at first supposed that this large proportion of water would oxidise and render innoxious the poisonous matter, but the contrary is now admitted to be the case—decomposition is rapidly increased and promoted. Moreover the poison germs, so far from being destroyed, are diffused broadeast with appalling rapidity. In times of danger this becomes painfully evident; hence the *Times*, in a recent article on the expected cholera epidemic, raises an alarm in the following terms:

"In the first place, the destruction of the excreta from cholera patients must be insisted on under the heaviest penalties, and a system of inspection adequate to enforce this provision must be organised. Without these preliminary safeguards we cannot hope to resist the enemy with any success. So long as the germs of the disease are allowed to pass through the sewers into the rivers, to be washed up by the tide against our seaside villages, to be wafted about our streets in the form of an impalpable dust, we cannot hope for any good results from sanitary measures of the ordinary kind. Cleanliness, ventilation—above all a pure water supply, are advantages which cannot be over-valued. But until the germs of disease are systematically destroyed and excluded from any chance of mingling with the air we breathe and the water we drink, nothing will control the ravages of cholera. Every other precaution is subordinate to the main preventative measure, which it will need special powers to carry into effect—the destruction of the cholera germs before their diffusion."

The "sanitary deadlock" is sufficiently perplexing without this further complication; one authority obliging the distracted members of town councils to drain *somewhere*, another interdicting the

drains from flowing almost *anywhere;* but none telling them *where* or *how* to dispose of their refuse. Now, however, the sewage question is to undergo another complication. The citizens of London, after paying so very handsomely for their grand experiment on main drainage, are to be told that, just when they most require it to purge their houses of poison and pollution, the mighty engine has broken down, and they must fall back on their own resources.

There can be no doubt the *Times* is quite right; the prohibition is absolutely necessary if the plague is to be stayed: but admit this, and the water-carriage system goes by the board, it must be condemned as unable to cope with the removal *under all circumstances* of house excreta.

In Glasgow, the Sanitary Section of the Philosophical Society, after two years' discussion, on which most of the members entered with strongly preconceived prejudices in favour of water carriage, a unanimous resolution was passed strongly condemning it, and insisting that in the perfect system of the future all fœcal matters must be rigidly kept out of the public sewers.

It is a compliment to the intelligence of that resolution to find that public opinion is gradually working round in the same direction. The city of Glasgow may not have been so far wrong after all in watching and waiting the experience of the great city before committing herself to a proportionately costly scheme. At the time the resolution I refer to was passed, the water-closet at one end and irrigation at the other were generally considered the two *necessaries* to all civilization. We have lived to see that neither of these are necessaries, and that neither are generally applicable or advantageous. We are told now that successful irrigation must be accompanied by processes of deposition or filtration. The British Association Committee even recommend two separate systems of drainage, and this partly concedes what the resolution referred to demands. I would, however, go further, and treat the house excreta as a material the removal of which should have no connection whatever with the sewers and should never be mixed with water; in fact, that the sewage system should not be complicated by this, the main source of the worst pollution.

Now I affirm that in the most populous cities the general use of the carbon closet system is perfectly practicable, and that it must be by far the most healthful and by far the most profitable means of getting rid of the nuisance.

In this Section last year I heard a gentleman say that "no scavenger should ever visit his house." Now I should like to have asked how that gentleman disposed of his house ashes, because either he allowed the scavenger to call for them, which disproved

his assertion, or he put these into the sewers, in which case some other local authority ought to look after him. This, however, is not an uncommon feeling of repugnance on the part of the householder, and must be duly respected; yet the most prominent advocate of water carriage must draw the sewage line somewhere, and all would draw it outside of house ashes. These must not in any case find their way into the sewers. But in the more noxious and more valuable material we actually have much less to remove, and the removal can be made equally inoffensive. I admit that any system to be generally adopted must require no attention from within and must be quite as automatic as the water-closet. This, however, is easily arranged, and if one tithe of the talent and ingenuity had been spent on the dry system that has been lavished on the wet, it would, I believe, have long ago superseded it in this country. There is no more necessity for a scavenger to enter a house properly arranged on the dry system than on the other.

Let us consider, in the first place, what is the actual total amount of excreta per head to remove; and I wish to premise that I would advocate no system that was not intended to cope with the whole of the house excreta, solid and liquid, leaving only the wash-waters to enter the ordinary drains.

I have published a table, taken from various authorities, showing the estimated amount of this material to be removed per head, with its value.* The last table are the figures employed by Her Majesty's Commissioners on the Pollution of Rivers in their reports, and as they make no allowance for loss, for absence from home, &c., I think the average of 8 cwts. (including only about $\frac{3}{4}$ cwt. solid excreta) per head may be fairly taken; so that in a large household of ten persons it would amount to 80 cwts. (about 8 cwts. solid), and its chemical value would be about 80s., or 8s. per head. The same household would use at least 20 tons of coals, and probably send away four tons of ashes. The total annual quantity of charcoal required therefore could not exceed 4 tons, would probably be much less, and the whole removal, allowing for the drying action of the charcoal in the vault, would be about 5 to 6 tons weight.

Eight cwts., then, is the total quantity to be annually removed per head, and it is now generally effected by mixing it with 1,200 tons of pure water, all of which it renders highly offensive, and its value, however it may be extracted, if that be indeed possible, is reduced to very much less than this, over and above the dilution, in inverse proportion.

* *Chemical News*, vol. xxii., p. 302.

It is scarcely necessary to reiterate the disadvantages of this method of removal. We know that the closets are costly in erection and in repairs, that they consume and foul a large portion of our water supply, and that they have hitherto wasted the whole of the material. We first tried to confine the polluted water in cesspools, then we converted these into a network of deep laid sewers, thereby connecting all the houses and ensuring the spread of a cholera or typhoid fever epidemic. We do not know yet how to deal with the sewer gases, and have discovered no certainly perfect method of getting rid of the pollution. Now it does appear to me that we have mistaken the application of water; we do not require such a gigantic carrier and diffuser. Knowing how possibly dangerous the excreta may become, we ought to seek a disinfectant which will add as little as possible to its bulk and increase its manurial value. Therefore I would at once add that precisely the same objection may be urged against the use of earth, which would require three and a half to four times the quantity of the material removed, and reduce the value of the manure to even less than this in inverse proportion. The analyses of earth-closet soil by Dr. Gilbert confirm my views as to the poverty of the manure. The same applies more forcibly to the use of ashes, of which even more are required. These two materials act only as deodorisers so long as they are dryers; let the mixture become damp, and it at once becomes offensive. The use of earth in large cities must be impracticable and will always be expensive. Ashes can generally be provided in the houses, but these are not so good as earth, and the manure is scarcely worth removing. In all the tons referred to in the British Association Committee's reports where this system is adopted the price obtained is merely nominal.

In discussing the merits of a dry system, we have always this advantage over the advocates of the wet system, that, while they are limited to the use of water, we have a large choice of dry deodorisers. That which promises the greatest success is charcoal, and this is now being made the subject of experiment on a pretty large scale. There is no greater difficulty than to provide closets for workmen which shall always be perfectly inoffensive and shall not get out of order. I can point out one work where the system I advocate has been in use for three years by 150 men, and the closets have never got out of order. We have never worked with more than a fourth the quantity as compared to earth, and I am convinced that we may reduce the amount required even to one-eighth. I have assumed, however, that we use a weight equal to

the material to be removed.* The house may have a closet on each floor—say three, or even four; these are arranged one over the other. Each draws on the same supply of charcoal at the top of the house; the contents of the closet are allowed to fall through a 12-inch thin galvanised iron pipe into a water-tight cemented cesspit in the basement of the house. The charcoal reservoir is filled and the cesspit emptied by the scavenger once a year, the whole process being quite external to the house. The urine is emptied into a simple earthenware urinal in the closet on each floor, and it falls through a lead pipe direct into the pit, where there is always sufficient excess of charcoal to perfectly absorb it. The total absence of all odour is most remarkable. No water-closet can be compared to it. The quantity to be removed is reduced to less than twice the weight of the total excreta, and when removed an ordinary observer would scarcely know it from the original charcoal employed. The next step in the process is to remove it to the chemical works, where it is reburned in iron retorts, the ammonia distilled off, and the charcoal returned to the householder. In small villages one of the retorts at the gas works will get through a large quantity, and the ammonia will add to the value of the gas liquor. There is a constant increase of charcoal obtained from the excreta itself; this is an animal charcoal similar to that from bones; it contains the whole of the phosphates and the potash, and with the ammonia is available for manure.

The chemistry of the process has been so fully gone into before, on a former occasion, in another section, that I deem it unnecessary to refer further to it here; it will be found very fully described in several papers already published in the *Chemical News*.* I wish here to show how capable the process is of general extension. It is scarcely necessary to assure you that the cholera germs cannot survive the ordeal by fire which they suffer in this treatment. If, however, in case of cholera, further disinfection be desired, it can be easily effected when the whole excreta of the house is in a small pit, and in any case it is removed from our neighbour's contamination. A remarkable proof of the wonderful freedom from odour is described in a former paper.†

The process is now being worked by a small company, called the

* The remarkable drying action of the charcoal before alluded to was singularly shown in one house, where the contents of a wash-basin had been daily emptied into the urinal and found its way into the vault for twelve months before it was accidentally discovered. The manure, when removed from the vault, was apparently quite dry.

* *Chemical News*, vol. xix., pp. 253, 269, 291; vol. xx., p. 196, and vol. xxii., pp. 289 and 301.

† *Chemical News*, vol. xxii., p. 303.

Nitro-Carbon Manure Company, Limited, established by a few gentlemen to show that the process, even on a comparatively small scale, can be made a commercial success; all are satisfied as to its perfectly fulfilling all sanitary requirements. Several of the principal shipbuilders on the Clyde are erecting the necessary closets and urinals in their yards, and in a few weeks these will be used by about 10,000 men. In re-burning the material the retorts to be employed will be Norman's patent twin rotary retorts, now much used in the principal sugar houses in Glasgow. An arrangement has been made with the shipbuilders to allot them shares in the Company to the value of the closets erected, and thus these employers of labour will share in any profit which may be made. If the process pays as well as we expect, it must rapidly extend; but as I know you will deem it your duty to examine every possible solution of the sewage difficulty, I make no apology for bringing it under your notice at this stage. Now, in estimating the profits of any chemical process as compared with irrigation, it is quite proper to value the manure produced only by chemical analysis. Her Majesty's Commissioners adopt this course; they attach little importance to farmer's certificates, but value entirely by chemical analysis. This is the only fair way, because it shows exactly what it is worth in open market; and, valued in this way, all the manures produced by the several sewage companies are comparatively worthless. Yet, although this has been abundantly proved, why are the shares at such a premium? But in comparing the value of irrigation with that of any chemical process dealing with sewage, they bring in another and, I submit, an improper element, *i.e.*, the total profit of the farmer. This is unfair; the farmer buys his manure—say, made from bones; or, say, from excreta—by analysis at its market value, and his living is made out of what that investment produces from the land. The irrigationists have no right to put themselves in his place, reap his profits, charge themselves nothing for the sewage, and call that "making it pay." In one of the accounts quoted in Her Majesty's Commissioners' Report, the "right of shooting over the farm" is actually entered as an irrigation profit!

We have hitherto used the ordinary earth-closets of Moule's patent, simply throwing smaller charges of charcoal in coarse lumps; these have been wonderfully successful, but in order to use fine granulated charcoal, and to considerably lessen the quantity required, it was necessary to invent a closet for this special application. I applied to my friends, Messrs. Pollock and Pollock, engineers, of Leeds, and the closet exhibited is the result of their

ingenuity.* It delivers a minimum, but accurately measured quantity, and places it exactly where it is required; and it is remarkable what a small quantity of the deodoriser is sufficient to keep the deposit perfectly free from odour.

I exhibit also the plans for workmen's closets; and when I add that in all the yards where these are being erected they are to supersede large and expensive ranges of iron buildings and water-closets, you will understand that their great disadvantages have been already proved to the satisfaction of those pioneers of successful engineering, the shipbuilders on the Clyde. The impossibility of stopping their action and rendering them offensive is highly important. An instance of the extreme difficulty of dealing with factories is mentioned in a former paper.† The almost universal experience is that the water-closet is unsuitable for factories. The owners of private houses are beginning to think in the same direction, or why do we so constantly find disinfectants still employed? If the water system is or can be made perfect, why should such agents ever be required? These disinfectants have all, more or less, a disagreeable odour, are all expensive, add nothing to the value of the product, and confess the weakness of the water-closet system.

I think, therefore, the method of the future must be some such modification of the dry process as that now referred to as the Carbon Closet System.—*Chemical News.*

ON A METHOD OF DETECTING SMALL QUANTITIES OF SUGAR IN URINE.

By J. Seegen, M.D., Professor in the University of Vienna.

Trommer's is the most reliable and delicate test for sugar. With its aid, I am able with certainty to make out 0.3 *milligramme* (0.0046 grain) of sugar dissolved in 10,000 times the amount of fluid. This great delicacy of the test, however, only holds good as long as we have to do with a watery solution of sugar. If, on the contrary, small quantities of sugar are to be detected in urine, Trommer's test is neither delicate enough nor reliable, for two reasons. 1. Urine contains certain substances (colouring matters, creatine) which prevent the suboxide of copper when formed from being precipitated; no separation of the reduced suboxide of copper, therefore, takes place, the blue fluid only becoming yellow or yellowish-brown, or presenting a turbid discoloration.

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* This closet can be obtained at the Carbon-Closet Company, 46 Naymount street, Leeds. It was figured in the *Engineer* for August 5, 1871.

† *Chemical News*, vol. xxii., p. 302.

2. The same processes of reduction are also brought about by uric acid; and urine, containing a considerable amount of uric acid, acts on Fehling's test-fluid exactly in the same manner as urine containing 0.1 to 0.2 per cent. of sugar.

The method devised by me has for its object the exclusion of those other contituents of urine which would disturb the proper action of the test, and the transformation, as it were, of the saccharine urine into a watery solution of sugar. Animal charcoal has the property of retaining most of the constituents of urine, more especially the colouring matters and uric acid. After filtering a watery solution of uric acid through animal charcoal I could (provided the charcoal had been good), after repeated filtrations, not find a trace of uric acid in the filtered fluid. Now, in order to detect small quantities of sugar in urine, I proceed in the following manner :

I filter one or two ounces of the urine several times through good animal charcoal until the urine is completely colourless. This operation only takes a few minutes. Then I wash the charcoal on the filter with a little distilled water, and to this water, when filtered off, I apply Trommer's test. The water with which the charcoal has been washed is almost as sensitive to Trommer's test as a watery solution of sugar, and in it I could detect even 0.01 per cent. of sugar by a beautiful red precipitate of suboxide of copper, whilst the original saccharine urine, when not filtered, only produces a yellow discoloration of Fehling's test-fluid. With urine containing a little more sugar—say, 0.1 to 0.2 per cent.—the water flowing off from the second and third washing acts even more energetically upon the test-fluid than that of the first washing, producing and even purer deposit of suboxide of copper. The water obtained by the subsequent washings thus evidently contains the sugar in a purer from. With normal urine, the water obtained by the above process is either entirely inactive towards Fehling's test-fluid, which remains blue, or it assumes only after a while a slight dichroid (varying colour according as the light falls on or passes through) turbidity. The water obtained by a second and third washing always remains without any effect. When the quantity of sugar has to be determined, the urine must not be filtered through charcoal, as the latter always retains a certain quantity of the sugar which cannot be removed again by washing.—*British Medical Journal.*

Canada Medical Journal.

MONTREAL, MAY, 1872.

THE CORONER'S COURT.

One of the relics of barbarity is the Coroner's Court. "Crowner's quests" have from time immemorial been the subject of ribald jests and sarcastic merriment. We should imagine that the lack of dignity, or the absence of all the paraphernalia which constitute a well-ordered court of law has led to this generally entertained opinion; but, more than this, the absurd and irrelevant verdicts rendered have been seized upon by minds like those of Goldsmith and Dickens, and have served to bring into discredit and ridicule a process in our criminal jurisdiction unfitting the solemnity of the occasion. Investigations touching the death of a human being should, from the very nature of the inquiry, lead to serious thought, patient search for the actual cause of death, and a truthful and straightforward verdict. No personal considerations should be allowed to weigh a hair's breadth. Justice should be administered even-handed, and if a gross wrong has been done it should not be smothered by a verdict of death by the visitation of God.

These reflections have been forced upon us by the hurried and unseemly manner in which, on several occasions within the past few months, cases have been disposed of in this city, so that the office of Coroner appears to have become a useless appendage to our criminal administration; nay, worse, in some cases to which we will allude the whole proceedings were a cruel mockery. If we must have a Coroner—we do not seek to abolish that office—let us have a learned and independent member of the legal profession. It was at one time held in England that the office of Coroner should be filled by a medical man; these views have lately been modified, and it is now believed that physicians do not make the most efficient coroners.

