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### CANADA

# MEDICAL & SURGICAL JOURNAL.

#### ORIGINAL COMMUNICATIONS.

#### PRESIDENT'S ADDRESS.

Delivered at the Eighth Annual Meeting of the Canadian Medical Association, held in Halifax, Nova Scotia, the 4th, 5th and 6th August. 1875. By L. B. Botsford, M.D., L. R. C. S., Edin. St. John, N.B.

Gentlemen,—In the order of business it is now my duty to address you on this our eighth anniversary. With one exception the Association has held its meetings in the Provinces of Quebec and Ontario. On this occasion we have the pleasure of assembling in one of the oldest cities of the Maritime Provinces; which with its noble harbour adorns the Atlantic coast of the Dominion. Perhaps the day is not distant when a session of this same Association will be held on that other shore where the waters of the Pacific wash its Western boundary.

Those among us whose heads are nearing their resting place may not see this event, much less the gatherings of our profession in those intermediate regions which must one day become the home of millions; but you who have commenced the battle of life, when the passing years will have left their impress, and you take your stand between the present and the future, will witness vast changes, and in the meetings of the "Canadian Medical Association" will find yourselves surrounded with brethren, coming from the different quarters of the Dominion—from the Pacific coast with its genial winters,—from the valleys of the Sas-

catchewan and Assiniboine-from the prairies of Manitoba, from the old homestead Provinces of Ontario and Quebec, from those Provinces by the sea, and you will reap the benefits which such meetings are so well calculated to confer, for they will embrace the experience of the profession under varying climates and under many conditions. And gentlemen we must not be discouraged by seeming failures. These are incidental to the commencement of all such institutions. The time will come when full success will crown our efforts, and our Association will be commensurate with our nation. We must have our evening as well as morning to constitute a perfect day. We cannot measure the result by present benefits. They will assume proportions which will surpass the anticipations of the most ardent. For no matter how extensive the experience of the individual practitioner, how close his observation, how powerful his mental capacity, he will, if confined to a locality, become cramped by its limits, and it may be his professional growth checked by an incrustation of routine so apt to settle upon us all. Throw the same person into contact with genial minds and he will enter upon new fields of thought, and receive as well as impart new suggestions, and that in proportion to the extent of country which may be represented. This has been the case in other departments of culture, and will prove true when professional brethren meet, for each member from his contact with disease under varying circumstances will bring to light some new experience and at the same time will carry away that detailed by others, each having some special opportunities in the wider field of observation, whilst the most cultivated will be benefitted even in their own special direction by the critical shrewdness of those who may be their inferiors in their specialty, yet their equals if not their superiors in other departments of the profession.

Another result will be the modifying influence which will be exercised on the extreme of the profession. The too hasty will be held in check by the naturally conservative, whilst the latter will be stimulated to new life by the impulsive energies of the former. And all will be stirred up from a sluggish routine which dislikes to have its calm disturbed, or drifts lazily away with the tide of opinion and accepts the dicta of teachers, rather than enter upon that strict investigation and careful line of thought so necessary to all progress.

By such collisions of mind may we not hope that there will arise some check to fashion, which has lessened and still lessens the influence of the profession. No one can deny the prevalence of fashion. Not merely in the past, when dogmatism prevailed in proportion to existing ignorance, but even now in our own times. The evil is ever ready to come to the surface. Those now living will recollect how Broussais swayed the schools and how his facts and theories were accepted or rejected. How every depar. ture from a healthy condition was regarded as the result of a sthenic state, and how, as a matter of course, bleeding and antiphlogistics were the great agencies for dislodging the enemy. Then again, diseases were ascribed to the failure of vital powers and bloodletting was so little used that it was lately treated by one of the most eminent in the profession as a "lost art." "Building up" was a necessary consequence; and then stimulants advocated as the best means to arrest the flagging powers of life to such an extent that (with many practitioners) no condition would seem to contra-indicate their use. And again the pendulum swings. and already are there some who will not allow that stimulants of an alcoholic character are admissible in any case.

At one time mercury was the great specific, and was pushed to such an extent that men felt the remedy to be worse than the disease: and from the ignorance which led to its abuse there came a rebound, and by some (wisely or otherwise) it is repudiated and cast on one side as a vicious poison, A great change has come over the profession as regards cholera. It is not many years since its contagious or communicable character was generally denied. Now it

is as generally admitted. Thus it is. Theories rise and fall; and medicines, which belonged to observed facts we might suppose to be better grounded, pass through the same phase; to-day used, and commended as efficacious, to-morrow neglected or condemned.

No doubt a few active or powerful minds lead to such results. By their force they set the new system in motion, and the mass follow; and the followers of a sect are always more inclined than the founders to push systematic opinions to the most absurd extreme; "and if we are to believe the recorded results of therapeutic research, conducted under complicated conditions, we shall be obliged to admit that the same diseases have equally well been cured by the interposition of the gods—by witchery and priestcraft—by the most sanguinary and antiphlogistic and by the most mild and expectant treatment; by remedies founded on the rational pathology of the disease; by the administration of infinitesimal parts of nothing; by peppermint water and bread pills. Each and all of those diverse plans of treatment have had their advocates, who bring forward in their favor accumulated masses of evidence."

There can be no effect without a cause. But the difficulty is to determine, amid the complicated actions of the human body, what is the cause. And yet there must be some one or other which shall be efficient in the varying systems of treatment. For if similiar results are attained, are we not compelled to admit that nature asserts her supremacy, and, in spite of the errors perpetrated, rises superior to the depressing agencies arrayed against her? Men become the subject of disease, and under every system throw off the morbid state and resume a healthy condition. Many a nostrum has been used and proved apparently successful in the hands of the regular practitioner, and frequently the thorough empiric can parade the cures which have attended his panacea. And both the regular and the empiric have succeeded, not because their remedies were beneficial in themselves (in many cases they may have been

injurious) but independently of the means used. We have therefore, to look for a reason why this should be. Why judicious means shall fail in the hands of one man, and why inert, or it may be injudicious medication, shall be attended with favourable results in the hands of another. common experience to witness the eventual failure of the theories, or of the medicines which have been initiated by strong and ardent minds because they are unphilosophically based, yet the success which has attended theories demonstrates the necessity of looking for some principle beyond mere physical agencies, some underlying cause for the success which follows the same or varying treatment. It may be urged that the "vis medicatrix" explains the difficulty: but that power has been present in the same case in which the philosophical attendant has failed, and the inert globule has afterward succeeded. We are there compelled in certain cases to look further for the efficient cause; one which aides the ignorant empiric as much as it does the regular practitioner—one which stimulates the force of the system to renewed activity and to a healthy termination, one which is more than a natural tendency to a sound state -one which exercises a curative power when called into play, and residing in the mind and proceeding from it aids the physician, who enlists in his favor a strong anticipation more potent in certain temperaments then well adapted This is no new idea. It is one we all recognize, yet one we continually overlook. We are so engaged in the contest with disease—so bent upon effecting results by the power of medicine—that we are practical sceptics of the enormous force which the mind exercises not only over the functions of the organs, but over the structure of the organs and tissues themselves.