Some years ago, when Montreal was half the size it is at present, there were two coroners. The process of investigation in that day was performed with greater satisfaction to the public than at present. We do not think it necessary to multiply the office of Coroner, but we do think it a reflection on our judicial system to have an office of such gravity and *quasi* importance filled inefficiently.

But, to return to the subject under discussion, we have stated that several cases have been summarily disposed of, and that the verdicts did not give satisfaction to those who thought on the subject. One, the case of a man called Harry Lewis, who died with all the symptoms of poisoning by opium, or of some of its preparations, or salts. It was testified to, under oath, that the man, the evening before his death, had procured morphia in quantity from a drug store in this city. Furthermore, he had been seen to swallow a white powder. A lengthened investigation took place; the viscera of the chest and abdomen were examined, and their condition tallied with what is generally observed in cases of poisoning by opium. No chemical examination was ordered; no attempt to decide the question of opium poisoning was made; the jury were instructed to bring in a verdict of death from congestion of the lungs from natural causes, and here the case ended. Now it happens that the public are deeply concerned in this very case, because it is contrary to law for any druggist or apothecary to sell any noxious thing or poison without the order of a physician, and it did not appear in evidence that the druggist who sold Harry Lewis the morphia was justified in so doing, at least he was not protected from censure or criminal prosecution by holding an order from a recognised practitioner for the dispensing of morphia. It is quite possible that the man did die from natural causes; nevertheless it remains unproven, and if the crown were to institute criminal proceedings against the druggist, one essential element of his defense is wanting.

Again, another case is brought before the Coroner, somewhat of a different character, but which is disposed of with equal dissatisfaction. A man complains of a stomach-ache and resorts to a druggist, who not only prescribes but actually dispenses his own remedy. The next we hear of the man is that he is found dead in a hayloft. A jury is summoned, evidence is taken, and death by the visitation of God the verdict rendered. Here, again, society is deeply interested in this case and its results. The law of the land permits alone persons holding the license of the College of Physicians and Surgeons to prescribe medicines or to exercise the functions and privileges of a physician in the Province of Quebec. The case remains in doubt, and some charitably-disposed persons would naturally and very reasonably believe that the druggist had given the man an over-dose of some drug, which had caused his death. Inquiry is thus burked, and injury is sustained by the druggist who, in all likelihood, gave the man a harmless dose of medicine; but a doubt remains as it is unproven.

Again, we read of a woman who dies and an inquest is held on her body. The medical men who are in attendance at the Coroner's Court find a whitish powder about the premises which they allege to be strychnine, and hence, without further inquiry, a verdict of death from taking an over-dose of strychnine is rendered. Since then we believe the Attorney-General has ordered the body to be exhumed, and a chemical analysis to be made to prove the presence or absence of the poison. A question naturally arises, with what ulterior object is this chemical analysis ordered to be made? Is it to decide the question of the actual cause of death? The Coroner and jury have decided, on what we deem to be insufficient data, that the death was caused by strychnine; thus bringing into ridicule the whole proceedings.

Another case is on record. A man named Bryson was, in May, 1870, found dead with his throat cut. The deceased lived in a house in St. Dominique street, and it was alleged that early in the morning, between four and five o'clock, he rose from his bed and committed the act of self-destruction. A man, whose name is not given, was present in the house, if not in the room, at the time of the occurrence, but his evidence was not produced before the jury. The medical gentleman who examined the case noticed that blood, in considerable quantity, was on the side of the bed and on the floor by the bedside. This did not quite agree with the account of the occurrence given by the inmates, as it was stated that he had risen from his bed and had committed the act while groping about the room. The neighbours had heard a noise as though a scuffle was going on, followed by groans. This case, at the time, called forth some very sensible and pertinent comments by the daily press. No searching or critical investigation appears to have been made; the inquest was hurried through; the man who had slept in the house, but who was not an inmate of the premises, was not examined, and the verdict rendered was one of *felo de se;* the body was buried and the whole circumstances consigned to oblivion.

But another case comes before us, and one in which, through the stupidity of the police, a body is found drowned and is disposed of in the course of a few hours, we believe somewhat under four. The inquest is held, and the man, who was a Protestant, and who had been missing since last December, was buried in the Roman Catholic Cemetery; whether in the consecrated ground or not we cannot say; in this case the friends of the deceased, had not only notified the police but had publicly advertised the circumstances of his disappearance and after considerable running

about and some expense, they had the body exhumed, recognised it, and had it removed to the Protestant Cemetery.

Again, we have the case of the man Jones who shot himself. In this case, aspersion of a serious and damaging character was published by a city paper, reflecting on the conduct of the professional gentleman who attended the case. This attack was so gross as to lose in the telling of the story. But who is to blame that the public are as much in the dark, after the inquest, as to the cause of Jones' death, as they were before the investigation? All we know is that the country is saddled with the expense of a useless trial and inquiry which is allowed to drop for lack of a post-mortem examination of the head of deceased.

These cases point either to the lack of judgment or the want of knowledge of the presiding officer. We will not impugn his honesty in the matter.

We have heard of instances in which the Coroner has taken upon himself to carry on an inquest without any medical evidence whatever. Now, this is decidedly wrong, because medical testimony is the only evidence upon which a jury can arrive at an accurate knowledge of the cause of death. It were better to have no inquests at all, than that they should be conducted in a manner to bring discredit on all connected with the Coroner's Court. Medical evidence should not be suppressed, nor should it be lightly passed over. Nor, again, should the Coroner or jury have the power of deciding the question as to the expediency of post-mortem examination. This is peculiarly the province of the physician, and where he is unable to assert positively the actual cause of death, then should he be required to examine the body *post mortem*, inspecting the condition of the various viscera to decide this point. We must state that the present system of conducting Coroner's inquests, not only in this city but generally throughout the country, is, as a rule, unsatisfactory, and it is high time to make some change, or abolish altogether the office of Coroner, substituting a more searching, impartial and, in consequence, more reliable tribunal.

UNIVERSITY OF BISHOP'S COLLEGE—MEDICAL FACULTY.

The first convocation for the conferring of degrees in Medicine, in the new Medical Faculty of the University, took place in the the College, Lennoxville, on Thursday, the 4th April.

The chair was occupied by the Hon. Edward Hale, Chancellor, having on his right His Lordship, the Bishop of Quebec, President of the University.

Dr. David, Dean of the Faculty, presented the following candi-

dates for graduation. Having taken the usual oath they severally received, at the hands of the Chancellor, the degree of C.M., M.D.

André Latour, Lachine; Wolfred D. E. Nelson, Montreal; Henry S. Cunningham, St. Catherines, Ont.; Philipe Deselets, Three Rivers; Joseph E. A. Lanouette, Champlain; Richard N. Webber, Richmond.

The Dean also made the following announcements:

The number of students in attendance during the session was twenty-five.

The following gentlemen passed their Primary Examination: Mr. Godfroi Dubuc, Chambly; Rodolphe Sicotte, St. Hyacinthe; Valmore St. Germain, St. Hyacinthe; E. A. Duclos, Montreal; Jeremiah Eneas, Montreal; Isaac Fontaine, St. Barnabé; Wm. MacDonald, Montreal.

The prize for the best Final Examination was awarded to Mr. André Latour, of Lachine; that for the best Primary Examination to Mr. Godfroi Dubuc, of Chambly, who also took the prize in the Senior Class of Practical Anatomy. The prize in the Junior Class of Practical Anatomy was awarded to Mr. Robert Costigan, of Montreal, Mr. John Ahern, of Quebec, receiving honourable mention. The two prizes offered to the students of the Senior and Junior Class of Physiology, who obtained the highest number of marks at the written examinations during the session, were awarded to Mr. Godfroi Dubuc (Senior Class) and Mr. Robert Costigan (Junior Class), Mr. Ricmond Spencer and Mr. John Ahern (Junior Class) receiving honourable mention for the excellency of their papers.

The graduates were subsequently addressed by Dr. David. His Lordship, the Bishop of Quebec, and the Rev. Dr. Nicolls also addressed the Convocation. In the evening a conversazione was held, which was very largely attended.

We give below the examination papers of the College of Physicians and Surgeons of Ontario for which we are indebted to our cotemporary the *Canada Lancet*.

COLLEGE OF PHYSICIANS AND SURGEONS, ONTARIO.

PROFESSIONAL EXAMINATION, 1872.

Descriptive Anatomy—Dr. Sullivan.

The brain being sliced to a level with the corpus callosum, how would you expose the third ventricle? Name the structures divided, and the boundaries of the ventricle.

Describe the arch of the aorta, its course, divisions, limits and relations.

Give the exact position of the pancreas, its structure, and the vessels and nerves that supply it.

What ducts convey secretions into the mouth, and at what points o they terminate?

Define the term fascia. Name the varieties, and describe the fascia lata.

The integument being removed, how would you expose the parts passing through the great sacro sciatic notch? Name them in order, and mention generally their destination.

What structures would it be necessary to divide to expose the median nerve from the axilla to its termination in the digital branches?

What class of articulations does the ankle belong to? Describe its ligaments, and name the tendons contiguous to it.

SURGICAL ANATOMY—DR. SULLIVAN.

Describe the mode in which you would expose the several cavities in making a *post mortem*, and state how you would remove the brain entire?

Name the muscles contracted in talipes varus and valgus, and any danger likely to occur in their division.

Give the exact course and relations of the external iliac, and mode of ligating it.

Give the boundaries and contents of the space in front of the elbow.

Describe the Lachrymal duct and Eustachian tube, and mode of catheterizing them.

MEDICINE—DR. WRIGHT.

Give the symptoms of Epilepsy in its two principal forms—Mitior and Gravior. Prognosis in each form, course, termination, and treatment.

Give the symptoms and signs of acute Pleurisy, distinguishing between symptoms and signs, the several stages, prognosis, course and treatment.

Give the symptoms of Dysentery in its Sporadic and Epidemic forms, and definition of the terms. What forms of febrile disturbance are liable to occur in each? What are the assigned causes of the disease? What the complications, prognosis, and full and explicit directions for treatment?

Give the definition of the term Exanthem. Give symptoms of

the premonitory stage in each, the phenomena of the second stage, and the average duration of each. Enumerate the most frequent complications.

Give the appearance of Vaccine disease.

Enumerate the causes which may change the shape of the chest, either increasing or decreasing its size, and means by which you may distinguish them.

MEDICAL PATHOLOGY—DR. WRIGHT.

Give the definition, causes and results of Passive Congestion.

Give the definition, causes and results of Active Congestion or determination of blood.

What is the condition of the blood in Rheumatism, Anæmia and Plethora?

Give the Pathological Anatomy of Enteric or Typhoid Fever.

MEDICAL DIAGNOSIS—DR. DEWAR.

Enumerate the Diagnostic points between Pulmonary abscess and the cavity of Tuberculosis.

Describe the symptoms of acute Bright's disease. Name and differentially diagnose the diseases likely to be confounded with it.

What is Enteritis? Describe its symptoms.

Diagnose Gout.

How would you distinguish between Spinal Meningitis and Myelitis? For what other diseases might the former be mistaken, and how would you recognise it from them?

SURGERY—DR. LIZARS.

Describe the difference between Osteo-Sarcoma and Osteo-Cephaloma.

Describe the varieties of Hemorrhoids.

What is commonly known as White Swelling of the Knee? Describe the Pathological changes that take place in its production.

Describe the difference between Concussion and Compression of the Brain.

Give the different varieties of Erysipelas, the distinguishing characteristics of each form, and their appropriate treatment.

OPERARIVE SURGERY—DR. LIZARS.

Describe the operations for Resection of the Shoulder Joint. State which you prefer, and your reasons for that preference.

Describe the operation of Paracentesis Thoracis, its site and dangers.

Describe the operation for removal of Superior Maxilla.

Describe the various Dislocations of the Hip Joint.

Describe the various methods of treating Fracture of the Patella.

SURGICAL PATHOLOGY—DR. FIELD.

Describe the Phenomena of Inflammation and the transitions to it from Normal Nutrition.

Give the Degeneration of the Fibrinous, and also of the Corpuscular portion of Inflammatory Lymph.

Name the five modes by which the healing of open wounds are accomplished; and describe the process of repair of open wounds.

Show the points of resemblance between a Mammary Glandular Tumor and Scirrhus of the Breast; also their distinguishing characteristics.

Give the distinctions between Innocent and Malignant Tumors as regards Structure, Growth, Ulceration and Propagation.

MATERIA MEDICA—DR. TUCK.

Explain and illustrate by example the Specific Operations and the Elective Action of Medicine.

Give the Description, Action, Use and Dose of the following: Creasote, Santonine, Chloral Hydrate and Tartar Emetic.

Give the British Pharmacopœal names and differential characters of Calomel, Corrosive Sublimate and White Precipitate, with their respective Uses, Doses, and Modes of Administration.

For a case of general Dropsy, write a prescription in full, and state the reasons for the introduction of each ingredient used.

WIDWIFERY—DR. BERGIN.

What are the signs of Pregnancy at the second, fourth and eighth month of Utero Gestation? Is it always possible to pronounce positively at these periods as to the existence of Pregnancy?

Why does the occurrence of rigor in the child-bed excite the fears of the medical attendant?

How are Puerperal Convulsions to be distinguished from Convulsions that are Hysterical, Epileptic or Apoplectic?

Name the different varieties of Uterine Hemorrhage.

OPERATIVE MIDWIFERY—DR. BERGIN.

What circumstances and conditions justify and necessitate the use of the forceps, and distinguish the cases calling for the employment of the long forceps from those that require the short?

What precautions should be taken before, during, and after the application of the forceps?

Is there more than one mode of Version? If so, describe such modes, and the reasons that compel the operation.

Why should labor be induced prematurely? And if resolved upon, at what period of Gestation, and how should it be accomplished?

When should the Cæsarian section be preferred to Craniotomy?

When is Craniotomy performed, and name the necessary instruments to perform the operation?

PHYSIOLOGY—DR. ————.

Describe the Nerve-Tissue, its varieties, and its several Functions.

Describe the Functions of the Pneumogastric and Sympathetic Nerves.

What are the forces which carry on the Circulation of the Blood?

What theories have been proposed to explain the generation of Animal Heat, and what are the objections to them?

What are the Changes in the Blood in the Placenta, and how are they effected?

Describe the Nervous and Muscular forces by which Respiration is effected.

What are the Constituents of the Blood, and how is it formed, tracing it from the Chyme inwards?

Describe the Functions of the Skin.

Describe the Functions of the several portions of the Alimentary Canal.

CHEMISTRY—DR. SANGSTER.

Give briefly the two theories as to the nature of Electricity.

Describe the Composition, Preparation, and Properties of the compounds of Nitrogen with Oxygen, specially pointing out the relation between $N^2 O^5$ and the Nitrates, and $N^2 O^3$ and Nitrites.

Give Composition and Properties of Cyanogen and its Compounds.

Express by symbols the composition of the following Compounds: Tartaric, Acetic, Nitric and Benzoic Acid, Grape Sugar, and Chloroform.

Describe the Chemical character and composition of the Fats, explaining briefly how they may be decomposed into their proximate constituents. Give general Formula for the so-called Fatty Acids.

Describe the Chemical relations and characteristics of Urea and Uric Acid, and explain how they may be separated from Urine.

Give a brief synopsis of the Chemistry of the Vegetable Alkaloids.

PRACTICAL CHEMISTRY—DR. SANGSTER.

Describe the mode of preparing Pot Iodate, Absolute Alcohol, and Pure HCL. —

Give the group tests for bases, mentioning the principal Metals in each Group.

Give the distinguishing reactions by which you would recognise Salts of Copper, Lead and Mercury.

What special reactions characterize Opium and Morphine, respectively?

What impurities are more or less frequently met with in Commercial Potassium Iodide, Sulphate of Quinine, and Chloroform, and how would you detect their presence?

MEDICAL JURISPRUDENCE—DR. CAMPBELL.

Describe the appearances in Death by Drowning, and note the difference presented by the body entering the water before and after death.

Name several conditions attended with Insensibility, with brief characteristics of each.

State in days the average length of Pregnancy, the shortest period of Gestation compatible with Viability of Infant, and the most protracted with Legitimacy.

Distinguish between Live Birth as understood in Civil and in Criminal Law.

Give the Signs in the Living and in the Dead of recent Abortion, at the Fourth Month.

Enumerate in their order the Personal Peculiarities most to be depended upon in cases of Disputed Identity.

Define Hallucination, Illusion and Delusion, and under what circumstances they would warrant a Physician in signing a certificate for committal.

TOXICOLOGY—DR. TEMPLE.

How are Poisons Classified? Give a few examples belonging to each class.

What are the Symptoms of Poisoning by Oxalic Acid? Give Treatment and Tests.

What are the Symptoms of Poisoning by Strychnine, and give Treatment?

What are the Symptoms of Poisoning by Opium, and give Treatment?

Describe the Symptoms and Treatment of Chronic Lead Poisoning?

SANITARY SCIENCE—DR. CARSON.