Brown Sequard, who has devoted much attention to the nervous system, has thus expressed himself, "Power of the mind over the body is much greater than most of you imagine; indeed, I do not think that any one among you, (he was addressing a public audience) however exalted

may be his idea of the strength and variety of that power, has an adequate conception of its magnitude within the bounds which I will mention." Again he remarks, "The cure of any illness which does not consist in a disorganization of the tissues can be accomplished when the person thinks it can be done. If we physicians, who treat patients every day, had the power to make them believe that they are to be cured, we certainly would obtain less fees than we do. There is no doubt at all that if we could give to patients the idea that they are to be cured, they would often be cured, especially if we could name the time for it, which is a great element in our success." I have succeeded in this way, and I may say that I succeed more now than formerly, because I have the faith that I can in giving faith obtain a cure."

Such are the opinions and experience of a close philosophical observer, one who has devoted great ability and ceaseless energy to the solution of nervous phenomena.

This is an aspect of our profession which demands our consideration; for though it has been well determined that the mind is often seriously affected by the condition of the body, it is questionable whether the body is not as much influenced by the mind, and that changes may thus be brought about even in the tissues themselves. If this is so, it will give one solution why recoveries occur under the same or varying systems of treatment, when the vis medicatrix cannot be regarded as the cause. This is a class of cases which gives efficacy to, and confirms each peculiar system of treatment in the estimation of its followers; and it will be futile to reason with any one as to the merits of his system, if he is conscious that he has been relieved when using it. We can only do so by going behind the system and showing that there is a cause which is operative though not generally acknowledged; a cause capable of producing results of a wondrous character, and when recognised sufficient to reconcile to sound philosophy what now appears a mass of contradictions.

I do not say that this class of persons on whom the mind is capable of producing such results is very numerous; but it is numerous enough to make the results a disturbing element in our medical progress, indeed to such an extent as seriously to affect the laity in their belief, and the profession itself in its certainty.

There are sufficient reasons to make us suspect that under anomalous conditions not only can the functions of organs be affected, as was demonstrated by Mr. Braid, of Manchester, but that changes in the tissues may be the result of disturbance in the nervous force; that this latter can assume various phases, being transmuted into heat or electricity, or manifesting itself in chemical power or motion. Be this as it may, Brown Sequard gives one among many instances in which nerve force caused physical changes of a remarkable character. He says: "A mother was looking at her child who was standing at a window with its fingers on the border of the window under the lifted sash. She saw the sash come down with great force and crush the fingers of the poor child. The mother remained unable to move, feeling immediately a pain in the three fingers at the very place where the child had been injured. The fingers swelled, an effusion of blood took place, ulceration followed, and she was a long time being cured." How this physical change was brought about, by what modifying power, it is difficult to determine. We cannot admit that the imagination per se could have been the efficient agent however important the role it played in the occurrence. But come from what condition of the mind, or tendencies of the nervous system it might, this, and phenomena similar in character exist as facts, and it will be wise if the profession give them due attention. They may be very few among the many, yet the principle involved in their production may supply a rationale for the instances which are adduced by empirics as proofs of the efficacy of their nostrums, and prevent the regular physician from being himself misled, or misleading others.

decided benefit will thus be gained. We will wrest from the ignorant their apparent success. We will make amenable to the laws of philosophical induction what has been vague and indefinite. For however subtle the principles which are operative, they will be mastered by a rigid system of investigation, and as soon as the phenomena become tangible they will not long escape the penetrating power of the medical mind.

Facts, no matter how incompatible with our previous experience and theories, will have to be faithfully registered, and when a sufficient number has been accumulated, then some one will rise to the emergency, and establish the law of their production.

Medical science has always required patient research, and never more so than at the present time; its foundations are based upon the laws of being, and these laws are bound up with, and modify every change in the organism. And as there is no domain of nature but what may throw light upon our path, the amount of knowledge requisite to become a well grounded member of the profession will steadily increase until it touches the inconceivable. And if the scientists who can stand on the firm earth, and have to deal with matter in its more simple combinations, have still before them vexed problems and long years of patient research, how much greater must be the endurance of the physician who has to determine his certainties amid the shifting sands of life, where the varying phases are all but infinite and the organic forces and mental powers assume protean shapes.

In May Dr. Steves and I went to Louisville to attend the meeting of the American Medical Association. We were most kindly received, and they have responded by appointing six of their number to be present at our session. There is evidence that the meetings of their Association are producing a very beneficial result upon the whole profession in that country; not only is the tone and standing of the profession raised by the mixing of the leaders and veterans with the general body, but its culture and intellec-

tual attainments force upon the public a truer estimate of its importance. A late President, Dr. J. M. Toner, says: "It must be apparent to all that the concentration of medical thought, and the scientific aspirations of the profession of the country, as expressed through the Central Association, are such that by its unity of action it exercises more influence now over the public and the profession than ever before; or than would be possible without such combined association. This is particularly noticeable in States in which there has been recent legislation affecting the pro-fession and public health." Again "It is a source of sincere congratulation that our medical educational institutions are rapidly enlarging and perfecting their curriculums; and becoming more thorough and efficient in teaching the science of medicine."\* Too much importance cannot be attached to the attainments required of the members of our profession, for, "it is our distinction and hope that to secure its largest practical amelioration, society must look mainly to us-our range of duty being the whole organization of man in health and disease-psychically as well as physically we alone offer that wider field of new action which an advanced society now requires. All that gives happiness, assuages pain, prevents disease, lengthens life, betters the individual or improves the race-these, the great concerns of living humanity, and carrying with them the principal morals of society, belong to our care. On them we are the only teachers that can speak with authority, or that, by and by, will be listened to with conviction. We alone can make theory on them, give way to demonstration, speculation to ascertained fact, doubt to certitude; and outside our pale there is no teaching nor knowledge that is secular beyond what forms a fraudulent empiricism on one side, and a perilous credulity on the other."—(Medical Times.")

There is a subject which I would submit to the Association for its consideration, and that is, the want of a regis-

<sup>----\*</sup>President's address, 1674, at Detroit.

tration of births, deaths and marriages. In some of the Provinces it does not exist, and it will be for you to decide whether a memorial from this Association to the general government will tend to hasten that most to be desired action of the Dominion Legislature.

Case of Peri-uterine Hæmatocele.—By WILLIAM GARDNER, M.D., Professor of Medical Jurisprudence, McGill University, and Attending Physician to the Montreal Dispensary.

(Read before the Medico-Chirurgical Society, Montreal.)

Mr. Chairman and Gentlemen,—I am induced to bring before you the following case of a somewhat rare disease, one which, hitherto, has not been up for discussion before this Society since its revivification. Apart from this and the fact that the disease has frequently been confounded with other conditions even by eminent surgeons, I have no special features of interest to claim for the subject of the present paper.

Mrs. W., æt., 24, has been married seven years, and had one child at full term, about a year after marriage. She has also had what she supposes were two miscarriages; the first three and the other two years ago. She was not attended on either occasion by any medical man, but asserts that for two or three months previous to each one the menses had not returned, and that she was then seized with sharp intermittent abdominal pain attended with the discharge of liquid blood, and solid ingredients. The bloody discharge continued for three weeks after the last of these two seizures. Shortly after the last miscarriage, two years ago, she had an illness of two month's duration, the main symptoms of which were swelling of legs and feet, and scanty coffee-colored urine. This illness was described by her then medical attendant as inflammation of the kidneys. After this illness her health remained for some time below

par, but otherwise was much as before, that is she suffered from a constant tendency to backache and leucorrhœal discharge. From the date of the last miscarriage till March of the present year the patient has been regular as to quantity and time of appearance of meastrual discharge. On the 26th March and day or two following was unwell; on or about 30th April had very slight discharge with pain lasting an hour or two only. During the last few days of May and the beginning of June had what she calls flooding, accompanied [with clots of solid ingredients. This had ceased for a few days when, on the evening of the 5th of June she was seized with severe pain in the lower part of the abdomen. After a few hours this left her and she slept fairly during the remainder of the night; and was able to be out of bed the next day. On the evening of the next day (Sunday 6th June) the pain returned, disappearing as before after a few hours' duration, to again come on, on Monday evening the 7th of June, with greater intensity than ever. I was now sent for, and found her condition to be as follows: she suffers intensely with pain in the lower part of the abdomen and back, causing her to moan continually. The face is pale and has a shrunken or pinched look like that of collapse. The pallor is certainly greater than would be accounted for by the severity of the pain, only. The pulse is weak and rapid, I did not use the thermometer, but feel convinced from the sensation imparted to the hand that it was below the normal standard. Examination of the abdomen reveals enlargement of the hypogastrium equal to that in pregnancy at the end of the fourth month. The enlargement is most marked towards the left iliac region. It is exceedingly sensitive, the left iliac region being especially so. Micturition is somewhat retarded; when making the effort the patient feels as if a foreign body was present in the vagina tending to escape.

On vaginal examination the finger detects the os uteri displaced upwards and forwards behind the pubes. It is neither dilated nor dilatable. The recto-vaginal fossa is occupied by a moderately firm, elastic, irregular-shaped, and very sensitive mass. This so encroaches on the os uteri as to make it feel like a little pit or depression in the mass. Introduced to the rectum the finger immediately encounters the tumour just described filling almost completely the concavity of the sacrum. The uterine sound enters readily to  $1\frac{1}{2}$  inches beyond the normal depth, if its point be directed rather more forward than usual. The sound in the uterus and the hand on the abdomen detect the fundus uteri displaced and lying somewhat to the right side and much less sensitive than that portion of the abdominal enlargement to the left side, which is evidently formed by the tumour.

The treatment and regimen enjoined were perfect rest, in every sense of the word, the avoidance of hot drinks, a diet of cold milk and beef tea, turpentine stupes to the abdomen, and a hypodermic injection of morphia.

June 8th., 10 a.m., the pain was immediately relieved, and commenced to return only an hour ago. The hypodermic morphia was repeated. At 10 p.m. the temperature was 1020, and the pulse 120. Another hppodermic injection of morphia. This state of matters continued without change for three or four days, there being on each day a morning remission and evening exacerbation of temperature with this additional symptom, that on Wednesday, June 9th, there was a reappearance of the bloody discharge which had ceased at the time of setting in of the pain:

June 11th.—The pain is entirely gone, and the temperature normal. There have been neither rigors nor perspirations at any time. The sensitiveness of the parts both externally and internally is very much diminished. The bowels have been moved spontaneously four times.

June 13th, 3 P.M.—Patient is feeling very comfortable, with a normal temperature and pulse of 96. At 7. p.m., pain of same character as before returned with great severity. Saw her at 9.30, p.m. Pain still intense; temperature normal; pulse, 120. Hypodermic morphia, in a full dose, relieved her at once.

June 14th.—Patient has slept all night, the pulse and temperature still normal. The tenderness of the abdomen is more marked than yesterday. There is also some increase of the enlargement, otherwise patient is free from pain and quite comfortable.

June 17th.—Doing well; temperature normal; pulse is still 100. Complains of nothing but some soreness of lower part of abdomen; this is decidedly best marked in the left iliac region. Here there is a distinct elastic tumour, very sensitive to pressure. There is now a feetid vaginal discharge, resembling in odour that present in cases of retention of portions of placenta or feetal membranes. This edour is very persistent in the examining finger, lasting for many hours, notwithstanding repeated washings with a solution of Condy's fluid.

June 27th.—Has steadily improved since date of last report. There has been no pain, and the abdominal tumour has been reduced in size very considerably, the same is to be said of that to be felt in the recto-vaginal fossa. There is no difficulty in micturition. The temperature is normal; the pulse remains rapid, 90 to 100; appetite improving. The vaginal discharge continues but is very much diminished in quantity.

July 17th.—Patient is menstruating, the only unusual symptoms being rather a free flow with some pain in the back. The flow, it may be remarked, continued three days. In other respects also the patient is doing well.

July 23rd.—Patient has been up for some days; expresses herself as well but weak; no pain or difficulty in micturition. The bowels are regular, the appetite good. Sleeps well; has neither rigors nor perspirations; the pulse is still rapid, 90 to 100. I am, however, inclined to think that her normal pulse is considerably above the average. The abdominal enlargement has almost disappeared. There is still a little tenderness in the left iliac region; none elsewhere.

Vaginal examination reveals the continued presence of

the tumour in the recto-vaginal fossa, but it is firmer in consistence, reduced considerably in size, and decidedly less sensitive. The os uteri has nearly regained its natural position in the pelvis. The uterine sound enters to the depth of about three inches only, or nearly three quarters of an inch less than at the time of commencement of my attendance.