What is the Annual Average of Death per Thousand in a Healthy Community?

What Diseases are likely to arise from Imperfect Drainage, from Deficient Nourishment, or Over-crowding?

What Cubic Space of Air should be allowed to each bed in a Hospital, and state the Diseases likely to be caused or greatly aggravated by Deficient Space?

Distinguish between Infectious and Contagious Diseases, with examples.

Describe Ozone, its nature, the modes of ascertaining the proportion in the Atmosphere, with the supposed effects of an excess or deficiency of it.

Define the term Endemic, Epidemic, and Enthetic, as applied to Diseases, with examples.

What kind of Impurities will Filtering remove from Water, and what remain unaffected by that process?

BOTANY—DR. CORNELL.

Why is Physiological Botany the most essential department of the Science of Botany, for the Medical Student to understand?

What is the Organized Fabric or Tissue of Plants? And how is Vegetable Growth effected?

Describe the Minute Anatomy of the Leaf, the cause of Death, and Fall.

To what extent is the Plant covered by Epidermis?

What is Phyllotaxis; and how do you use the term?

Describe Infloresence, both Definite and Indefinite.

Describe minutely, the Food, Nutrition, and Elementary Composition of Plants.

Medical News.

EXTRACTION OF ARTIFICIAL TEETH FROM THE ŒSOPHAGUS.

Early on the morning of April 25th, I was aroused by the housemaid, who said she had something in her throat, and that she

feared she had swallowed her artificial teeth during her sleep. She was much distressed, and made constant efforts at deglutition. I passed my finger down the throat; but, although I could reach below the cricoid cartilage, there was nothing abnormal to be felt. I then passed a long œsophagus-forceps, guided by my finger, down the throat, and about four inches beyond the point where my finger reached, the forceps struck against a foreign substance, which I seized and gently withdrew. This proved to be a metal plate holding two teeth, and from which projected two ugly-looking hooks for its attachment to the adjoining teeth. The young woman complained of soreness while swallowing for a day or two afterwards, but is now quite well.

Arthur Bracey,
Surgeon to the Birmingham Eye Hospital.

INJECTION OF TINCTURE OF IODINE AND OF ALCOHOL IN BRONCHOCELE.

Dr. Carl Schwalbe (*Virchow's Archiv*, Band 54,) speaks of injection of tincture of iodine and of alcohol in the treatment of thyroid tumours. Those in which it succeeds best are the soft and cystic enlargements; in hard fibrous tumours no result is obtained; and in vascular swellings there is danger of the production of embolism, unless the vessels have been partially contracted and the tumour diminished by the internal use of iodine and by electrolysis. If blood escape in a stream on the introduction of a cannula, the injection must not be made; in any other case it may be done with safety. About ten or twenty drops are injected as nearly as possible in the middle line of the neck, over the tumour, by means of a syringe fitted with a cannula having a short point. If no blood flow on the introduction of the cannula, the fluid is forced in; and before removing the instrument, the operator waits for a short time in order that the injection may not again flow out. The operation is sometimes followed by transient pain in the course of the nervus auricularis magnus, cough, gastric oppression, vomiting, and in weak subjects by fainting. One woman, who was subject to epilepsy, was seized with symptoms of hemiplegia soon after the injection, and died in convulsions. Schwalbe prefers alcohol for the injection, a drachm of iodide of potassium being at the same time taken daily. The injection may be repeated at weekly intervals. No confinement is required during the treatment; the average duration of which is two or three months.—*Wiener Medizin, Wochenschr.*, March 16th 1872.—*British Medical Journal.*

CANADA

MEDICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Clinical lecture delivered at the Montreal General Hospital by J. M. Drake, M. D., Professor of Clinical Medicine, McGill University.—*Fatal case of Rheumatic Delirium.*

Organic or functional disorders of the brain, occurring as a complication of acute rheumatism, are fortunately of somewhat rare occurrence, and indeed have only attracted much attention within a comparatively recent period. You are fortunate in having witnessed such a case, as it will serve to impress you with the possibility of its occurrence and the danger which it imports. We had in this case what appeared at first a somewhat severe (but by no means unusually so) case of acute articular rheumatism; several joints were affected—the knees, wrists, smaller joints of the fingers, elbows and shoulders. The pulse did not indicate any great disturbance of the vascular system. The sweating was moderate, the heat apparently natural, the tongue coated and somewhat yellow. The treatment adopted at first consisted in the administration of a saline purgative, painting the affected joints with Tr. Iodine: 10 grs., Dover powders at night, and this was followed by the use of an. acid tonic mixture, with moderate but nutritious diet. Under this treatment the patient's condition for the first two or three days appeared to be somewhat improved. The pains were not so much complained of, and the tongue became less coated. This alleviation of the symptoms was, however, of very transient duration—he became more iritable, the pains in the joints returned, a slight murmur was detected at the base of the heart, and a few hours later he complained of a stitch in the side. He was then placed on full doses of Bicarb. Potas. every two hours, and blisters were applied in the neighborhood of the affected joints, and also to the sides of the chest. The Dover's powder at night was continued. He appeared much relieved by this mode of treatment. His pains almost left altogether. The Bicarb. Potas. affected his secretions so as to render them dis-

tinctly alkaline in their reaction. The heart affection did not appear to have increased in severity, and everything promised well. It was observed, however, on Thursday last, that he appeared highly emotional and irritable. He had, I should remark, had rather severe epistaxis—he wept as he told me that the nurse had insisted on his eating some corn starch which he did not relish—and the patients in the ward united in saying that he appeared low-spirited, peevish, and disconsolate, frequently declaring that he should die. On Friday evening delirium set in, he became very restless, tossing about in his bed as though he either did not feel or was indifferent to the pains in his joints. He even sprang from his bed and tried to run towards the window, and that night he had little or no sleep. On Saturday, at the hour of visit, he returned rational answers to the questions asked; complained of pain in his head. The pupils were natural. He had no vomiting. The pulse was about 100. His face did not appear unusually pale or flushed. The tongue was but slightly furred. The surface warm and slightly moist. His expression was rather mild and excited, and now and then he would utter some rather incoherent expressions. That night (Saturday) the delirium returned with increased violence, and towards morning he died. The immediate cause of death was not very apparent, but from the description it seems to have been from syncope. The treatment adopted was the application of nine leeches to the temples and a pill containing 2 grs. Pil. Hyd. 3 grs. Scilla, and ½ gr. Digitalis every four hours. I was induced to apply leeches from the fact that his nose had previously bled, which I inclined to regard as a natural effort at depletion and an indication of cerebral congestion. I now believe I was in error on this point, and I wish you to remember that I mention this not for your imitation, but as a warning—not that I consider the trifling loss of blood could have seriously diminished the chances of recovery—but it was certainly a step in the wrong direction, and as such I caution you against repeating it. And yet what could be more natural at first sight than to refer the wild excitement and delirious raving observed in this case, to inflammation of the serous membranes of the brain. We know how frequently other serous membranes as the pericardium and pleura are affected in the course of rheumatism; what was more likely than that the serous membranes should also occasionally suffer in a similar way. The post mortem examination, which was made with considerable care, very decidedly negatived such a supposition. We found the Dura Mater very adherent in the course of the longitudinal fissure, owing to the pressure of an unusually large number of the so-called Glandulæ Pacchioni, which

is so far interesting as indicating morbid action. According to Dr. Todd, they are 'the product of a chronic, very gradual irritation, due to more or less frequent functional excitement of the brain itself. They are peculiar to the human subject. Nothing similar to them has been found in any of the inferior classes of animals, and they are scarcely observable in the young subject. The superficial veins were rather more full and turgid than usual. The arachnoid was opaque and somewhat thickened in parts. There was a small quantity of subserous effusion. The brain itself was not only not congested, but decidedly anæmic in appearance, the punctæ vasculosæ not more apparent than in perfect health. There was no fluid in the ventricles. The only morbid condition discoverable was situated in the pineal gland, which was the seat of cystic disease. The lungs were, especially in the lower lobes, highly congested, so much so as in some parts to closely resemble apoplectic extravasation. The pericardium contained a quantity of yellowish serum, which I regret was not measured. The heart presented on its external surface some old patches of organized lymph, and a very few small patches of recent effusion; these were especially seen over the auricular portion, and the roughness of the surface thus produced was no doubt the cause of the systolic murmur heard during life. Some ecchymotic extravasations were seen at various points on the surface of the heart. The valves were healthy, and the muscular fibre appeared unusually pale. Liver healthy. Spleen very soft. We thus see that there were no appearances discoverable in the brain to account for the delirium under which the patient sank. To what cause then can its occurrence be referred? There are three conditions which have been admitted as giving rise to cerebral symptoms in rheumatism. 1st, True inflammation of the brain and its membranes. 2nd, Head symptoms, symptomatic of peri or endo-carditis or acute pleurisy. 3rd. Cases of rheumatic delirium unaccompanied by internal local inflammation of any kind. Of the first class of cases, examples are comparatively few. True inflammation of the brain or its coverings, as evidenced by pathological science, is of very rare occurrence in rheumatism. Dr. Watson records a single case—a female patient, who died under his care in the Middlesex Hospital after symptoms of cerebral inflammation supervening upon acute rheumatism. Unequivocal pus was found smeared over the hemispheres of her brain. A similar case is recorded by Dr. Fyfe, in 29th vol. Med. Gaz.; and a third example by Dr. Fuller, as having occurred in St. George's Hospital, under the care of Dr. Seymour. The second class of cases, viz: those in which the head symptoms are symptomatic of inflammation of the heart or pleura, are much

more frequently met with. So commonly, indeed, is the delirium of rheumatism dependent on heart affection that Dr. Watson warns you that whenever, in acute rheumatism, you find your patient flighty or wandering, or more distinctly delirious, or affected with any form or degree of convulsion, examine carefully the condition of the heart. Of the third class, viz: rheumatic delirium unaccompanied by internal local inflammation, a few cases are mentioned by Dr. Todd; and Dr. Fuller states he has seen eight, one of which proved fatal on the third day. Another fatal case is recorded by Dr. Fuller as having occurred in the practice of a friend of his. In all these the heart and chest were repeatedly and carefully examined, without affording any evidence of inflammation. As to the cause of the delirium in these cases—apart from those rare instances of true meningitis which have been met with in which the occurrence of delirium is sufficiently explained by the pathological changes in the structure of the brain or its membranes—there are two explanations. Thus some consider that it is entirely due to inflammation of the pericardium and pleura, the brain becoming afterwards affected in consequence of irritation conveyed to it by the phrenic and pneumogastric nerves. Others reject the idea of sympathetic irritation as inadequate, and attribute the nervous symptoms to disturbance of the cerebral action occasioned by embarrassment of the cardiac circulation. This is Dr. Watson's opinion. After remarking the frequency with which a small quantity of serous effusion is found beneath the arachnoid in connection with carditis and pericarditis, in cases of rheumatic delirium, he says: "Now, that acute inflammation, fixing itself upon some portion of the heart, should embarrass its action and modify the condition of the circulation through the cerebral bloodvessels, is not only conceivable but highly probable. Any retardation of the venous circulation in the head, any engorgement or congestion of that system of vessels would be likely, if we may reason from the analogy of other parts to produce effusion." It is possible that in the patient whose case I have been describing the disorder of the sensorial functions depended on simple disturbance of the cerebral circulation; it is possible that the same disorder depended on the serous effusion; and it is possible, and I think probable (says Dr. Watson,) that it depended in part upon both these causes. In opposition to this opinion, Dr. Fuller points out that even in severe cases, when carditis terminates fatally, delirium convulsions and coma are rare and exceptional phenomena; while they sometimes appear in cases where the cardiac symptoms are of less than average severity, nay, that head symptoms sometimes come without any cardiac lesion at all. The same reasoning ap-

plies to cases in which cerebral symptoms are associated with inflammation of the lungs or pleura. The most satisfactory explanation of the occurrence of rheumatic delirium is that adopted by Dr. Fuller, viz: that it depends on the influence with the irritation of the sensorium resulting from the poisoned condition of the blood. But we know from recorded cases that rheumatic delirium does not always occur in instances where the rheumatic symptoms are best marked. Indeed, it has supervened in cases which appeared to be comparatively slight in their intensity. If, therefore, we admit the rheumatic poison to be the active cause of delirium, how is this discrepancy to be explained? In the following manner:—It seems a well-ascertained fact that the nervous tissue, both in the centres and in the peripheral extensions becomes more excitable and mobile in proportion as its power becomes weaker. The motor nerve is more readily thrown into action, though the impulse it communicates is weak and cannot be long sustained. The sensory nerve is alive to the least impression, and the brain is highly impressible, and hence we find that those persons are most liable to suffer from cerebral symptoms in the course of various disorders where the nervous system has been damaged by previous ill-health, habits of intemperance, or hereditary tendency to mania or other forms of insanity. We know how frequently delirium tremens shows itself when an intemperate man receives a severe injury or is deprived of his customary stimulants, and how frequently delirium follows comparatively slight injuries to persons whose nervous system is reduced by ill-health, or who suffer from unusual excitability. Dr. Trousseau relates a remarkable instance which may serve as an illustration. Now it is precisely persons who are exhausted or cachectic and feeble, or who have been long addicted to intemperate habits, or who have suffered from or inherit a tendency to insanity, who are most likely to be affected by delirium. It is not to be wondered at, says Dr. Fuller, that with a brain participating in the general mal-nutrition of the body, a heart weak, ill-nourished, ill-supplied with nervous stimulus, and hardly capable of maintaining a due circulation; and a blood long vitiated or impoverished, that a slight additional cause of irritation or depression may prove sufficient to distract the brain's equilibrium, and that an attack of delirium may supervene whenever, by the pressure of some fresh morbific matter, the nutrition of the nervous centres is still further interfered with. You thus perceive that the weakened condition of the nervous centres is to be regarded as a predisposing cause, and the altered and poisoned state of the blood as the proximate or exciting cause of rheumatic delirium; and we can readily admit that these condi-

tions are alone adequate to produce delirium, even without local inflammation. In the vast majority of cases, however, the brain is not sufficiently weakened, or the action of the rheumatic poison sufficiently intense, to produce delirium until the supervention of some internal inflammation, more especially of the heart and lungs, still further impairs the nutrition of the brain and deranges its functions.

The delirium which occurs in rheumatism is usually of a wild, furious, character, so much so as to occasionally require severe measures of restraint. Occasionally, but less frequently, it is of a low, feeble character. At the outset the patient is observed to be restless and fidgetty, peevish, desponding, nervous and uncommunicative, perhaps doggedly silent. This state may continue for from a few hours to several days, and then the patient becomes violent and furious. In some the delirium has been accompanied with convulsions, as in a case under the care of Dr. Bouillaud. The pulse is usually frequent, and the pupils dilated. The period during which the delirium may continue is variable, say from a few hours to several days, or even three or four weeks. The Prognosis in cases of rheumatic delirium is of course very serious, but not necessarily hopeless; and therefore any expression of opinion should be extremely guarded. Dr. Fuller relates a case of a girl who was attacked by rheumatic delirium. She was of delicate constitution originally, and had been still further reduced by want of food, overwork, and by previous bloodletting. Yet she recovered, after three weeks' delirium. Death may occur in a few hours. Trousseau mentions the case of a man who died within a quarter of an hour from the manifestations of cerebral symptoms; or the patient may linger several days and succumb at length from weakness or of coma or convulsions.

As to Treatment.—Rheumatic delirium being clearly asthenic in its character, notwithstanding the violence of its manifestations, our principal object of treatment should be to strengthen and aid the weakened brain and nervous system, while at the same time we use appropriate means for subduing any local inflammation which contributes to the general disturbance. For this purpose opium to tranquilize the nervous centers and allay pain, combined with diffusible stimulants, as Hoffman's Anodyne or brandy, will be indicated. A word of caution is necessary in the use of opium. It should be used carefully, tentatively, and its administration immediately discontinued if there be the slightest tendency to coma. On this point I cannot do better than quote the words of Dr. Handfield, Jones. "The more we can perceive the signs of excitement without power in the cerebral disturbance, the more

bold we may be in our administration of stimulants and support. In cases of this kind, opium is often necessary, and its dose must depend on the degree of excitement, and on various other circumstances. Too small doses may only aggravate the excitement, and too large may bring on dangerous or fatal stupor. The determination of this point is one of the most delicate in therapeutics, and cannot be solved, at least in all instances, by administering small tentative doses in succession. I am inclined, says Dr. J., to give large doses of hyoscyamus as ℈i. of the extract, in cases where it might not be safe to give a full dose of opium." For my own part, had I another case of delirium to treat, I would give a large dose of Bromid Potas. as ʒi. with Tr. Valerian or musk and Hyoscyamus. I am the more inclined to the belief that it would be beneficial, from the effect I have seen it produce in incipient delirium tremens; above all, avoid depletory measures; even local depletion, if called for by urgent symptoms, should only be used with the greatest caution—every drop of blood is wanted. If the pericarditis be severe in such cases, it is better to trust to blisters, mercurial diuretics, and opium, and avoid cupping or leeching if possible. I trust you will not look upon it as contradictory what I have just said if I refer to two cases of rheumatic delirium recorded in Dr. Jones' work which were treated by tartar emetic and local depletion in conjunction with opium stimulants. I do so without varying from the opinion I have just expressed, merely to show how recovery may take place under such treatment.

Hospital Reports.

Medical and Surgical Cases Occurring in the Practice of the Montreal General Hospital.

Case of Fracture of the Occipital Bone, near the Left Parietal, under the care of John Reddy, M.D., L.R.C.S.I. Reported by Mr. Montgomery Jones.

John Purcell, aged 22, was brought by the police to the Montreal General Hospital, on the morning of April 8th, when the following history was elicited:

He had been walking across a small bridge near St. Anns, while in a state of intoxication, when, his foot slipping, he was precipitated a distance of some fifteen or twenty feet, falling on a mass of rocks below.

On admission he was profoundly insensible, breathing stertorous; pupils widely dilated, but no apparent sign of paralysis; a wound three inches in length, and gaping, extended from the superior angle of the occipital bone, downwards and backwards; besides, a depressed fracture of the skull in that situation, a portion of bone, three lines in width and about one and one-quarter inches in length, being driven beneath the surface of the external table. There were several contusions of minor character on the body. Pulse, 92; temperature in axilla, 100°; respirations, 20—and labored.

The head was shaved and the upper portion of the scalp wound brought together with a metallic suture. Ice was applied to the head, water-dressing to the wound, and he was ordered, internally, beef-tea and milk *ad libitum*.

April 9th.—Condition unaltered, with the exception that the pulse had fallen to 64. He refers pain to the head when roused. Is ordered Potass Iod., grs v.; Potass Bromid, grs. x.; Ammon. Carb., grs. ij.; Aquæ, ℥ss., every four hours.

April 14th.— Nothing marked has occurred in his symptoms since last noted. The pulse has ranged from 58 to 70, but this morning he attempted to get out of bed, became dizzy, and with difficulty kept himself from falling. During the two hours following this attempt, the pulse fell from about 70 to 48, at which it remained with very slight variation for forty-eight hours. The above medicine was ordered to be discontinued, and two ounces of brandy substituted. In the meantime the wound has progressed favorably under cold-water dressing. The depressed portion of bone looks as though it were exfoliating.

April 20th.—Pulse, 80; temperature normal; bowels regular; no pain in head; has requested his clothes, which are granted; wound being dressed with carbolic acid lotion nearly healed, but, when probed, a portion feels rough, as though denuded of periosteum.

May 20th.—Dr. Reddy to-day enlarged the opening communicating with the diseased bone, and removed a portion one and one-half inches long by one-fourth of an inch broad. The patient left the hospital the following day, since which he has quite recovered.

PERISCOPIC DEPARTMENT.

Surgery.

CLINICAL LECTURES ON INTESTINAL OBSTRUCTION.

By Thomas Bryant, F.R.C.S., Surgeon to Guy's Hospital.

ON LUMBAR COLOTOMY FOR THE RELIEF AND CURE OF RECTAL OBSTRUCTION AND DISEASE.

(Reported by Mr. Henry Clarke, student.)

Gentlemen,—I have selected the operation of lumbar colotomy —that of opening of colon in the right or left loin—as the subject of to-day's lecture, not only because I know it to be well worthy of your attention, but because I believe it has not yet found its true place in Surgery. It is admitted among the justifiable operations in exceptional cases, to be performed when all other means have failed to ward off death and give relief, but under no other circumstances; as an operation for any curative purpose it is hardly recognised. When successful also it has generally been believed that the condition of the patient is so miserable—that the escape of fæces and wind from the artificial wound causes so much distress and discomfort—that life at such a price is hardly worth having; that at the best it may prolong life, but with a local discomfort that is almost unendurable. Yet I think I shall be able to show you that the operation deserves far higher claims upon our attention than these; that it not only is a most valuable means of prolonging life and relieving pain; that when successful the artificial anus is not such a source of local discomfort as you might believe; and that, as a curative agent, it bids fair to be of great and undeniable value. I propose, therefore, to consider the operation in two points of view—first, as an operation of expediency to prolong life and relieve pain; and, secondly, as a curative agent. As an operation of expediency, it may be called for under any circumstances in which some chronic obstruction in the large intestine exists: whether the obstruction be due to the presence of some tumour pressing upon the bowel—that is, to some outside influence—or to some stricture contracting the calibre of the bowel from some inside influence. As a curative agent, it may be performed for severe examples of ulceration of the rectum, which in a

pathological sense are curable, but if left alone will go on to cause stricture; or for complications of ulceration of the intestines, in which the ulceration has perforated the bladder, and produced a recto-vesical fistula. I propose to consider it, first, as an operation of expediency—where there is obstruction of the large intestine, and other means have failed to give the necessary relief; and more particularly with reference to tumours. Now, I must ask you to recall to your minds some of the cases I have related in my former lectures, of intestinal obstruction produced by tumours so occluding the return or colon as to produce complete mechanical obstruction. The first case I will recall is one you will remember in which a cancerous tumour was present, hanging from the promontory of the rectum into the pelvis, and so completely occluding the rectum—the case of Mrs. M., aged 46, that I saw in consultation with Mr. Phillips, of Leinster-square. She had suffered from chronic obstruction to the bowel for months, and had been under the care of my colleague Dr. Owen Rees and Dr. West. For one month before I saw her she had been the subject of constipation, and for ten days vomiting and tympanitis existed. Lumbar colotomy was performed with relief, but she died on the third day, on the patient suddenly lifting herself in bed to have the draw-sheet changed.

At the post-mortem examination we found that this cancerous mass hanging over the promontory of the sacrum had on that sudden movement burst, and discharged itself into the peritoneal cavity, producing the collapse and death of the patient. In that case the operation, although unquestionably it would not have saved her life, would have prolonged it and rendered the remainder of it much more confortable. I do not know that I could have given you a better example of the class of cases which we are now discussing. In the second case we got a better result. It was caused by a growth inside the bowel. A young lady, only 18 years of age, had insuperable constipation for seven weeks, during the whole of which time nothing whatever passed per rectum. Enemata had been given her, both by the nurse and by a skilled Surgeon; but they returned always as they had been sent up—not a trace, not a smell of fæcal matter came down, and no wind. Owing to the obstruction she vomited, but this never went on to stercoraceous vomiting. She had been in the hands of several Medical men; a Physician-accoucheur had seen her, and could find nothing uterine. I examined her and could find nothing whatever beyond the constipation. I examined the rectum most thoroughly, and could find nothing. And this young lady, only 18, had mechanical obstruction clearly of some kind, completely shutting up the bowel. From the distension of the bowel it looked as if it were

the large intestine. I thought I could trace the upper part of the large intestine very much distended. I say "thought" because there is oftentimes great fallacy here; you are very liable to come to a wrong conclusion upon that point. It is very difficult to tell whether the bowel you see distended is large or small intestine. The constipation having been of some weeks' standing, and all remedies having failed to give relief, I felt that life could only be prolonged or saved by an operation. This I did by opening the colon in the right loin. A quantity of fæces came away. The operation was performed in September of last year; now she is up and about. All the fæces pass through the artificial anus. She takes her food as well as any of us. But lately, during the last month or six weeks, she has complained of a bearing-down pain about the pelvis. I have had the opportunity of making two examinations of this patient since, and on both occasions I found clearly a tumour coming down into the pelvis—so clearly that, on passing the finger into the rectum, one could easily imagine the finger was in the vagina, and felt a polypus coming down from the uterus. I only hope this may force its way down lower, and that it is a fibrous polypus. Pathologically we know such things do exist. Should it come down and be within the means of Surgical treatment, we may remove it, and save the life of the patient. This, then, is a case of a tumour in the intestine itself producing mechanical obstruction, and necessitating such an operation as I have performed. In another case a hydatid tumour completely blocked up the pelvis, and produced obstruction of the rectum and also of the urethra. In that case I was consulted for the retention of urine. I relieved it by means of an incision, letting out a quantity of hydatids; but the man died from the constipation: the intestine burst, sloughed from overdistention. These are three good examples of obstruction from tumours occluding the large intestine, in which colotomy saved or might have saved life. Never hesitate, therefore, when you get such cases of intestinal obstruction as I have related, to perform such an operation. Do not wait until the patient is moribund before you perform it; colotomise, with the hope of such success as the history of these cases would seem to warrant.

We will now proceed to consider colotomy for the relief of some organic disease of the rectum, and, using a general term, say for stricture of the rectum—recognizing the fact that we may get stricture from cancerous disease (either carcinoma or epithelioma), from syphilitic disease of the rectum, or from simple ulceration, in the same way as you may get in other parts syphilitic, cancerous, or simple ulceration. In a large number of cases there is no doubt

this stricture of the rectum is caused by cancerous disease. In many it is the result of syphilis; in a few of simple ulceration. You will find no better example of the (syphilitic ?) form than in the patient in Astley Cooper ward now under care. This is the history of the case as given by the reporter, Mr. Lubbock:—

(I need hardly tell you in passing that any attempt to dilate a stricture by a bougie when ulceration has taken place is utterly futile: it is a direct irritation to the patient, it excites the breaking-up of the material, and therefore rather hastens the end than retards it.)

STRICTURE OF RECTUM—VAGINAL AND ISCHIO-RECTAL FÆCAL FISTULÆ.

(Reported by Mr. MONTAGUE LUBBOCK.)

Eliza O., aged 29, admitted into St. George's Hospital on February 28, 1872, under Mr. Bryant, from Stoke, Suffolk. Patient has led a healthy life until her third confinement, four years ago, which was protracted, and the child was delivered by means of instruments after having been dead for three weeks. She laid up for fourteen days, and upon getting up found a discharge coming from the vagina, and was obliged to wear a cloth, as the fæces continually passed from the bowel into the vagina. Two years and a half ago she went to St. Bartholemew's Hospital, where an instrument was passed up the bowel, but which did not stop the passage of the fæces from the bowel into the vagina. Patient has been married nine years, and has been confined six times, always going the full time, and three of the children being born alive and three dead.

1st child born about 7 years ago, alive, died after 5 weeks.
2nd " " 6 " " dead.
3rd " " 5 " " dead.
4th " " 4 " " dead.
5th " " 2 " " alive, died after 3 months.
6th " " 1 " " alive, has had snuffles, but no eruption on the skin. Patient says that her husband is a labourer enjoying good health, and never to her knowledge having suffered from sore throat, eruption on the skin, or other syphilitic symptom.

On admission.—March 1. Patient is a well-nourished person, having the appearance of being in good health, but complaining of the passage of fæcal matter by the vagina. Superficially examined by Mr. Rendle: About the anus are several elevations, some having openings which discharge a thin purulent matter; soft parts around thickened. The parts being tender, no further examination was made.

4th. Mr. Bryant, upon examining the patient, found the skin

near the anus riddled with fistulous openings, three existing on the right side of the anus, and four on the left, and by which passed a thin purulent matter. There were numerous outgrowths about the anus; and these symptoms led Mr. Bryant to suspect the existence of stricture of the rectum. Upon introducing the finger per anum a stricture was felt about one each above the anus, and the obstruction was so complete that no passage could be felt by the finger. Mr. Bryant was of opinion that the nature of this stricture was decidedly syphilitic.

Now, there is a case that is worth looking at. If you examine the patient locally, the first point which declares itself is a fæcal discharge from the vagina; there evidently is some communication between the rectum and vagina. On examining the anus, four or five anal fistulous openings are visible, communicating with the bowel, through which fæculent fluid oozes; some fleshy anal outgrowths are likewise present. Whenever you look at a patient and see such a condition as that, you may safely say there is a stricture above it. You would not get all these symptoms except from the presence of some obstruction higher up in the rectum These fistulæ, anal and vaginal, are merely the means nature is adopting to get rid of the fæces somehow or other. On passing the finger into the anus we found the rectum perfectly occluded; no orifice could be made out to get the tip of the finger into. Within an inch of the anus it came to a cul-de-sac and would go no further, though no doubt with a probe we might have found some little aperture of communication with the upper bowel still left. So this poor creature had gone on for years with this condition of matters. It had been recognised for two years and a half, but the stricture must have existed before that—no doubt for many months, if not for years—although it was made manifest in her first pregnancy, the pressure of the child's head having broken down the tissue and produced the recto-vestical fistula. In this case I have very little doubt as to the stricture being syphilitic; the history of the case fairly indicates it. Six infants born at the full times—four dead, the other two only born alive; and in the last child you see we get another symptom, the snuffles, which you known is a common consequence of hereditary syphilis; and although by itself it is not sufficient to establish the syphilitic nature of the disease, with the other points in the case it renders it very probable.

Having given up a fairly typical case of stricture of the rectum, although of a syphilitic form, I propose now to make a few brief remarks upon the subject of stricture as a whole.

In the majority of cases this is caused by cancerous disease; in

many it is the result of an inflammatory process, simple or syphilitic, from the cicatrisation of deep-seated and extensive ulceration; in others it is due to the contraction of inflammatory material poured out external to the bowel in the submucous tissue. In exceptional instances it may be caused by contraction of the parts external to the bowel, after pelvic cellulitis; and Curling quotes a case where it was the direct result of an injury.

In all these conditions the calibre of the intestine is gradually or rapidly encroached upon, till at last complete obstruction takes place. The stricture may appear after death as an annular contraction of the bowel, with adventitious material in the submucous tissue, and hypertrophy of the muscular coat, looking very like a scirrhous pylorus; or as a thickened, ulcerated, irregular mass of cancerous material, infiltrating all the tissues of the bowel, although rarely extending beyond two or three inches in length. The bowel above the stricture as time goes on will become dilated, and at a late stage it may rupture, ulceration of the colon being a very common consequence of its over-distension. Below the stricture there will often be found pedunculated fleshy or cancerous growths. It has been already pointed out that fistulæ—vaginal, cutaneous, or vesical —often coexist with stricture; abscesses and hæmorrhoids are also occasionally met with.

Stricture of the bowel, taken as a whole, is twice as common in women as in men—my note-book revealing the fact that of forty eight consecutive cases thirty-two were in this sex. Syphilitic stricture seems to be the more common in women; cancerous stricture in men. Curling, out of sixty-seven cases of reputed cancer, gives forty-four as found in the male sex.

The approach of this disease is very insidious, whatever may be its origin or nature. *Constipation* is the one general early symptom, and it is not till some ulceration has commenced, either at the seat of stricture or above it, that others appear--such as *diarrhœa* with lumpy stools containing mucus, pus, or blood, straining at stool, and a sensation of burning in the part afterwards; with at last a complete stoppage of the bowel—abdominal distension and dyspeptic symptoms being constant accompaniments. An examination with the finger carefully introduced into the rectum will as a rule, at once reveal the true nature of the case; for about two inches up the bowel the narrowing will usually be felt with or without new tissue infiltrating the part of ulceration. In exceptional cases the stricture is beyond the reach of the finger; but under these circumstances it may at times be brought within its reach by pressing with the free hand upon the abdomen above the pelvis.

When the stricture is an annular one it is probably cicatricial or fibrous—possibly cancerous.

When epithelial or positively cancerous, the seat of stricture will be infiltrated with a nodular irregular mass of new tissue, probably breaking down and ulcerating. Sometimes this mass can be felt externally at the brim of the pelvis over the left iliac fossa. I have felt this clearly on three occasions.

When syphilitic, the ulceration will probably extend upwards from the anus, and anal integumental outgrowths will frequently exist.

In ordinary cases of cancerous stricture there is an inch or more of healthy rectum between the anus and the stricture. In exceptional and very extensive disease the anus will be involved.

In advanced cases the anus will appear patulous, and on separating the buttocks a red brickdust-coloured fæculent discharge may run out; wind will also pass without effort.

To flat tape-like or figured fæces, as given by authors as characteristc of this disease, I with Curling, do not ascribe much importance—for such a condition of motion is very usual even in a state of health when the bowels are irritable, and many other conditions of the pelvic parts may give rise to the same thing; but when a patient never passes a well-formed motion, large or small, the case looks suspicious. On the other hand, when a large well-formed stool is occasionally seen, the probabilities of a stricture existing are very slight.

The examination of a rectum the subject of ulcerative disease with a tube, flexible or otherwise, requires the greatest care, for perforation of the bowel is very prone to occur.