The conjunction and sequence of the symptoms in the case just described have left in my mind no doubt that they were those of effusion of blood in the pelvis.

The questions naturally arise—Whence the source of this effused blood? and into what part or cavity was it effused?

It would not be possible to say decidedly where the effused blood was situated, but I think it is more than probable that it was in the cellular tissue of the pelvis, rather than in the cavity of the peritoneum.

I have come to this conclusion from the tension of the swelling, the firm way in which the uterus was fixed, almost immovably against the walls of the abdomen, and the circumscribed character of the swellings, as felt behind the uterus and to its sides through the posterior vaginal cul-desac.

The question of the source of the blood is one more difficult to answer. The effused blood in pelvic hæmatoma, or hæmatocele, comes from a variety of sources. As a matter of fact in rupture of blood vessels into any part of the peritoneal cavity the blood will gravitate and occupy the most dependent portion of the pelvis, viz: the retro-uterine or Douglas's fossa. The source of blood may thus be rupture of cysts, of aneurisms, of the gravid uterus, of ovarian or Fallopian gestation-sacs.

A fatal case of rupture of a Fallopian tubal gestation-sac was brought before the December meeting of the Obstetrical Society, London in 1873, by Dr. D. C. MacCallum, Professor of Midwifery in McGill University.

Sudden large effusions of blood are most likely to have been brought about in one of the ways just mentioned,

which are also the sources of those forms of hæmatocele which occupy the peritoneal cavity—the most danger-ous and rapidly fatal forms of the disease. Other sources of bleeding into the peritoneal cavity which would in these cases be apt to be more moderate in quantity than when due to the above sources, are, that which may occur from the ovary after the escape of an ovum under unusual vascular excitement, which may be due to many causes augmenting the condition of physiological erethism attendant on the performance of this function; and retrocession of menstrual blood from the cavity of the uterus through the Fallopian tubes. The last mentioned variety can only occur from sudden large outpouring of blood from the uterine mucous membrane (or as some assert from the the lining membrane of the Fallopian tubes themselves) together with obstruction to its outward flow, from complete occlusion due to atresia of the cervix, or great narrowing of the cervical canal from anteflexion or other morbid condition.

Hæmatocele, from the cause last described, is probably rare,—certainly the uterus often becomes distended with catamenial fluid, prevented from escaping by obstruction, without any such result occurring.

In the case just reported no such cause could operate, as the cervix uteri was perfectly patent.

Another source is rupture of some varicose vein. The veins of the pelvic sexual organs are large and numerous, and liable to become varicose from various causes. Those of the broad ligament are often large and varicose in women who have borne many children, or in whom the uterus remains in a condition of subinvolution, and chronic congestion. Sometimes, indeed they are so congested as to present a dark purple appearance. If in this condition the veins of the broad ligaments give way, which they are apt to do from the little support the receive from the loose tissue by which they are surounded, then effusion of blood takes place into the peritoneal cavity. The coats of the

veins may, however give way without any laceration of the peritoneum, and the blood is then extravasated into the loose cellular tissue in the broad ligament and immediately surrounding the middle and lower part of the uterus. The last is, I am inclined to believe, the cause which operated in the present case,—and this especially when it is remembered that my patient had been subject for years to leucorrhæa, and chronic backache, both giving evidence of congestion of the uterus and its appendages.

The possibility of abortion having occurred especially in view of the history of menstrual irregularity for two or three months previous to the accession of the hæmatocele, and the enlarged condition of the uterus as indicated by the abnormal depth to which the sound entered must not be forgotten. If so it probably operated as an exciting cause to rupture of varicose veins.

Peri-uterine hæmatocele has often been confounded with other diseases. Barnes asserts that until the last twenty years almost every cause of the disease was confounded with inflammatory effusion, and even now many are slow to admit the evidence upon which its existence is established. In 1850 the disease was so little known that Malgaigne attempted to enucleate a supposed fibroid tumour of the uterus which proved to be a collection of blood. Again, Scanzoni in his work on "Chronic Metritis," issued in 1863, says: "We regret not to be in a position from personal experience to speak of this disease, for in our certainly extensive and protracted observation we have not been able to diagnose peri-uterine hæmatocele in a single case." The diseases from which we are especially to diagnose pelvic hæmatocele are pelvic cellulitis and peritonitis and retroversion of the uterus. The diagnosis not rarely resolves itself into settling the question as to which condition, hæmatocele, or pelvic cellulitis or peritonitis came first; the effusion of blood is exceedingly apt to induce inflammation. So that in any case what is now pelvic cellulitis, or peritonitis, may have begun as hæmatocele.

Sudden intense pain of the lower part of the abdomen, with pallor, cold sweating and rapid pulse, in short, collapse, without previous rigors, these are the symptoms of internal hæmorrhage, and they are of especial significance when they occur during or after abortion, or about the menstrual period, in persons who have a history of chronic ovarian or uterine trouble.

In pelvic cellulitis the patient has generally been recently delivered or has aborted. It sets in with rigors followed by pain less intense than in hæmatocele. In hæmatocele the pain is the first symptom and is very severe at the outset. The swelling or tumour in hæmatocele is, as a rule, larger, displacing the uterus; it is also softer at first, and as it diminishes in size it grows harder until it finally disappears. It is also almost always, ante, or retro-uterine. In pelvic-cellulitis the tumour is at first hard, then becomes soft and fluctuating as suppuration occurs; it is, moreover, nearly always one-sided.

With regard to treatment, on certain points all authorities are agreed, on others there is great difference of opinion. During the period of effusion of blood, and for some time after, absolute rest in bed, the avoidance of hot or stimulating drinks, the application of ice-bags to the hypogastrium, maintaining the functions of the bladder and rectum, and the giving of opium in quantities sufficient to relieve the pain and quiet the nervous system, are seemingly the most important indications.

The question as to the propriety of tapping is one in which there has been and still exists great difference of opinion, eminent names being ranged on both sides. The correct position to take in this as in most others in which difference of opinion prevails is probably one of eclecticism. If the tumour be of moderate size, and produces but a moderate amount of distress easily controlled by opium, it is better to leave it to nature. Such a course is to be recommended in cases such as the one now reported.

But if the tumour be large, and especially if there be

symptoms of irritative fever or septicæmia, we must then think of puncture. In cases where the tumour is producing alarming symptoms from its size only, the aspirator should be used for tapping, so as to prevent the admission of air. But if there be evidences of suppuration and septicæmia or pyæmia, then a free incision ought to be made and the clots removed with the finger, after which the cavity may be injected with solutions of iodine, carbolic acid, or Condy's fluid. The site of selection for the puncture is usually the protruding part of the tumour in the vagina behind the cervix uteri, and the trocar or bistoury is plunged into the swelling in a direction parallel with the axis of the uterus.