In those cases of stricture of the bowel, therefore, where ulceration exists, and the hope of doing good by dilatation has passed—when relief can only be given by sedatives, and life cannot long be sustained—the operation of colotomy is of great value. It gives comfort to a degree that sometimes astonishes, and always gratifies. On convalescence or recovery it is not found to be practically associated with such inconveniences as Surgeons of old have theoretically surrounded it. It prolongs life, and adds materially to its comfort; and little more than this can be said of most operations. But it must not be postponed till the powers of life have become so exhausted as to render the chances of recovery from the operation poor, or till the large intestine has become so distended as to have become damaged or inflamed. It should be undertaken as soon as it is clear that the local disease has passed beyond the power of local treatment with any prospects of good, and the general powers of the patient are beginning to fail—as

soon as the local distress finds no relief from palliative measures, and a downward course with unmixed anguish is evidently approaching. The difficulties of colotomy are not great, nor are its dangers numerous. When unsuccessful it has been usually made so from the delay in its performance—from the want of power in the patient, or secondary effects of the disease in the abdominal viscera. When *most* successful it gives immediate relief to most of the symptoms, and makes life worth having; when *least* so, by lessening pain it render what remains of life endurable. I have performed this operation for stricture of difrent kinds on ten occasions, and have never regretted it.

I will now proceed to consider the operation of colotomy *as a curative agent*—as an operation by means of which repair may go on uninterruptedly in the seat of the disease, even to a cure, and by which relief to local pain may be given and life prolonged; for I have something more than a belief that this result may be looked for in many cases, if not all, of simple ulteration of the bowel, as well as in cases of syphilitic stricture.

In cancerous disease such a consequence of the operation can hardly be expected; and yet, in the case now to be related, it would appear as if a curative process has taken place—for the ulceration that existed before the operation has now ceased, and a smooth, non-ulcerating, nodular structure alone remains. The patient suffers no pain from the local affection. The ulceration that existed has skinned over, and presented a smooth, unbroken surface, and now secretes a clear mucus. No blood or broken-up tissue comes away after examination.

STRICTURE OF RECTUM—COLOTOMY—RECOVERY.

(Reported by Mr. Barnard.)

Elijah B., aged 28, was admitted into Guy's Hospital on August 31, 1871, under Mr. Bryant, with stricture of the rectum. He had been a healthy man up to eighteen months ago, when he had diarrhœa, and this has never left him for long. He has never had any pain in the bowels. He has, at times, passed blood with his motions. He has lost flesh. At times his bowels do not act for several days; his stools are always small. A stricture of the rectum has been detected by a medical man before his admission. On admission the anus appeared very patulous, and a narrow stricture was detected about one inch and a half up the bowel. It was so small that the top of the finger could not be passed through it; it was also ulcerated.

Oct. 10.—Mr. Bryant performed colotomy in the left loin, mak-

ing the oblique incision. No difficulty was experienced in the operation. The bowel was stitched to the margin of the wound and then opened.

On the second day after the operation the man said he felt greatly relieved; the wound did well in all respects, and in one month the man had so convalesced as to walk out of the Hospital.

February 23.—Quite comfortable in all ways. Ulceration apparently healed; surface smooth and painless. Pure, clear mucus alone escaped after examination.

I took this case to be one of cancer, for it was difficult to come to any other conclusion; and if it be, it certainly speaks better for colotomy as a curative agent in this affection than I have hitherto regarded it, and it is an argument in favor of performing it at an early period of the disease.

Again, in cases of recto-vesical fistula, where ulceration takes place in the rectum and makes its way into the bladder, the relief given by colotomy is very striking; for I must remind you that patients, the subjects of this condition are enduring the pain of ulceration of the rectum as well as that of a foreign body in the bladder. It seems, moreover, that this ulcerative action, although at times cancerous, is more frequently of a simple kind, and that, as a consequence, is quite capable of a complete cure. I have had four such cases to treat. In one (published in the *British and Foreign Review*, January, 1869) the ulceration completely healed after the operation. In two others, which I have related in detail at the Clinical Society, 1872, the same results seems to have taken place; for although in one the fistula is still clearly open, no signs of ulceration are present, and in the second, from recent intelligence, it appears that for the last three months the fistula has closed. I operated upon him three years ago, and up to three months ago urine passed into the rectum downwards through the anus and upwards through the artificial anus in the left loin; for the last six months, however, no such escape has taken place. He can retain his urine as well as ever he could. He has no bladder irritation or rectal irritation. All his urine comes the right way, and all his motions pass through the loin. He suffers no pain whatever, locally or generally; and beyond the slight inconvenience—for the patient says it is only slight—of passing his motions through the loin, he is as well as ever he has been in his life.

The fourth case has only recently died, and I now show you the preparation removed after death. The disease is clearly villous and very extensive in its nature; it has made its way into the bladder. The operation in this case gave relief and prolonged life, but no more. Unlike the other three, it had no curative

tendency, but the three are enough to support the views I would now wish you to bear in mind.

The same result may also be looked for in a certain class of cases of ulceration of the rectum that is not cancerous—a class that, if left alone, will go on to produce stricture, and that does not get well if left alone. I allude to severe examples of simple ulceration of the rectum, and to syphilitic disease. All surgeons know the obstinacy of those affections, and the almost invariable tendency they have to progress and to end in a fatal stricture. The parts cannot heal for the same reason that an ulcer leading down to the muscles cannot heal so long as muscular movement is allowed, and that the painful ulceration of the rectum won't heal till the sphincter muscle is divided. Surgeons now also know how rapidly ulcers so placed do heal when splints are applied and muscular action is prohibited. When the fibres of the sphincter ani are paralyzed by a superficial section of the sphincter muscle, surely the same result may be expected in those cases of ulceration of the rectum to which I now allude, when the bowel is left at rest, and the fæculent flow is diverted from the natural channel through an artificial opening as made by colotomy. In the case now up-stairs in Naaman ward, in which cancerous disease was supposed, to exist, this result has been already recorded to have partially taken place. In the case of recto-vesical fistula the same healthy action in kind, although more marked in degree, has likewise been recorded; and I believe that if colotomy were performed in many more examples of severe ulceration of the rectum, syphilitic and otherwise, the same result might be recorded.

With this object I performed the operation, in February, upon a young married lady, aged 24, a patient of Dr. Wise, of Plumstead, for extensive ulceration of the rectum and stricture of three years' standing, with, so far, excellent results. With the same object I hope to perform a like operation upon that woman in Astley Cooper ward, whose case I have already read to you, with recto-vaginal and anal fistula, the result of stricture and ulceration. But remember that when the operation is performed with a curative object it must not be postponed to too late a period; it should be undertaken when all other means are clearly of little use, and when the disease, if left alone, must progress to its too certain end.

THE OPERATION OF COLOTOMY.

For irremediable stricture or mechanical obstruction of the rectum from any cause, Callisen's operation of opening the colon in the left loin should be followed. When the seat of obstruction is higher than the rectum, and it is a point whether it be in the sig-

moid flexure or transverse colon, Amussat's operation in the right loin should be performed; for Callisen first suggested colotomy in 1796, and applied it to the descending colon, and Amussat revived the operation, and extended it to the ascending colon in 1839.

The colon in this position lies behind the peritoneum, immediately beneath the transversalis fascia. The kidney is in close contact with it above; and in one case I operated upon, this organ was placed so low down as to fill in the space between the rib and pelvis, and it had to be pushed upwards to allow of the colon to be seen and opened.

The operation is to be performed as follows in the left loin:

The patient is to be placed upon his left side, with a pillow beneath the loin so as to arch somewhat the left flank, and turned two-thirds over on to his face. The outer border of the quadratus lumborum muscle is then to be made out, for this muscle is the surgeon's main guide. An incision is then to be made, four or five inches long, beginning one inch and a half to the left of the spine, below the last rib, and passing downwards and forwards in front of the anterior spine of the crest of the ilium, the line of the incision passing obliquely across the external border of the quadratus luborum muscle about its centre, and taking the same direction as the nerves which traverse this part. By this incision the integuments and fascia are to be divided, and the external border of the quadratus muscle exposed; the abdominal muscles being laid open in a direction to the same extent as the external wound. All vessels are to be secured. The transversalis fascia will next come into view, and beneath this will be the colon; a layer of fat generally intervening. The fascia is to be opened with caution. In the loose fat and cellular tissue beneath the fascia the colon is to be found. When distended it comes at once into view on the surgeon dividing the fascia; when empty, some little trouble may be experienced in hooking it up with the finger. I have found, on several occasions, great help in doing this by rolling the patient over on his back at this stage of the proceedings. The bowel falling into the finger is thus readily caught. Allingham says (St. Thomas's Hospital Reports, 1870) that from more than fifty dissections he has always found the descending colon to be situated half an inch posterior to the centre of the crest of the ilium; the centre being the point midway between the anterior superior and posterior superior spinous processes. He has never known this point to fail him. When difficulties are felt in the operation he believes they are from the colon being looked for too far from the spine; and in these views I cordially agree. When the bowel has been seized it should be

partially rolled forwards, in order to expose its posterior surface; for if this be not done there is a risk of the surgeon wounding the peritoneum, as it is reflected from its anterior surface on to the anterior abdominal walls. The bowel having been drawn up to the wound, is then to be secured to the integument by the passage of two double ligatures introduced through one margin of the wound, then through both sides of the bowel, and lastly through the second margin; these ligatures being finally held by an assistant. The bowel should then be opened by a longitudinal incision, about three-quarters of an inch long, over the ligatures that have traversed its canal. The centre of the ligatures are then to be drawn out and divided into two portions; with these the two sides of the opening in the intestines are to be fixed to the margins of the wound. Two or more stitches may then be introduced to make the artificial anus secure.

The margins of the wound may be oiled to guard against the irritation of fæces, and the patient placed in bed. At times the fæces escape in large quantities directly the bowel is opened; at others some slight fæculent discharge occurs at the time, the larger flow taking place later. This is not, however, a point of any importance, and the surgeon should take no measures to get the bowels to act. Indeed it is better, as far as the operation is concerned, that the flow be postponed; for within an hour or so the parts about the wound become sealed with lymph, and thus the risks of extravasation become diminished.

After the operation a good sedative should be given, such as opium, morphia, or chloral, and the recumbent position maintained; a piece of oiled lint covered with oakum, and kept in place with a soft towel, being the best local application.

The sutures may be removed on the fourth or fifth day, according to circumstances, and the most perfect cleanliness observed. Good food and stimulants may be given within a day or so of the operation, repairs, as a rule going on favourably.

When the wound has cicatrised the patient may get up, a folded napkin fastened on with a lumbar belt being a good application. The ivory ball or plug that has been advised appears to be a useless instrument; it cannot be kept in its place, and does not, therefore, prevent the prolapse of the bowel that is said to be so likely to follow the operation. An indiarubber ball, with enough of one of its sides taken away to cover in the wound, is an excellent application. It it capable of holding any little fæces or fluid that may pass; it retains wind, and is a good pad. Three of my patients are now wearing it, and express themselves as feeling great comfort from its use. With the oblique incision, as sug-

gested, the prolapse of the bowel that is said so commonly to take place does not appear to be very troublesome; it takes place only to a very limited degree, the incision falling into the line of the lumbar integumental fold.

Should the contraction of the orifice take place—a condition I have not yet met with—a sponge tent may be daily introduced. Mr. Pollock gives a case in Holmes's "System" where such treatment was a necessity.

After convalescence it is well occasionally to wash out the lower portion of the bowel with warm water, for some fæces are apt to pass the artificial opening and rest in the rectum, causing irritation. When the anal end is open it is best to do this through the natural opening; when it is closed, through the artificial.

I have performed this operation now at least sixteen times—in four for vesico-intestinal fistula, in two for pelvic tumor, and in ten for stricture of the rectum. One of the cases of vesico-intestinal fistula lived four months after the operation, and died with suppurating kidney, but entirely relieved from all vesical and rectal distress (*British and Foreign Review*, January, 1869); two are now alive and enjoying life, suffering very little inconvenience indeed from the artificial anus. (Clinical Society, 1872.) One of the patients with pelvic tumour died on the third day from a rupture of the tumour; the second is in good health and comfort. Of eleven other patients, one lived eighteen months after the operation in ease, dying from supposed cancer of the liver after a month's illness; four died within four months, and five are alive, one having been operated upon in May, 1870, a second in November 1871, and three this year.

Curling has performed and recommended the operation in seventeen cases, and in ten of these the patients survived over periods varying from two to eighteen months. Allingham has had ten cases. Two are now living, three and four years after the operation; one survived it four years and a half, and another nineteen months; five lived a few months, and one a few days.

These results cannot be regarded otherwise than with satisfaction; for it must be remembered that in all these cases the operation was undertaken when life was threatened, and the distress from the local disease was severe and otherwise irremediable. The operation is a good one in all cases of vesico-intestinal fistula, when solid fæces flow with the urine; in all cases of stricture of the rectum, as soon as the obstruction becomes serious and local distress great; in all other cases of mechanical obstruction to the rectum from pelvic causes, when no less severe measure for relief can be suggested; and last, but not least, in extensive ulceration

of the rectum—cancerous, syphilitic, or simple—when local treatment fails to give relief, and local distress is great, when the general powers are evidently giving way from the local disease, and the suffering severe, quite irrespective of all mechanical obstruction.

In no case, however, should the operation be postponed till the patient's powers are failing, for the prospects of recovery are greatly lessened, and convalescence rendered impossible.

—*Medical Times and Gazette.*

CASE OF SPINA BIFIDA CURED BY INJECTION.

By James Morton, M.D., Surgeon and Lecturer on Cinlical Surgery, Glasgow Royal Infirmary.

The child, who is the subject of the following report, was brought under my notice by Dr. Robert Grieve, of this city, about fourteen days after its birth; the most prominent part of the tumour was then slightly ulcerated. The mother was directed how to defend it and dress it properly. The following report of it was written by my assistant, Mr. John Caskie.

Ann Ross, aged two months, had a tumour situated over the lower lumbar vertebræ. At birth it was small, but had gradually increased in size. Some time ago it showed signs of ulceration; but these healed up, leaving thickening and cicatrices of different colours. On admission the tumour was as large as a middle-sized orange, and cylindrical in shape. At some parts it was reddish, and at others bluish in tint. It was semi-transparent, fluctuant and somewhat wrinkled on the surface. It became tense when the child cried. On looking through it, several striæ were seen passing over its internal surface. On March 27, 1872, it was tapped with a grooved needle, and about three ounces of a fluid resembling cerebro-spinal were drawn off. The child did not suffer; and, as the fluid continued to exude, the opening (which was made upon the right side towards the top) was closed by means of collodion. On April 1st the child was in fair condition, had no diarrhœa, took the breast well, and was in all respects healthy. On April 2 the tumour was again tapped, and about two ounces of fluid were drawn off. After the tapping the fontanelle was depressed, but by night it was again normal. The child continued well, and no leakage took place. The tumour was dressed with a small piece of oiled lint. On April 5th the tumour was tapped with a small trocar and cannula, and half its contents were drawn off. About two drachms of a solution of iodine in glycerine were slowly injected, and the tumour was dressed with oiled lint. The child suffered a little from shock at first, but soon recovered, It con-

tinued well during the day, taking the breast well. The fontanelle was for a time depressed. At night the tumour was half filled, and the fontanelle was nearly normal. The lower limbs on examination were found to be quite normal, as regarded colour and temperature. On April 6th, the tumour was about three-fourths of its former size. The contents were thicker; but no distinct coagulation had taken place. The child continued well. On the 8th, slight ulceration was observed over the top of the tumour. It was diminished in bulk, and was now only about half its former size. The child had complete power over the lower limbs, and was well. The tumour continued to diminish; and on the 16th consolidation had taken place at the upper portion, and the other parts felt firmer than formerly. The ulceration had not increased, but there was slight discharge of pus from under the seat that covered it. On the 25th the tumour was nearly on a level with the surrounding skin, and only distinguishable from it by its livid colour. Over its centre there was a small triangular depression, from which a small slough was taken by Dr. Morton. The child was in all respects healthy, and had complete power over its limbs.

On the 6th April last, in the *British Medical Journal*, there is an account of the first and only other case which I have treated in the manner here noted, so that both have been successful. The composition of the iodine solution will also be found there stated.

The procedure adopted may be shortly re-stated thus: 1. Two tentative tappings are made with a grooved needle, with an interval of four or five days between the two. 2. The tumour is tapped with a small trocar and cannula, allowing about half the contents of the sac to escape, and about a drachm of the iodine solution is injected; rather more was used in this case, but, I think, less might have sufficed. The after-treatment may be said to consist in dressing with some bland substance as oil or lard cleanliness and care, so as to avoid local injury or irritation.

Prevention of the complete escape of the cerebro-spinal fluid I believe to be of the greatest importance; hence the use of collodion in this case, which answered the purpose admirably. The presence of this fluid is essential to the functional, if not the structural, integrity of the spinal cord and brain, and when it is allowed to drain away the child speedily succumbs. On this point I can speak from some experience; besides, soon after treating the case already published, a child was sent into the infirmary having a similar tumour in the dorsal region, which was punctured by the grooved needle, but not injected; the spinal fluid continued to exude, and from this alone the child sank and died. The idea

of using the collodion did not occur to me till too late, but this mishap caused me to direct my assistant to watch the case now given, and use the collodion if necessary, and it forms an apt illustration of the success of such a mode of closing the puncture. After the second puncture the collodion was not required

To my mind, the satisfaction attending the success of this case is enhanced by the circumstances of its being the second of two cases treated in precisely the same way; and these the only two that have been treated by injection with the glycerine solution, which I was induced to adopt, as being less diffusible than either a watery or spirituous solution.