Case of Polypus in Utero.—Course, Duration and Treatment By J. T. Moore, M.D.

Mrs. C., a married woman, aged about 30, with light complexion, blue eyes, and of average height: about five feet four inches, first came under my notice on the morning of the 22nd of last April. The following is a history of her case, as given by herself up to that time. She is the mother of three children, the youngest being about two years old. In the latter part of December, 1874, she was taken with a severe pain in the right illiac region, extending across over the fundus uteri; shortly afterwards hæmorrhage commenced per vaginam. A medical man was sent for who had previously attended the family (a Homoepath). He diagnosed the case as nothing serious, and left some medicine, the chief part of which was hamaduelis-virginica or the active principle of witch hazel; this is considered one of their strongest anti-hæmorrhagics The case progressed, and he continued the treatment up to April 21st, 1875. She lost more or less blood nearly every day during the intervening time, never missing over three days at a time. On the night of the 21st of April, she had a severe syncopal attack, such as is often produced from extreme loss of blood, which lasted about two hours; under light stimulants she revived, and on the following morning I was sent for. I found her in a very low state, not able to turn herself in bed; very anæmic and emaciated. Lips and nails had a bloodless appearance.

Unfortunately, I am unable to give the state of her pulse or temperature, as I am now writing from memory some three months after recovery of the patient.

On examination I found great tenderness along the line of right fallopian tube, extending to right ovary. Uterus rather low down in vagina, and slightly antiverted. Discharge very fœtid and disagreeable. She complained of severe pain in right illiac region, which seemed to be in a measure paroxysmal; when these paroxysms came on she suffered from nausea and vomiting. Free emesis seemed invariably to ease the pain.

Treatment.—I put her on following mixtures:

- R. Quinine Sulph. 3ss; Tinct. Ferri, Mur. 3iiss.; Aquae Purre, ad 3iv. Sig. Take a desert spoonful every fourth hour, alternated with-
- R. Extract Ergotæ Fl.; Acidi Gallicia a 3i; Syrupis Simple ad 3iii. Sig. Shake well, and take a desert spoonful every fourth hour. Control of the Contro

Also ordered injection, Liq. Ferri Persulph, one part to eight of water. Used Quinæ on account of the prevalence of malaria in this section. Diet regulated.

In a short time I found she could not tolerate the Iron mixture. I then tried in turn the sacharated Carb. Ferri, Amonio Sulph. Ferri. and Ferri. Ferro. Cyanidi. but/all with like results. After a few doses of each the stomach would become perfectly intollerant, and a peculiar idiocyncracy was shown throughout which prevented any assistance from this valuable drug. The transfer of the control of the c

During this time, however, the hæmorrhage became less severe, and the patient improved in strength.

I now concluded there must be some local trouble within the uterus, upon which the major part of the symptoms depended. I therefore determined to dilate the os uteri, so

as to enable me to make a thorough examination. I made a number of (graduated sizes) carbolized sponge tents; commencing with the smaller, I introduced one every 48 hours, leaving them in 24 hours. After using the fourth I found I could carry two fingers through the cervix uteri. Upon placing the patient in position, I made a digital examination, and found a growth high up on the right side of fundus just behind the junction of the right fallopean tube, which I diagnosed to be a riband-shaped polypus. It was impossible to remove it without further dilitation. I then used two very large-sized tents intending to remove the growth with the craseur. On removing the last tent I observed some clots following it, and when prepared to use the instrument, what was my surprise to find the growth had entirely disappeared. I could only account for it as having sloughed off from pressure of the two last large tents. From this time the patient commenced convalessing, showing only for a few days slight pain in the region of the uterus She went four weeks until her usual time for being unwell, and has passed three periods with regularity; seemingly enjoying good health. She is now able to walk about the town, and is regarded by everyone as having almost miraculously recovered from a severe and fatal illness.

REMARKS—I. What peculiar connection seemed to exist between the uterus and the stomach? Did the severe pain from the uterus cause nausea? If so, why did the vomiting ease pain? Or was nausea and vomiting an accidental complication.

Was the tenderness along the right fallopian tube caused by irritation or inflammation, extending along within the tube from seat of the tumour, which was in close proximity to the ostium internum?

Port Burwell, August 13th, 1875.

# Kospital Reports.

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

Case of Acute General Tuberculosis.—Fatul by Meningitis.
Under Dr. Ross. Reported by Mr. R. L. MacDon-Nell.

S. B., æt. 14, was admitted into the Montreal General Hospital on the 15th August, 1875, under Dr. Ross. She is a strong and robustly-built girl, though small for her age, and has been for the last seven years an inmate of one of the charitable institutions in this city. Nothing could be learnt of her family history.

Her illness began rather suddenly, nine days ago, with fever and feeling of great weakness, together with great pain in the back. This was soon followed by some vomiting (easily however, controlled) and some headache. She then became very restless, somewhat delirious at night, frequently waking sharply and giving a sudden loud scream, with complaint of her back—sometimes of her head. It was then noticed that she squinted. She was seen by Dr. Ross on the afternoon of the 5th, and was removed to hospital the same day.

Aug. 6th.—She now lies in a very drowsy condition. Can, however, be roused to partial consciousness by being spoken to. Head continually directed to the right side, and eyes half shut. There is decided strabismus and very frequent spasmodic movements of the right eye. Right pupil slightly more dilated than the left. Both act very sluggishly with light, and oscillate considerably. Neck stiff but no retraction of the head. If the head be moved, she screams and cries out, "Oh! my back." Pulse 68.

Ordered. Head to be shaved, and bladders of ice to the head, and the spinal ice-bag to be applied, and to take Potass. Iodid. gr. x every four hours.

Aug. 7th.—Passed a bad night. Screamed a good deal. More drowsy. Drooping of right upper eye-lid. More dilatation of that pupil. That eye more stationary; pupils do not act. Abdomen retracted. Cerebral maculæ of Troussean particularly well marked. The opthalmoscope showed all the retinal vessels intensely congested. Pulse in the morning 68; in the afternoon, 108. Temperature 101°.

Ordered. Calomel, gr. 5, to be followed by Black Draught.

August 8.—Had two severe convulsions yesterday evening, and to-day is profoundly insensible. Marked ptosis on right side with corresponding pupil widely dilated. Pulse in the morning 104; temperature 1006, in the evening pulse 128; temperature 101°.

August 9th. Comatose and livid, with noisy breathing, pulse, 130; temperature, 101 ° 6. Died this afternoon. Post mortem, eighteen hours after death.

Vessels of scalp congested and bleeding freely on being divided. Cerebral veins of the convexities gorged to their utmost extent with blood. Considerable effusion of serum beneath the arachnoid. At the base of the brain this membrane was found thickened and opaque. Similar patches of thickening with slight deposit of lymph being also noticed along the line of some of the congested vessels. The commissure of the optic nerves, and the roots of both third nerves were imbedded in a deep mass of gelatinous lymphy deposit. It was thicker and more opaque over that of the left side. No distinct evidence of tubercle could be found in this region, but a quite decided granular condition of the vessels was noticed, especially at the inner extremity of and passing along the fissure of Sylvius. Puncta-vasculosa numerous and distinct. Corpus Callosum wanting in firmness. Fornix very much softened. Ventricles considerably distended, and containing about 4 oz. of limpid serum. No signs of softening in any part of the ventricular walls. Choroid plexuses extremely congested. Velum Interpositum opaque and thickened, and dotted with minute specks of miliary tubercle. Spinal cord and its envelopes, normal—arachnoid especially being clear, transparent and unaffected.

Heart and pericardium healthy. Pleuræ adherent at several points by fine bands, and their surfaces sparsely studded with a number of fine miliary tubercles, grey and hard. The Lungs also contained in their substance a small quantity of similar tubercles, which were found aggregated together into a small mass at the apex of the left lung.

Miliary tubercles were also found in the capsules of the kidneys,—a few in the structure of these organs—in the peritoneum, on the surface of the liver and in the capsule of the spleen.

Case of Ulcer of the Stomach. Death, Autopsy. Under the care of Dr. DRAKE. Reported by JAMES C. CAMERON M.D., House Surgeon, Montreal General Hospital.

A. Q, æt 17, admitted to Hospital 30th May 1875, complaining of vomiting and great prostration. Three days previous to admission she had vomited a large quantity of dark blood, chiefly in clots. Had never vomited blood before, and has not done so since. She has suffered from pain in the epigastrium, constant nausea, occasional vomitting of glairy frothy mucus, and a disinclination for food. Her menses have been irregular for some months. appearance is very anaemic; lips and cheeks blanched, eyes clear and prominent; she has lost flesh and seems much debilitated; her expression is languid and apathetic and her manner taciturn. Upon examining her carefully she complained of a burning pain in the epigastrium, of a constant desire to vomit, which was greatly increased after partaking of any food. Pulse regular but weak; heart sounds quite natural; bowels constipated. Dr. Drake diagnosed the case as one of ulcer of the stomach, and accordingly put her on the following treatment: A pill of argent nit gr. 4, morph, acet. gr. 1, P. tragacanth co. q, s. An enema

of castor oil and turpentine at once, the epigastrium to be painted over with collod. cantharidine. and beef-tea, iced, to be administered every half hour, one tablespoonful at a time; ice in small pieces to suck; no solid food to be on any account allowed. Notwithstanding every care, the irritability of the stomach still persisted; so, on the 1st of August Dr. Drake ordered an enema of beef juice and brandy to be administered every two hours, nothing but ice being given by the mouth. This treatment was kept up for two days and nights; the nausea and vomiting ceased, the pain in the epigastrium disappeared, her general appearance began to improve, she seemed more lively and in much better spirits, and the color returned somewhat to her lips and cheeks. She felt so much better that she begged to have the injections discontinued, and to be allowed some food by the mouth. Accordingly, on the 3rd of August, milk and beef-tea, iced, were administered in small quantities as before, and fer. carb. sacch. grs. xv ordered to be given three times a day. All went well till the evening of the 4th, when about nine o'clock she complained of a sharp pain in the epigastrium; all food was at once stopped, enemas were again administered, and ice given freely; but the pain persisted, and nausea returned.

On the 5th the pain became so great that an hypodermic injection of morphia had to be given; the relief, however, was only temporary, and during the course of the day she became quite insensible; vomiting, convulsive in character, set in; no blood was brought up, only a frothy mucus. She lingered during the night and died early on the morning of the 6th, exhausted.

Autopsy.—Rigor mortis well marked; the body was quite anaemic. Stomach, pale and anaemic; no perforation; upon the lesser curvature, about two inches from the cardiac orifice, a small, circular punched-out ulcer was found about the size of a five-cent piece. The mucous coat was quite eaten through by it and the walls much thinned. The base of the ulcer was slightly congested.

On the posterior surface of the stomach there were two large patches of ulceration of quite recent origin, the mucous membrane being softened but not wholly destroyed. These patches were separated from each other and from the small deep ulcer by healthy mucous membrane; they did not communicate at any part. Between the small ulcer and the cardiac orifice was an old cicatrix, much hardened and thickened, marking the site of an old ulcer, which had undergone spontaneous cure. The lungs and other viscera were anaemic, but otherwise healthy.

Case of Apoplexy into the Pons Varolii.—Under the care of Dr. Geo. E. Fenwick. Reported by J. D. Cline, B.A., M.D., Assistant House Surgeon, Montreal General Hospital.

J. E., a sailor, aged 50, was brought into hospital on the 7th of August. Scarcely any history could be got of his previous condition. His shipmate who brought him said that he had been in the same state as he was then during nearly the whole voyage, which was about two weeks; that he had fallen suddenly into this state, and had been left to himself, and very much neglected. He was very filthy. He could walk with help. Could only be roused by a loud tone to reply to the simplest question. Could scarcely be induced to swallow anything. Wanted to sleep all the time. There was no paralysis, but all the movements which he could be induced to make were very sluggish. Would draw up his legs slowly when pinched. His pupils were not dilated, but responded very slightly to the stimulus of light. Temperature was normal in the axilla, but extremities were cold and pulse slow, between 60 and 70, and very soft. He evacuated his bowels and bladder unconsciously four times while in hospital, which was during 48 hours. The only thing done for him was the administration of stimulants. He became gradually weaker and more comatose, and on the day of his death could not swallow at all. Before his

death, at 2.30 a.m., he had two convulsions, the first at 11 p. m., and the other immediately before death.

Autopsy.—There was great congestion of all the visceral organs, lungs, liver, kidneys and spleen, and of the brain andits membranes, some serous effusion into the ventricles, and a large clot of blood, involving nearly the whole of the substance of the pons varolii, and mixed with the débris of its broken-down tissue.

# Beriscopic Department.

#### SURGERY.

The Dangers of Operating on Habitual Drinkers.