How far this mode of treatment may be applicable to the cases in which the congenital defect exists above the lumbar region, I will not at present endeavour to define; but surely it is not too much to say that if by it we can save lives, when we have a lumbar tumour to deal with, we are not to be debarred from attempting to deal with those in the dorsal or cervical region, provided the extension of our line of operations be prudently conducted.*—*British Medical Journal.*

* This case was made the subject of some clinical remarks: and the child was shown to the Glasgow Medico-Chirurgical Society on the evening of May 3rd.

Medicine.

ON INCONTINENCE OF URINE IN CHILDREN.

By J. Warrington Haward, F.R.C.S., Assistant-Surgeon to the Hospital for Sick Children.

Among the minor ailments of children, one of the most common and troublesome is incontinence of urine—an affection which, besides the misery and ridicule that it often brings upon those subject to it, not unfrequently, in an indirect manner, gravely interferes with their health. True incontinence of urine in adults usually indicates serious disease of the nervous centres, and has quite a different meaning and importance to that met with, as a rule, in childhood; wherefore I shall confine these remarks to the affection as it occurs in children and young persons. Although it is in these of much less serious import than the same symptom occurring in adult life, and depends, generally, upon much more remediable and transient causes, yet even here its effects are often very distressing. There are several cases on record, and I have myself seen two, in which the urethra has been cut through by a string tied tightly round the penis by boys anxious thus to prevent

the escape of urine during sleep. A troublesome eczema, and even considerable ulcers, may be produced by the constant irritation of the urine upon the skin: a condition which, when combined with any diseases requiring confinement to bed, often leads to serious bed sores. For this reason it is always desirable, when any surgical operation is to be undertaken on a patient with this affection, to first cure, if possible, the incontinence. I have already had a good example of this in a boy who came under my care for the treatment of talipes, which had failed owing to the occurrence of sloughs wherever any pressure was made on the foot, and the boy had, besides, two large and deep ulcers over both hips. I found that he was constantly wet from the involuntary escape of urine—a condition that I have observed is often associated with talipes, but which in his case was due to congenital phimosis. I at once circumcised him, and thereby cured the incontinence, and at the same time the tendency to sloughing; the sores on the hips began at once to heal, and the talipes was easily remedied. Besides these physical evils, incontinence of urine often brings upon the unhappy child a painful amount of persecution, depriving it of many of its natural pleasures, and perhaps materially interfering with its education.

The treatment of this affection, then, is not without interest, and its success will depend very much upon the accurate recognition of its causes; for these are manifold and various. And first, the cases may be divided into two chief classes: (*a*) those depending upon deficient nervous or muscular action; (*b*) those which have for their cause an excess of this action. The normal retention and passing of urine depend upon the proper balancing of the expulsive and retentive forces—that is to say, of the muscular walls and of the sphincter of the bladder. And this balance may be disturbed either by a want of sphincter power or an excessive expulsive power. Now the first of these—the want of sphincter power—is, I believe, in children, much the less frequent of the two causes, and is usually associated with delicate health, spinal curvature, talipes, or other paralytic affections; it is also the most troublesome to cure. The second and more common cause, the excess of expulsive power, occurs, on the other hand, in perfectly healthy children, and may depend upon the condition of the urine, or of the bladder, or upon some neighboring or eccentric irritation, and is of the two much the more easily remedied. There is no doubt also a certain, but I believe a small, number of cases which depend upon mere indolence and bad habit; and these must be treated by careful management, and, if need be, punishment; which, I may remark, should not depend upon the temper

or caprice of a nurse, but should be carried out in an intelligent manner.

In the cases due to want of sphincter power there is usually incontinence by day as well as by night; the water escapes very frequently and in small quantities, and the child is constantly wet; they are mostly associated with general nervous and muscular debility, and the expulsive power of the bladder is also weakened. These cases will be benefited by tonics, and especially by strychnia. I have seen excellent results from this remedy, but it must be persevered with and given in sufficient doses, and not relinquished if it does not in the first week or two produce much benefit; for it must be rembered that this class of cases always requires prolonged treatment. I have also seen benefit from the liquid extract of ergot, but this is less to be depended upon than strychnia; and several children, in which all other means have failed, I have cured at once by the application of solid nitrate of silver to the neck of the bladder, or the orifice of the urethra. These were all girls. The majority of cases, however, depend upon the second cause—an excess of nervous or muscular action. And in these the balance of expulsive or sphincter power is not, I believe, altered by the weakening of the sphincter, but by a spasmodic expulsive action which the sphincter is incapable of resisting. Thus, during the day, by voluntarily adding to the contraction of the sphincter, the effects of this expulsive spasm may be to some extent resisted, and the water is retained; moreover, as in some other spasmodic affections, these involuntary contractions occur less frequently in the day than during sleep, when the voluntary controlling powers are in abeyance. Again, the causes of this kind of incontinence are of an irritant nature, and such as to excite spasm rather than to weaken the spinchter; a view which is, besides, corroborated by the fact that the most effectual remedies are those which remove irritation and allay nervous and muscular excitement. It is remarkable, too, that, like chorea and epilepsy, the incontinence often ceases during an acute illness, but returns with convalescence. In boys, I think, by far the most common cause of this muscular spasm is the existence of congenital phimosis, which, from its retaining the secretion round the glans, the barrier which it offers to proper cleanliness, and the adhesions which it frequently leads to between the preputial mucous membrane and the glans, is a constant source of irritation. I have seen so many children mercilessly dosed with iron and other physic, when the incontinence was at once cured by circumcision, that I cannot avoid laying some stress upon the apparently obvious necessity of examining the urinary organs of all children suffering from incon-

tinence. And I would point out that in many of these boys a very moderate degree of phimosis will be sufficient to cause incontinence; there is often an excessive length of prepuce, with but little contraction of the orifice; such cases are almost certainly cured by circumcision. It must be remembered, however, that a bad habit often persists after its original cause is removed, and therefore it is sometimes necessary to take some pains to break these children of the habit of passing water during the night for the first week or two after the operation; as, for instance, by waking them a little later every night; measures which, though ineffectual before the operation, will, after it, soon be successful. Many of these cases, however, are at once cured by the operation without any further trouble. Another frequent source of irritation is the presence of ascarides in the rectum, and thus the incontinence may sometimes be cured by a compound scammony powder, followed by iron. Fissure of the anus, though not common in children, may also cause incontinence of urine, and it is remarkable, sometimes, how much of the inconvenience is referred to the bladder rather than to the real seat of disease. Of course this would be treated by the appropriate operation. Excessive acidity of the urine is another cause which, it will be remembered, depends usually upon disorded digestion, and must be treated accordingly. Alkaline urine is occasionally present in these cases, and, when not associated with cystitis, is generally found in hysterical girls. In these phosphoric acid, chalybeates, and valerian, will be the most appropriate remedies.

Incontinence of urine is sometimes the only symptom of stone in the bladder, especially if the stone be a very large one, so that sounding must not be omitted in our investigation into the causes of this affection. But there remain certain cases, and of these not a few, in which we can discover no cause whatever for the affection; and these are they which are, as a rule, to be cured by belladonna. To prevent disappointment it is needful to take care that the preparation of the drug is a good one, for specimens of belladonna differ much in potency. The extract is, I think, the best form of giving it, and should be administered in doses commencing at one-sixth or a quarter of a grain, and, if necessary, increased till some dryness of the fauces or other physiological effects are produced; if then there is no improvement it is not likely to be beneficial. It matters little whether it is given during the day or only at night. Chloral has been highly spoken of as a remedy for this affection; but, though I have tried it pretty extensively, I have not found it nearly so efficient as belladonna. Neither have I found blisters, which are recommended to be

applied to the sacrum or umbilicus, of much use. Bromide of potassium and cantharides are also by some recommended, but have generally failed in my hands. I have recently been testing the efficacy of all these remedies, and my opinion of them is founded upon that experience. Nevertheless, they will some of them doubtless succeed when others fail; but of the cases for which no causes can be found, there are, I think, very few indeed which are not to be cured by belladonna.

Queen Anne Street, W., May, 1872. —*The Lancet.*

ON DEATH FROM CHLOROFORM: ITS PREVENTION BY GALVANISM.

By Thomas Green, F.R.C.S., M.D., Edinburgh; Consulting Surgeon and and late Senior Surgeon to the Bristol Royal Infirmary.

Death from chloroform is now an announcement unhappily appearing so often in the medical journals, that it becomes the duty of those who have seen much of its use to lay the results of their experience before the profession; the more so, if they know, or think they know, one remedy more than another likely to arrest the mortality from that drug.

Ether, chloroform, and other anæsthetics, have been in constant use at the Bristol Royal Infirmary since their first introduction into notice. Three deaths from their use have occurred at that institution during this period.

Case I.—The first occurred in the practice of my colleague Mr. Harrison, then senior surgeon to the Infirmary. Chloroform was administered to an elderly woman in the ward, before bringing her into the theatre for operation. A second drachm of chloroform was being inhaled, when, after a few stertorous respirations, the pulse and breathing suddenly ceased. Mr. Hore, the house-surgeon, immediately employed the usual means. The surgeons were sent for; and, when they saw the patient she appeared dead. Galvanism was then tried; it "produced some convulsive efforts of the respiratory muscles," but animation was not restored. (*Association Medical Journal*, 1861, p. 109.)

Case II.—The second case occurred in the practice of my colleague Mr. Prichard. Chloroform was given to an elderly man on the table in the theatre. After a short inhalation from the first drachm, a few convulsive respirations were followed by a sudden stoppage of the heart's action and of breathing. We were all in the room at the time. Galvanism, artificial respiration, etc., were at once tried: the first caused strong contractions of the face and trunk, but had not the slightest effect on the heart; the latter

was kept up for nearly half an hour through an opening in the trachea, but without any effect on the heart. In this case, paralysis of that organ was so complete that all means failed to excite its contractions, and death was the result. Those who have not seen a spectacle of this kind can hardly realise what a painful and depressing thing it is to look upon. On examination after death, the "external surface of the heart was found covered with fat;" and "the muscular structure generally was pale, and contained much fat, deposited in rows among the fibrile." (*British Medical Journal*, 1858, p. 207.)

The third case occurred in the out-patient room of the Infirmary, and is reported by Dr. Ludlow, the house-surgeon. The first two cases I witnessed; but I saw nothing of the last. Since the second case, no death has happened in the operation room. I have now to mention some cases where recovery took place, under ciraumstance quite as bad as those before related.

Case III.—The following case occurred at the Infirmary. I had operated on a boy for stone, under chloroform. The operation was over; the boy was untied and about to be taken to his ward; all present had left the room, except Mr. Webster (then a pupil), myself and the nurses. Seeing everything safe and well, I left the table, and was going into the consultation-room, when Mr. Webster called after me to say that the pulse had stopped. On turning round, I found the boy deadly pale and pulseless, and his breathing stopped. The galvanic battery was in the theatre ready for use, and it was instantly applied. After a few seconds, both pulse and breathing returned, and the patient entirely recovered. It is impossible to imagine anything more decided than the effect of galvanism in this case; and it is the more remarkable, as the pulse ceased to beat some time after chloroform had been discontinued.

Case IV.—An elderly man was brought into the theatre for operation by Mr. Prichard. A small quantity only of chloroform had been given, when the pulse suddenly stopped, and the man appeared dead. The galvanic apparatus was near, and was instantly used. A deep and rapid inspiration, succeeded by a strong noisy expiration, like a loud groan, was the immediate result; and at the same time he started up into the sitting posture. The circulation was at once restored, and he entirely recovered. All these things occurred in a little more time than it takes to describe them, one thing followed another so rapidly.

Case V.—The next case occurred in the practice of my much respected colleague, the late Mr. Ralph Bernard. An elderly woman was placed on the table to have the trachea opened for disease of the larynx. The veins of the neck were large and

numerous, and a good deal of blood escaped; hence Mr. Bernard was obliged to proceed slowly in exposing the trachea. Perhaps half an hour was occupied in this way; when the pulse suddenly stopped, and to all around she appeared dead. Galvanism was instantly applied, with the same result as in the last case. Circulation and respiration were immediately restored. The trachea was then opened in the usual way.

Case VI.—The next case occurred to myself. A boy was on the table for operation. A small quantity of chloroform was given, when suddenly the pulse became hardly perceptible, but did not stop entirely. Galvanism was at once used by Mr. Crisp of Swallowfield, then house-surgeon, and in an instant recovery was the result.

Case VII.—The next case was that of a girl placed on the table for amputation of the leg by Mr. Bernard. Chloroform was being given, when suddenly the pulse stopped. Galvanism was at once used, and instant restoration was the result. She was taken back to the ward. The next day half a tumbler of brandy was given her. She was brought into the theatre, the tourniquet slightly screwed; and the leg was taken off by Mr. Bernard. When again in her ward she did not know that her leg had been removed.

The last death from chloroform occurred in 1858. Since that time, no fatal case has happened in the operating theatre. The third death took place in the out-patient room.

From so many fatal and nearly fatal cases happening in one institution, it may be thought that the agent was not properly administered—perhaps not sufficiently diluted. Chloroform has been generally given by the house-surgeon: a drachm placed on a sponge over the mouth and nose, and taken off from time to time to allow fresh air to enter; the finger being kept constantly on the pulse. No accident has now happened for some years, so that it may be inferred that this method of administration is safe. The last five cases here related can leave no doubt as to the fact that galvanism saved life in each of them; that the pulsations of the heart stopped in an instant, and were as instantly restored by this agent. In all the recorded cases which I have met with, there are not to be found five successive cases similar to those mentioned—that is, where restoration was instantaneous. Cases are recorded where the pulse and breathing suddenly stopped, and were restored by artificial respiration. The most recent is related by my friend Mr. Clover; and, from his experience in the administration of anæsthetics, there cannot be found a more accurate authority than he is. Mr. Clover relates a case where, after chloroform has been used, the pulse and breathing suddenly stopped, and were

restored by carrying on artificial respiration for about a minute (*British Medical Journal*, 1871, vol. ii, p. 33). I would, however, suggest to Mr. Clover that the minute thus spent might make the difference between life and death. One of the best cases I know, where artificial respiration succeeded in instantly restoring the action of the heart after it had suddenly ceased, occurred in the practice of Sir William Fergusson. Dr. Snow was administering chloroform to a "tall, thin, elderly lady, with a small and feeble pulse," (a bad subject for chloroform, evidently having a very weak heart); suddenly the breathing ceased and the pulse could not be felt. Sir William, with the promptness and readiness for every emergency which belongs to that accomplished surgeon, at once applied his mouth to that of the patient, and made a strong expiration, which expanded her chest fully, and immediately the heart began to beat. (Snow on "Chloroform," p. 260.)

These cases show the value of artificial respiration; but it has failed so often in the fatal cases recorded that we cannot place much reliance on it, even when air is blown in from the mouth of another. Amongst other reasons is this: the air goes, not into the lungs, but through the œsophagus of the stomach. This has happened in the attempts to restore animation after drowning. Dr. Marshall Hall's plan has succeeded in restoring patients narcotised by chloroform. The effect of artificial respiration is proved by a simple experiment. In an animal just killed, if air be at once forced through the trachea, the lungs immediately begin to act and the heart to pulsate. If the ribs be cut at each side, and with the sternum thrown up, the entire process is brought into view. This experiment is instructive, can be easily performed, and is painless to the animal. Amongst other means, quickly slapping the face with a wet towel has been used, and will often succeed in less urgent cases where the pulse is becoming feeble, but it cannot be relied on when it has suddenly stopped. The same may be said of strong ammonia placed under the nose.

An important communication has been made by Mr. Brown, of Haverfordwest, (*British Medical Journal*, 1871, vol. ii, p. 13). He agrees with the most accurate observers that death from chloroform is caused by "paralysis of the heart;" restore motion to that organ and the patient is safe. He has little faith in artificial respiration, and dragging out the tongue he truly describes as an "idle occupation." Mr. Brown recommends that no time should be lost in either of these proceedings, but that the "brain should be roused by hanging down the head." He reports five cases where, after chloroform, the heart suddenly ceasev to pulsate; the head was immediately lowered to the level, or below the level, of

the body; breathing and circulation were at once restored. In fact, if blood be sent to the brain, the heart is at once excited to action. This, we know, is successful in syncope from loss of blood, etc. Altogether, Mr. Brown's paper is well worth attentive consideration from all who have to deal with anæsthetics. The consideration of the cases which have occurred at the Bristol Infirmary has left a strong impression on my own mind, and, I believe, on those who witnessed them, that galvanism is the most powerful agent which we possess to restore animation when suspended by chloroform or any other anæsthetic.