Sir James Paget, in his recently published Clinical Lectures, says, (pp. 14 and 15): "One does, indeed, sometimes meet with habitual drunkards who pass safely through the perils of great operations; but these are rare exceptions to the rule, according to which one may reckon that the risks of all operations increase with the increasing degrees of habitual intemperance. I think you will find that a habit of slight intemperance is much worse than occasional great excesses; that regular soaking is worse than irregular carousing; probably because of the steady impairment of the blood and of all the textures to which the soaking leads. Of course you will keep your hands off notorious drunkards, unless you are driven by the stress of a strangulated hernia, or a stopped windpipe, or something leaving you as little choice as they do. But you must be on your guard to detect a good deal of drunkenness of the soaking kind, which is not notorious and not confessed. Be rather afraid of operating on those, of whatever class, who think they need stimulants before they work; who cannot dine till after wine and bitters; who always have sherry on the sideboard; or who are always sipping brandy-and-water; or are rather proud that, because they can eat so little, they must often take some wine. Many people who pass for highly respectable, and who mean no harm, are thus daily damaging their health, and making themselves unfit to bear any of the storms of life.—The Doctor.

#### Operation under Chloral Hydrate.

Drs. J. S. Nairne and Alexander Nairne employed Chloral as an anæsthetic during the removal of a metatarsal bone from a child three years old. They describe the mode of administration in the Glasgow M. J. Of an aqueous solution of chloral, of which 20 minums contained 12 grains, they injected subcutaneously 10 minims at 10.30 a.m. No effect at 10.38. Ten minims more injected at 10.40. At 10.55, 10 minims more injected: patient sleeps, and if awakened falls asleep again in a moment. At 11.05, 10 minims were administered by the mouth; pinching makes her cry, but she sleeps again immediately. 11.15, 10 minims more by the mouth. At 11.20 she was in a deep sleep; pinching did not wake her, and the operation was performed. During its performance she began to cry as if dreaming, but left off and was fast asleep the moment it was over. She was allowed to sleep for two hours, and then made to drink a cupful of strong tea, three-quarters of an hour after which she sat up, looking dazed, but unterrified, and oblivious of pain. Drs. Nairne tell us that the solution of chloral was too concentrated, that it made deep wounds afterwards, which, however, healed up well enough; but we may observe that a much weaker solution is apt to produce ulcers, which do not always so readily heal. Drs. Nairne add that they proposed to inject strychnia subcutaneously in cases of an overdose of chloral, as they have found it make chloroformed animals brisker. They have also found a few drops of an aqueous solution of strychnia (2 grs. to the ounce) remove the nausea and vomiting which sometimes follow the inhalation of chloral.

It will be observed that nearly an hour was consumed in administering the chloral, that even then the anæsthesia seems to have been imperfect, and that ulceration followed at the points of injection. Moreover as it is by no means clear that the method is less dangerous than the inhalation of chloroform or ether, it is not likely to commend itself to other practitioners.—The Doctor.

#### MEDICINE.

Ergot in the Treatment of Increased Mammary Secretion and Inflammation of the Breast.

Dr. J. Sehtscherbinkenhoff (Centralblatt fur Chirurg.) has had his attention drawn to the influence of ergot on the mammary gland.

During an epidemic of ergot poisoning, he observed that in nursing women there was frequently an entire cessation of milk when symptoms of ergotism appeared.

The same phenomenon was observed among cows fed with meal containing ergot.

Regarding the accumulation of milk in the glandular parts of the breast as the chief cause of mastitis, he administered ergot in many cases in which this process was in an early stage, with the happiest results. Further, during actual inflammation of the gland, the use of ergot was attended with speedy recovery. At time of weaning, the ergot caused a speedy cessation of the lacteal secretion.—The Doctor.

# Ovarian Compression in Hysteria.

Prof. Charcot sets out with stating that in the great majority of instances of hysteria there is an aura which starts from one ovary, sometimes both. And he further insists that it is only needful to maintain a decided pressure over the affected ovary in order to suspend the attack. This result, it seems, M. Charcot realized fully in a case of hys-

teric epilepsy. Whenever he compressed the left ovary, the hysteric symptoms disappeared. When the pressure was relaxed the symptoms returned. The compression is the same as that which is made use of when the iliac artery is compressed. The practice, if only its success shall be confirmed, seems calculated to be of use.—The Doctor.

#### Chronic Aortitis.

M. P. Jousset has communicated to the Paris Academy of Sciences the result of his investigations into chronic inflammation of the aorta, which he regards as a frequent disease, habitually misunderstood and confounded with heart disease or even with interstitial nephritis. The principal lesions are atheromata, milky and chalky patches, thickening and loss of elasticity of the walls, and finally, dilatation of the artery. The inflammation may spread from the arterial lining to the endo-cardium, or the reverse may occur: thus arises cardo aortitis. As concomitant lesions he mentions premature ossification of the peripheric arteries and sclerosis of the kidneys. M. Jousset speaks of two forms of aortitis—one painful, known as angina pectoris; the other painless, or nearly so, which has been the chief object of his study.

The chronic may be preceded by an acute aortitis, and alcohol, tobacco, coffee, and tea favor the development of the disease. In all the cases observed by M. Jousset the patients were over thirty-five years of age, and either gouty or the subjects of hæmorrhoids. The principal symptoms are habitual dyspnæa, with occasional paroxysms of suffocation, which have all the characters of cardiac dyspnæa. The pulse is accelerated, and at the same time becomes small and at length imperceptible. Cold sweats and syncope supervene. During the paroxysms the expiration is convulsive and prolonged. Sleeplessness, debility, and anæmia lead to a cachexia marked by ædema, albuminuria, and sub-delirium. Death takes place from syncope, asphyxia, or uræmic poisoning.—The Doctor.

## Preventive Measures in Syphilis.

Mr. Acton recently read a paper before the Royal Medical and Chirurgical Society of London, from which we make the following extracts:

His paper commenced by stating that when he returned to England, after the completion of his studies in Paris, he was greatly struck with the severity and number of cases of syphilis in London, as compared with Paris, and as a consequence of this he brought the subject before the notice of the society in 1846, and again in 1860, showing that the Belgian and French troops were much less attacked by venereal affections than the English. In 1873 he found that in districts in England where the troops were not what he called protected from the women, primary syphilis existed in the proportion of 123 per 1,000 men annually He maintained that syphilis could be prevented and stamped out by providing ready means of ablution, and destroying the local form of contagion, and warning male patients not to infect other persons. The institution of hospitals whether free or otherwise, was one remedy, for treatment of prosti-tutes as out-patients was quite inadequate. They should be segregated as soon as diseased, and not allowed to leave hospital until they are quite cured. By doing this, as at Hong Kong and Dartmouth, the disease had been reduced. to a minimum. In his visit to Brussels, in 1874, Mr. Acton had visited the Military Hospital, where he found only three cases of syphilis among the private soldiers, and two among the non-commissioned officers, out of a body of 3,500 troops. There were only nine women confined to hospital for venereal disease, showing that in Brussels the police inspection had nearly stamped out the disease. In Paris he visited the military hospitals, and could only discover six cases of primary disease, and eight of secondary syphilis, among 3,841 men forming the garrison of Paris. Disease among the females was very slight also, and Mr. Acton attributed this decrease to the police regulations.