The heart suddenly stopped in seven cases; two died and five recovered. In the latter its functions were instantly restored by galvanism. It may be said that galvanism was used in the two fatal cases; but in the first other means were tried, and some time had elapsed before it was employed; in the second, it was used at once and failed. The state of the heart was, however, quite sufficient to explain its failure. Degeneration of that organ from fatty deposit was so extensive that, when its vital contractions ceased, no artificial stimulus could restore them. Galvanism will excite muscle to contract, but cannot impart motion to "rows of fat." In the five latter cases here reported, the stoppage of all motion in the heart and lungs was so complete, and the restoration so instantaneous, thot no doubt can remain as to the value of the agent employed.

Electricity is the most powerful agent with which we are acquainted for exciting muscular motion even after death. Dr. Ure's experiment is well known, when by electricity he brought on strong muscular contractions in a man who died by hanging an hour before the experiment. Death from chloroform is caused by the cessation of muscular action, by paralysis of the heart. If electricity be the most potent agent known to excite muscular motion, it follows, not alone as a physiological fact, but a logical truth, that electricity in some form or other must be the most powerful agent known to restore animation when suspended by chloroform. Galvanism has often been used after those accidents, and is said to have failed. Seven cases in which it proved unsuccessful are reported in Dr. Snow's last edition of his work. The same story is to be found in all of them; other means were used, the apparatus was sent for, adjusted, and tried; of course it failed, it came too late; to be successful it must be ready for instant use —on that depends its success. Seconds or minutes make the difference between life and death. The truth of this is so strongly impressed by his own mind that I have not for many years ventured to operate under chloroform, either at the infirmary or in

private, without having the galvanic apparatus ready for instant use; and I must express the opinion that chloroform should never be administered without the same precautions being taken. Deaths from chloroform are now so frequent (it has been said one in a week), and we are told that many deaths from this cause are never reported at all, that the time is not far distant when the public safety will demand some inquiry into the use of this deadly agent, more comprehensive than anything hitherto done in that way. This inquiry may be made by any competent tribunal—say, a joint committee of the Colleges of Physicians and Surgeons, and it could not be in better hands, assisted, if they wish it, by men who have given special attention to this subject—such as Mr. Clover, Dr. Richardson, etc.

The inquiry should embrace several matters: first, whether any and what precautions should be taken before the use of chloroform or any other anæsthetic; next, to ascertain the best and safest of them, and the best and safest means in which they can be administered; and, lastly, the best and surest means to prevent fatal accidents from their use.

None can say what the result of that inquiry will be, if ever made; but I must express the belief that it will prove to be a mistake to give chloroform to a person kept some hours without food, without some support to nerve-power, and brought to an operation under a dread of its consequences—it may be, shivering cold—brought from a warm bed to a cold room. For several years I have always given a fair amount of fluid nutriment, and a full amount of stimulant, not long before any operation under chloroform. Next, it may prove that more precision must be used in its administration. Dr. Snow and Mr. Clover tell us that the proportion of chloroform to atmospheric air should not exceed five per cent. Mr. Clover's apparatus has been called cumbrous and inconvenient, but it attains a precision in this matter which no other contrivance has hitherto done; and I believe that no fatal case has occurred in the large number of operations in which it has been used by him, amounting to some thousands. Lastly, I feel some confidence that inquiry will prove galvanism to be the best and surest prevention against fatal accidents from chloroform, etc.

Before concluding this paper, I think it not right to let the opportunity pass without expressing the strongest dissent from the doctrines of Mr. Lister on the subject of these remarks. He has called the use of Mr. Clover's apparatus "a harmless luxury." (*British Medical Journal*, 1871, vol. ii., p. 117.) Some might call his own strongly expressed advice, to draw out the tongue in

cases of accident from chloroform, a "harmless" crotchet, or, as Mr. Brown calls it, an "idle occupation"; but, when taken in conjunction with the following statement, deliberately written for the profession, it becomes a far more serious matter. He writes as follows: "The very prevalent opinion that the pulse is the most important symptom in the administration of chloroform is certainly a most serious mistake; as a general rule, the safety of the patients will be most promoted by *disregarding it altogether*, so that the attention may be devoted almost exclusively to the breathing." From my own limited experience, and from the recorded opinions of nearly all the best authorities in this and other countries, that "paralysis of the heart seems to be the most frequent cause of death after chloroform," (*American Journal*, 1871, p. 437), I can come to no other conclusion than that Mr. Lister's teaching is more than a serious mistake; that in practice it will be found a fatal error.

Mr. Lister has also written as follows: "When Mr. Clover virtually recommends medical men generally to follow him in abstaining from this practice (drawing out the tongue), he has given about as pernicious a piece of advice as can well be given with reference to the administration of chloroform." (*British Medical Journal*, 1871, vol. ii, p. 117.)

I know enough of Mr. Clover and his professional character to be able to assert with confidence that there is not a surgeon in London who would endorse the statement that he ever has given, or could give, "pernicious advice" on the use of chloroform, or on any other subject.

The use of chloroform is a serious business, involving, as it does, the issues of life and death—how serious few can realise, except those who have seen one or more fatal cases; and sure I am that when the heart suddenly ceases to beat after its administration, those who rely on pulling out the tongue to save life, will have to witness that sad sight when a person lies dead before them, who but a few minutes before was in full possession of life and strength.

P.S.—When galvanism is employed, the rotatory battery now in general use answers the purpose well; it is portable, always ready, and easily worked. One pole should be applied to the neck, and the other over the lower ribs on the left side.—*British Medical Journal.*

MALINGERING DETECTED BY FARADISATION AND THE USE OF NITROUS OXIDE GAS.

By JULIUS ALTHAUS, M.D., M.R.C.P., Physician to the Infirmary for Epilepsy and Paralysis.

In November last I was consulted by the secretary of a workingmen's benefit society with regard to the case of one of the society's members, who professed to have lost the use of his left arm, in consequence of an accident which he had had three years previously. According to the society's rules, the sum of £100 is paid to members who are permanently incapacitated for work by disease or accident. The patient had had a fall from a considerable height, and asserted that ever since he had been unable to use his arm. He had been admitted into a provincial hospital, where he remained for three months, and where (to use his own words) "the surgeon tried as hard as he could to cure him," but failed. In course of time the patient, who was known not to have done any work since the occurrence of the accident, applied to his society for the hundred pounds owing to him; and I was then requested to give an opinion whether the patient was permanently or only temporarily disabled.

The claimant was a tall, powerful man, of determined countenance, and evidently considerable force of will. He professed to be unable to undress himself, and had, therefore, to be assisted when the helpless limb was bared for examination. I found that the temperature and the bulk of the left arm were in all its parts quite equal to those of the right. The limb was held in full extension, and drawn to the body; while the fingers were somewhat tightly fixed. On endeavoring to flex the forearm and to supinate the hand, considerable resistance was encountered; and, when additional force was used for effecting this purpose, the patient called out with pain, and said he could not bear the manipulation.

Seeing this condition of the limb, only three pathological conditions could be suspected, viz., paralysis with contraction, ankylosis, or dislocation—provided always that the patient was sincere. In peripheral paralysis owing to injury of the motor nerves of the part, which is the only form of paralysis that could be thought of in this case, there is rarely any very great amount of contraction, since the paralysed limbs are mostly found flabby; and if the case be of long standing, the muscles are wasted, and the temperature is considerably diminished. But as these clinical signs, although of value, are yet not invariably present, I employed a test which gives absolutely decisive results in such cases, and enables us at a glance to decide the presence or absence of peripheral paralysis—viz., faradisation. It has been shown by the

concurrent testimony of all recent observers who have investigated this subject, that, in peripheral paralysis caused by injury to the motor nerves, the muscles animated by those nerves completely lose their *faradic* excitability, while their *galvanic* excitability may be preserved, or, under certain circumstances, even increased. If, therefore, in the present case, the deltoid, trieeps, biceps, and the other muscles of the useless limb, could be made to respond by contraction to the faradic current, it would be rendered evident that there was no paralysis owing to injury of the branchial plexus or any of its branches.

On using faradisation, I found that all the muscles of the arm and hand responded readily to the current by contraction of their fibres; yet, curiously enough, the arm of the patient did not execute those movements which are generally produced by such an application. Something evidently resisted the displacement of the bones; and, when I looked at the powerful determination visibly expressed in every feature of the patient's face, his hard stare, his contracted brow and lips, I could not help feeling suspicious that this something might be the patient's own volition. The influence of faradisation being irresistible if a sufficiently strong current be used, I increased the power with which I acted, in order to overcome any possible resistance on the part of the patient; but the latter called out so lustily, saying that he could not bear the pain, that I was obliged to desist. Enough, however, had been ascertained for enabling me to eliminate one of the three pathological conditions which could give rise to the complaint of the patient.

I now informed the secretary that, although I had satisfied myself that there was no paralysis, yet it was impossible for me to give a certificate concerning the exact nature of the affection from which the patient suffered, unless he were previously placed under the influence of an anæthetic. All parties having consented that this should be done, I procured the assistance of Mr. Clover, who on the following day administered nitrous oxide gas to the patient. The latter was rapidly rendered insensible; and I could now freely move the arm in all directions, there being neither dislocation nor ankylosis. As soon as this was ascertained, the influence of the anæsthetic was withdrawn; and the patient, who recovered himself in a few moments, was informed that his case was not nearly so bad as he had imagined, and that he would certainly recover the use of the arm under proper treatment. I gave a certificate to the effect that the patient suffered from a painful affection of the shoulder-joint, which would yield rapidly to subsutaneous injections of morphia or a judicious use of galvanism; and that there was neither paralysis, nor dislocation, nor ankylosis, seriously to interfere with the use of the extremity. The claim was therefore not allowed.—*British Medical Journal.*

MEMORANDA OF TREATMENT OF CASES OF NERVOUS DISORDER.

By J. Lockhart Clarke, M.D., F. R. S.

Imcomplete Hemiplegia of the Right Side, with Partial Aphasia.

A lady who had come from the country to see her daughter, found, in the course of a few days, that she was gradually losing the use of her right hand and arm. The first occasion on which she experienced this weakness was, that one day, after beginning to write, she found herself unable to continue. Very shortly afterwards, she found that she was losing power in the right leg, so that she had great difficulty in walking; she also felt a sensation of "pins and needles" in the right hand, but not in the foot; at the same time she complained of great loss of memory. She was frequently quite unable to recollect many of the words she wished to use; and sometimes she transposed her words, or used wrong ones. Her articulation was very indistinct; but she could protrude her tongue and move it in any direction. There was a dull "heavy" pain on the left parietal region of the head, with a sensation of "creeping or drawing up" of the scalp, and some deafness of the left ear. There was no cardiac murmur, or any other sign of heart disease

Her general health was much deranged. Her tongue was loaded; her breath offensive; her appetite was gone; and she complained of nausea and flatulence, with a sensation at the epigastrium "as if something wanted to be removed." Her skin was dirty-yellow; her bowels constipated; but her urine was clear and without albumen. She was ordered a mild aperient, a blister behind the left ear, and the following pills.

℞ Hydrarg. subchlor. gr. vj; ext. hyoscyam. ʒijss. Ft. pil. xij. One to be takan night and morning.

At the end of a week I saw her again, and found her decidedly improved. After two or three days the pills produced brisk purgation. She was ordered to repeat the blister and continue the pills. At the end of another week the improvement was still more marked. Her memory was much better, her articulation more distinct, her right arm stronger, and she could walk without much difficulty; but she till complained of dull pain, and "drawing up" of the scalp on the left side of the head. The bowels had acted about twice daily, and the evacuations on passing caused a scalding sensation. The blister was repeated, and the pills continued. At the end of the third week she was nearly well; all that she complained of was flatulency, and the creeping or drawing

sensation in the scalp of the left side. Her skin had lost its previously dirty-yellow colour, and her appetite was keen. She was ordered to discontinue the pills, and to take some rhubarb, ammonia, and æther in peppermint water. A fortnight afterwards, she returned to the country quite well.

64, Harley Street, W., June 1872.—*British Medical Journal.*

RUPTURE OF THE HEART.

By W. Wynn Westcott, M. B. Lond., Martock.

S. V., aged 65, married, a carpenter, and a man of good general health and strength, in the summer of 1872 was struck on the forehead by the accidental recoil of an iron bar. This inflicted a wound which injured the temporal artery, and was followed by very free hæmorrhage. Last December, when returning home intoxicated from a neighbouring village, he fell over a bridge and struck his forehead against a sunken stone, inflicting a wound almost identical in position with the former. This wound also caused free hæmorrhage, which was stopped with considerable difficulty. Although not an habitual drunkard, he had drunk freely for many years, and was much shaken in health by the latter accident.

On February 26th he was at a public house during the evening, in his usual health, and drank moderately, returning home sober. The next morning he got up feeling unwell, and walked to my surgery, about two hundred yards. As I was not up, he walked home again, and at 9 o'clock I went to see him. He was sitting by the fire, looking weak and ill; and presented very much the appearance of a man who had been intoxicated overnight. He complained of pain at the epigastrium and in the region of the stomach, of want of appetite, weakness, and chilliness. The bowels were constipated; pulse weak, but regular; tongue foul. I ordered two tablespoonfuls of the following mixture to be taken three times a day: ℞ spt. ætheris sulph. ʒij; tinct. calumbæ ʒij; magnesiæ sulphatis ʒvj; aquæ q. s. ad ʒvj.

At 8 P. M., he appeared very much in the same state, but complained of nausea and severe pain over the stomach; yet he was lying quietly in bed, with features calm and pale. An hour later, he vomited much bilious matter and semi-digested food. The sickness then went off, and he took a basin of gruel. He expressed himself as feeling better, and his wife went to bed. In a short time, he roused his wife, asking her to make him some peppermint-tea. She did so, and he drank the tea. His wife then returned to bed, between 2 and 3 A. M. Some time later, he

sat up in bed, put out the lamp which had been left burning by the bedside, and lay down again. Within ten minutes, he sat up, complained of feeling faint, and again lay down. His wife heard a slight rattling in his throat, upon which she got out of bed, struck a light, and found him dead.

Post Mortem Examination, thirty-one hours after death.—The body was well nourished; the flesh firm. There was a thick layer of fat. The expression of the face was very much altered. There were two linear depressed scars over the lower part of the sternum. The stomach was congested, especially at the cardiac end. The liver was healthy; the spleen and kidneys were congested. The sternum was carefully raised, without injury to the pericardium, which projected and seemed full and tense. The lungs were pale and normal. The pericardium was opened longitudinally, and about half a pint of serum escaped, leaving a teacupful of soft dark clot. The surfaces of the pericardium were healthy. The heart was removed entire; and a very considerable deposit of fat on the surface and in the grooves of the organ was noticed. On the wall of the left ventricle, near the anterior border, were three longitudinal fissures: the two upper and smaller ones extended through the pericardium and fatty layer only; the lowest and most anterior extended through the entire thickness of the wall, and measured rather over a quarter of an inch in length, and admitted a goose-quill easily. Internally, all the cavities were healthy, except the left ventricle; and all the valves appeared normal. The left ventricle was opened through, the septum of the ventricle, and was found to contain soft dark clots, interlaced with the chordæ tendinæ and columnæ carnæ. The clots were gently washed away by water; there was then seen several of the musculi papillares, ruptured, and their free ends covered by slight clots; and, near the anterior border, a long ragged zigzag fissure, three-quarters of an inch in length, corresponding to the principal external rupture; its edges were also covered by small clots, but there was no continuous clot in the course of the wound. Several portions of the muscular substance were examined by the microscope, and were found to have undergone fatty degeneration.—*British Medical Journal.*

Midwifery.

CONCEALED PRÆ PARTUM HÆMORRHAGE.*

By Joshua Parsons, Esq., Frome.

The three cases which I am about to detail have occurred to me at long intervals in a tolerably extensive midwifery practice of many years duration; and, although they belong to a class well recognized and often described by writers on the subject, yet I have found in conversation that many brother practitioners of intelligence and experience, not having had their attention specially directed to such cases, possess but vague ideas of their nature and treatment. There are, however, few accidents interfering with the even tenour of natural parturition more distressing to witness, or calling for more clearness of diagnosis and decision of treatment on the part of the medical attendant, than those of which I am about to speak. It has, therefore, struck me that a record of these three instances, though not otherwise very interesting, may form a footprint for whose guidance some perplexed and anxious brother may be thankful.

Case I occurred in 1840. The patient was the wife of a weaver, a strong and healthy primipara, arrived at the seventh month of gestation. On February 8th she was seized with faintness and a feeling of painful distention of the abdomen; but, as no labor-pains occurred, no treatment was adopted by the midwife beyond keeping the patient in bed. As, however, the pallor and distention increased, I was summoned on the 12th, and found the woman exhausted and exsanguined to a remarkable degree. Upon examination, although there had been no pains or discharge, the os uteri was flaccid and dilatable, the membranes unruptured, and the face presenting. I had at the time no idea of the nature of the case with which I had to deal; but possessed with the dread instinctive in an accoucheur of seeing my patient die undelivered, and miles away from instruments or professional assistance, I introduced my hand into the unresisting uterus, and immediately delivered the small dead fœtus by the feet. Finding the abdomen but little diminished in size, I thought there was another child to be born, and plied the woman freely with brandy and ergot; and

* Read before the Bath and Bristol Branch.

after a while had the satisfaction of finding the placenta thrown off. The cause of danger and perplexity then became evident, for I removed from five to seven pounds of old black coagula. The uterine surface of the placentra showed that it had been detached over its larger part. The woman slowly recovered to a great extent, but was ever afterwards an invalid and remarkable for her extreme pallor.

Case II occurred on December 4th, 1860, to one of those unhappy individuals whose bairntime (to use a Scotticism) was a catalogue of disasters. She had arrived at the eighth month of her eleventh pregnancy, when she was, at 4 a.m. of the morning mentioned, while lying quietly in bed, seized with sudden deadly syncope. As she lived close to my house, I saw her in a few minutes, and, recognising the nature of the case, I examined and found the head presenting and the funis prolapsed. Being thus able to assure myself that the child was dead, and knowing from former experience that to deliver the patient with forceps was a work of time and difficulty, I did not hesitate to resort immediately to craniotomy, and, after giving ergot, to remove the placenta and a large mass of coagulum which appeared to be of recent formation. The patient recovered, and had children subsequently.

Case III.—This patient is the wife of an innkeeper living four miles from my house, and was expecting her seventh confinement in November last. For four days she had been observed to lose her colour, and complained of hardness and tension of the abdomen, but had continued to move about and attend to her household duties. On the afternoon of the 19th she fell suddenly in her kitchen, and was for a long time unconscious. When she was carried to bed, a slight discharge of blood was observed, and I was sent for, being told to come directly, as she had had a fit. When I arrived she had become conscious, but was tossing about faint and pulseless, with no labour-pains, but a slight sanguineous discharge from the vagina. On examination, I found the os about the size of a shilling, occupied by distended membranes, but very hard and resisting. I immediately sent to my son, Dr. Parsons, asking him to bring various instruments, and intending, as the urgency of the case seemed increasing every moment, to deliver as soon as he arrived. As, however, by reason of distance, a considerable time must necessarily elapse, I determined to do something; and so I ruptured the membranes, and gave at once two drachms of the liquid extract of ergot, repeating the dose in half an hour. Fortunately these means were successful in controlling the hæmorrhage; and on my son's arrival the aspect of affairs had so much improved that we considered it right to wait a while and

watch for the issue. About midnight a labouring-pain came on, and the woman was delivered naturally about 2 a.m. The child had been evidently dead for some days, and the placenta was followed by a great gush of fluid blood and many pounds of old clot. The woman is still suffering from exhaustion and bloodlessness, but will, I trust, ultimately recover.

The cause of the accident of which I have been speaking is, to me, obscure. In neither of these cases had there been any over-exertion, nor had either of the patients been exposed to any of those shocks of body or mind which we are accustomed to see followed by hæmorrhage and premature birth. In the first and third cases, the pallor and painful distention showed that a moderate discharge of blood had been taking place between the placenta and uterine walls for some days, before a sudden and unaccountable increase occurred and produced the alarmiug symptoms already described. Although the issue was fortunate in these instances, yet I need not tell you it is by no means always so, two or three fatal cases having occurred within my own knowledge. In the last case, my distance from home led me to adopt measures which fortunately proved successful; but, looking at the tendency to sudden increase of symptoms, I would not voluntarily run the risk of delay, but should make it a rule, where I had reason to believe that subplacental hæmorrhage was going on, to induce labour and complete the delivery of the patient by the speediest method suitable to each particular case.

I do not know any condition likely to cause difficulty in the recognition of this accident. In the second case, the sudden and complete collapse and violent pain might at first have led to a supposition of ruptured uterus or abdominal pregnancy; but the round, well-defined uterus, hard as a cricket ball, and perhaps the absence of tenderness, would at once clear up the difficulty. In neither case did I observe any diseased condition of the placenta likely to account for its separation from the uterus, though the appearances plainly indicated that such separation had taken place to a very large extent.—*British Medical Journal.*

Canada Medical Journal.

MONTREAL, JUNE, 1872.

"THE CANADA MEDICAL JOURNAL."

This number completes the eighth volume of this periodical, and although this journal may not be discontinued, yet this closes the present series. This has been brought about by personal differences between the editors. The publishers of the CANADA MEDICAL JOURNAL considered it advisable to stand aloof from all party feeling; they therefore intimated to the editors their determination to stop the publication, leaving them to resuscitate a new work or works, which will stand or fall by their own merits.

All debts due the old journal are requested to be paid to Dawson Brothers, Great St. James street.

The publishers of any new undertaking will make known the terms of subscription through their own columns.

REPORT OF THE DEEP-SEA DREDGING EXPEDITION TO THE GULF OF ST. LAWRENCE, BY J. F. WHITEAVES, F.G.S.

For some years past exploration of the sea-bottom, more especially on the coast line, has been followed up chiefly in reference to the habits of fish which are used for the food of man, and which, when taken, enter largely into the commercial enterprise of numbers of the inhabitants of countries. These explorations have assumed a practical character, the object being to preserve valuable fisheries from destruction, by suggesting measures for saving from injury feeding grounds which otherwise would be seriously damaged, thereby driving the finny tribe to seek sustenance in other localities. The fisheries of our gulf have for centuries been used by the inhabitants of the neighboring Provinces and the Atlantic States of America as one means of commercial enterprise. And in view of the value of those fisheries we are surprised that the Government did not, at an earlier period than 1872, ascertain or inaugurate explorations having such an important bearing on the preservation of those fisheries.

Mr. Whiteaves, whose report is before us, fully alive to the

importance of these researches, commenced, in 1867, an exploration of the sea-bottom of Gaspé Bay. At this period it was purely a scientific investigation, and as such was conducted by Mr. Whiteaves, unaided by the pecuniary resources of the country, necessarily cramped, and without efficient aid, the depths examined were not over some fifty fathoms.

The following year Mr. Whiteaves visited England, and his specimens of foraminifera, sponges, polyzoa, and molluscs, attracted the attention of naturalists in London. He returned to the work in 1869, having procured, while in England, improved dredging apparatus. On this occasion he examined two cod banks, stretching between Cape Gaspé and Cape Rosier village. His investigations were highly gratifying, and, feeling the importance of the work, the following year he brought the subject up prominently before the Natural History Society of Montreal. His views were endorsed by Mr. Principal Dawson, and that gentleman made interest with the Minister of Marine and Fisheries, who at once placed the Government schooners at the disposal of any expedition which should be started for the purpose of deep-sea dredging.

Dr. Dawson requested Mr. Whiteaves to undertake the superintendence of the expedition, as representing the interests of the Natural History Society of Montreal, and Mr. G. T. Kennedy went with him, representing McGill University. The latter gentleman was obliged to return home, and Mr. W., in consequence, worked single-handed.

The report consists of three parts: In the first we have an abstract of the diary kept by Mr. Whiteaves while employed on board the schooners "La Canadienne" and the "Stella Maris." This extends over two months, from the 6th July to the 22nd of August, 1871, during which period twenty-seven hauls were made, in depths varying from less than 50 up to 250 fathoms.

In the second part we have a summary of the zoological results obtained during the expedition, and here we learn that Mr. Whiteaves has not altogether completed the investigation of all that he secured. He gives, however, a complete list of the novelties among the Echinodermata and Mollusca, which he found; together with such notes on other groups as the time at his disposal permitted. Mr. Whiteaves estimates that upwards of one hundred species of marine animals were collected, which belong exclusively to the deep-sea in Canada, and he states that from low-water mark down to fifty or sixty fathoms, sea-weeds, both large and small, abound, and that animal life is abundant and prolific; beyond this, however, the sea-weeds are rare, and in the deep-sea mud the ani-

mals differ from those of more shallow water, and, furthermore, are somewhat less numerous, both individually and in species.

In Part III we have practical suggestions and concluding remarks. In speaking of the food of fishes, Mr. W. divides the feeders into two groups: those that feed at the surface, as the herring and mackerel, and those which feed at the bottom, as the cod, halibut, and all flat fish. From the observations made after an examination of the stomachs of over five hundred cod-fishes taken in Gaspé Bay, as also on the north shore of the St. Lawrence, Mr. Whiteaves concludes that the cod very rarely feeds at greater depths than fifty or sixty fathoms. A list of what cod feed upon is given, judging from the contents of the stomachs of those fish when examined.

In examining the cod banks, or, as the Gaspé fishermen call them, reefs, Mr. Whiteaves was amazed at the number of the minute shells of the foraminifera found in the sand at the latter, and he suggests that probably these microscopic animals form the food of other marine animals which are themselves devoured by the cod, and which may account for the presence of the cod in such numbers at these places. Attention is drawn to the fact that the cod is subject occasionally to the attack of parasites. Tape worms are sometimes found in the intestines, and nematoid worms were observed encysted on the outside of their livers. Halibut and flounders appear to feed largely upon molluscs obtained in deep water, from 100 to 250 fathoms.

Mr. Whiteaves suggests that if Americans are to be allowed to fish in Canadian waters "the custom (said to be practised by them) of splitting the fish caught at sea and throwing the offal overboard on the fishing ground, should not be permitted." This would have a tendency, it is thought, to damage the cod banks and drive the fish away from their accustomed feeding ground. Attention is drawn to the oyster and to the want of care in preserving from destruction that valuable bivalve. It is recommended to offer a premium for the best essay on artificial oyster culture, and to hold out inducements to persons engaged in the artificial culture of oyster-beds, by affording them legal protection. Attention is drawn to the fearful ravages of the Teredo or ship worm, and another species of burrowing crustacean, of the genus Limnoria, specimens of which Mr. W. secured in a piece of waterlogged wood, and, furthermore according to Mr. Principal Dawson, it would appear that the wharves and harbors of Nova Scotia and New Brunswick have been greatly damaged by this species of Teredo.

We notice in the report one item which attracted our attention.

Mr. W. observes: "It may be mentioned that the cost of the "outfit, and extra travelling expenses, amounted to about $130, "of which the Natural History Society of Montreal paid $94.28, "and myself the remainder." We cannot think it possible that an undertaking attended with such results as Mr. Whiteaves' has produced will be allowed to go unremunerated. Surely the Government are able to afford the expenditure of a few dollars in work generally acknowledged to be advantageous; in fact, absolutely necessary; and we do hope that the money already expended by individual enterprise will be voted, together with an appropriation to the scientist for his loss of time. We believe that a sum of $500 has been voted this year for the work, which, we think, will barely pay the expenses of the expedition, and leave nothing for the pay of the scientific head who conducts the operations. Science is all very well in its way, but we trust, for the honour of the country, that the Hon. Peter Mitchell will bring the matter before Parliament and see that a liberal reward will be made to the gentleman who has inaugurated a work fraught with such important consequences, full of interest in its purely scientific results, and by no means devoid of practical utility."

Medical News.

ACTION OF DIGITALIS.

M. Gourvat (*Gazette Medicale*, 1871, Nos. 26, etc., and 1872, 1, 2, 4 5) finds that moderate doses of digitaline given to frogs paralyze the motor nerves of voluntary muscles; and larger doses destroy the irritability of the muscles themselves. Involuntary muscular fibres appear to be stimulated by it. Moderate doses cause a transient contraction of the arterioles; large doses cause a longer contraction. In both cases the contraction of the arterioles is succeeded by paralysis and dilatation. The contraction is caused by the action of the digitaline on the vasomotor nerves, and not on the walls of the arterioles themselves. The beats of the heart are rendered stronger, slower, and move regular, by moderate doses. The arterial tensions is increased. The retardation of the pulse is due to the increase in the arterial tension, and is proportioned to it. The contraction of the arterioles lessens she secretion from the Skin, mucous membranes, and glands, except the kidneys, the urine being increased.—*Medical and Surgery Reporter.*

CURE OF COLDS.

A Berlin correspondent of the London *Druggists' Circular* says:—The dreary days of winter have passed away, and as I hope, colds and catarrhs have left likewise, and if I now mention a good cure for these enemies of our winter enjoyments, It may be said that it comes *post festum*, but I believe it is better to be late than not to come at all, inasmuch as the remedy, indeed, has been found very effective, and its application very simple and not unpleasant to the patient. It is prepared in the following manner. A wide-mouth glass-stoppered bottle is filled with amianth, or better, with cotton, and then the following mixture is poured on, so that the cotton or amianth is perfectly saturated with it:—

℞. Acid. carbolis puriss., 5.0, ℈iv.
Liq. Ammon. caustic, 6.0, ʒiss.
Spec. gravity 0.960
Aquæ destillat., 10.0 ʒij. ℈ij
Spirit. vini. rectificatiss, ℈iv.

The vapors are drawn into the nose frequently during the day, and now and then inhaled into the mouth. A medical gentleman of Stettin, who is renowned not only for his skill as a physician, but likewise for the tremendous catarrh that troubles him regularly every winter, has used this olfactorium anticatarrhoicum with perfect success on his own person, and afterwards on many of his patients, and recommends it highly.

CHINESE TREATMENT OF TETANUS.

This mode of treatment of tetanus has been seen by English physicians in China and India to be successful: The patient smokes in a pipe a mixture of from twenty to twenty-five centigrammes of crude opium and tea or rose leaves, which are worked up with a small quantity of molasses. When smoking he must inspire as deeply as possible, and continue this operation until the narcotic influence is noticed. This continues then, as a rule, three or four hours. The smoking is repeated as soon as the tenanic symptoms reappear. In the meantime as much nourishment as possible is given. In using opium thus it must be remembered that its narcotic effect is somewhat neutralized by tobacco.—*Philadelphia Med. and Surg. Reporter.*

REGISTER OF THERMOMETER AND BAROMETER

Kept by THOMAS D. KING, 26 Beaver Hall, Montreal.

APRIL, 1872.						MAY, 1872.					
Day of Month.	Ther. 8 a.m.	Ther. at 9 a.m.	Minimum.	Maximum.	Barometer, 9 a.m. corrected to sea level.	Day of Month.	Ther. 8 a.m.	Ther. 9 a.m.	Minimum.	Maximum.	Barometer, 9 a.m. corrected to sea level.
1	29	29	21	30	29.39	1	52	54	46	68	30.02
2	26	28	24	31	97	2	54	56	51	66	29.81
3	28	32	26	40	30.07	3	43	45	38	65	96
4	34	36	31	41	20	4	45	48	43	60	99
5	33	38	26	44	23	5	44	48	35	63	30.26
6	38	41	35	47	11	6	46	49	45	62	01
7	32	36	27	51	10	7	56	61	51	66	.....
8	39	40	35	52	05	8	50	53	46	78	.....
9	42	43	35	54	29.68	9	53	57	52	68	29.89
10	42	43	38	49	57	10	49	50	46	75	30.13
11	34	36	33	44	98	11	53	57	45	62	15
12	35	36	29	46	30.34	12	59	58	53	72	29.83
13	45	49	34	44	29.85	13	43	46	38	67	30.07
14	35	35	32	54	89	14	49	55	39	63	28
15	30	34	27	42	30.07	15	55	57	50	66	28
16	30	31	26	41	01	16	48	52	39	66	26
17	38	42	33	49	20	17	53	56	39	67	11
18	37	40	29	51	29.96	18	54	58	44	70	02
19	39	45	33	57	65	19	58	62	49	74	29.69
20	34	37	32	61	30.02	20	55	57	54	74	54
21	39	44	32	57	07	21	57	59	54	70	81
22	42	36	39	67	29.86	22	55	59	49	71	30.08
23	29	30	26	36	30.07	23	55	56	54	74	29.71
24	36	39	32	43	29.95	24	54	56	48	59	96
25	39	40	38	52	30.07	25	59	61	50	61	71
26	41	44	39	51	.....	26	52	54	50	63	30.02
27	44	47	39	75	.....	27	62	65	51	67	29.80
28	39	42	30	61	.....	28	54	55	54	66	70
29	43	47	35	61	30.36	29	50	52	44	64	97
30	47	50	41	64	34	30	53	54	48	57	30.14
..	....	....	....	....	....	31	57	59	52	62	05
	36.6	39.0	31.9	49.8	30.00		52.5	55.1	47.0	66.6	29.97
	Monthly Mean, at 8 a.m.	Monthly Mean, at 9 a.m.	Monthly Mean, Minimum.	Monthly Mean, Maximum.	Monthly Mean, Barometer.		Monthly Mean, at 8 a.m.	Monthly Mean, at 9 a.m.	Monthly Mean, Minimum.	Monthly Mean, Maximum.	Monthly Mean, Barometer.

In recording the Temperature the decimals are rejected for simplification. If Thermometer more than half degree, say 10.7, it is rendered 11°, if less than half degree, say 10.3, it is rendered 10°. The mean is scarcely affected by the rejection of the decimals.

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