He gave a table showing that in the St. Lazare Hospital he only found 23 cases of primary disease among 202 patients in this prison, which is under the police surveillance. With respect to England, Mr. Acton said that Parisian medical men alleged that British travellers, like sailors, were the cause of much of the disease, and that the disease would ere now have been stamped out had it not been that England and other similar countries went on continually introducing fresh cases into Paris. In London he found 24 cases of primary disease among 408 single soldiers in the 2nd Battalion of the Coldstream Guards quartered in London. In the first battalion of the Scots Fusilier Guards he found 25 cases of severe forms of syphilis among 505 unmarried men. He handed in a table extending over a year, which showed that one-fifth of the whole number of troops quartered in London in 1874 were affected with primary sores. which would have incapacitated the men from duty for a period of six weeks on an average. Perhaps 164 of these men would have secondary disease, requiring mercury, which would further incapacitate them from duty for a period of two months or so, and this would debilitate them greatly. Comparing the syphilitic affections of the Foot Guards with those among the troops quartered in Paris, he showed that 500 troops in London had more disease than 3,841 quartered in Mr. Acton considered that one-half the prostitutes in London were diseased; whereas of those in the districts under the Contagious Diseases Acts only about 8 per cent. were found affected at periodical examinations. It appeared that at Woolwich, during 1871-2-3, only 1,085 cases of primary sores were treated in hospital, out of a garrison of 18,250 men, or only one man was infected in 17 soldiers, instead of 1 in 6, as in London. He therefore in conclusion, looked upon the advantages of supervision of prostitutes as no longer a problem, but as an undoubted fact: St. Louis Clinical Record.

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Physic in Food.

Watercress has long had the popular reputation of being a powerful antiscorbutic. Probably all the *Crucifaræ* eqully deserve this title. M. Dupuy says that the plant contains an essential oil of which sulphur forms a constituent, and that he has also discovered in cress—iodine, iron, a bitter extract, and phosphorus. He therefore adds these minerals to the soil to increase the quantity in the plant and then prepares s succus. He has established cress-gardens for the culture of this plant in order, as he says to vegetabilise (!) the minerals which gave it such important properties.

This reminds us that long ago an Italian writer proposed to obtain iodized milk for his patients by feeding cows on hay sprinkled with a solution of pottasium iodide. We wonder if the cows would like the flavour- More recently an English writer says that the cows on the Island of Ushant, off the coast off Brittany, feed principally on sea-weed, and that consequently their milk is particularly rich in iodine; and it is proposed that this milk be used for the cure of diseases benefitted by iodine, as it does not produce the constituional disturbances that often result from the administration of iodine in other forms.

Last of all it has been reserved for a French Physician to iodize eggs by electricity. The arrangement employed can be easily understood when we say that he conveys the iodinein to the egg by what we may call electrolysis

By any of the above methods physic is to be put into the food of invalids without imparting any disagreeale flavor.—The Doctor.

Note on Salicylic Acid. By Edward R. Soibb, M.D., Brooklyn, N.Y.

This substance long known as a rare and curious chemical derived from the vegetable kingdom, has lately been brought into prominent notice, chiefly in Germany, from its relation to those changes which are commonly known, and best understood as fermentations, to which class or kind of

changes so many diseases and pathological conditions are now prettty well known to belong. The writer knows far too little of the subject and its relations to attempt an accurate or exhaustive paper upon it, and the object of this note is simply to call attention to it, that it may be read up in the current literature—to give a brief outline of its bibliography, that reference may be made in regard to its history—and to offer some thoughts in regard to its sphere in medicine.

Salicin is a glucoside, or neutral vegetable principle discovered by Leroux in 1830, in the bark of some species of willow, Salix, whence its name. It was afterwards found in various species of poplar, and in other trees and plants. Salicin was chiefly investigated by Piria who gave an elaborate account of its derivatives, and among these of salicylic acid. Early in its history the acid was prepared by Lowig and Weidmann from the flowers of Spirea ulmaria; and later, a research by Prof. Proctor, of Philadelphia. showed that our oil of wintergreen, Gaultheria procumbens, was really a salicylous ether; and from this source salicylic acid was obtained by Cahours. Gerhardt, Ettling, and others contributed to the researches by which the properties and reactions of salicylic acid were accurately determined and its composition fixed; but as yet it was a chemical curiosity whose potential possibilities were quite unknown. belonged to that class of substances which had simply consumed a large amount of patient labour, and in relation to which the rigid utilitarian asked Michael Faraday "What is the use of such things?" and received for reply the answer. "What is the use of baby?"

The physiological and pathological effects of salicin though imperfectly investigated, seem to have gradually and slowly directed attention to those of its derivatives, and occasional paragraphs have appeared in current scientific literature, from time to time, upon salicylic acid for some years past. But only within a year or two—and the writer regrets that he does not know by whom first—German

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writers have alluded to its peculiar and powerful effects as an antiferment, and antiseptic. As its peculiar powers are recognized, and its importance become possible and probable, the sources from which it had been obtained as a chemical curiosity became impracticable, in consequence of the small quantity which could be obtained from them, and the great cost in material and labor.

The next step in the progress of salicylic acid toward practical utility affords an excellent illustration of the progress in chemical knowledge made of late years.

The modern chemist appears to know, within certain limits, the combinations of the elements in organic substances very much as he knows the axes of crystals, and hence deduces their planes of cleavage. That is he knows how they will split up under given conditions, and what new arrangements of their elements are possible or even practicable. And further, he knows by pure reasoning upon facts, what new elements to introduce between the molecules of one combination to split it up by a new set of affinities into new combinations never before seen or reached, and which would have remained long unknown under the mere empirical researches of the older chemistry. The peculiar properties and reactions of salicylic acid as an antiferment producing a demand for it, the German chemists, Kolbe and Lautemann, sought for an organic compound which from its elementary composition might be split or dissociated into the desired new compound salicylic acid-This substance, whose molecule might be broken up, they found in phenol, or the so called carbolic acid, and it is a very curious circumstance—purely accidental so far as this writer knows—that a substance of well and long established character as an antiferment, should have offered to these chemists a molecular constitution so well adapted to be broken up into a still more powerful antiferment; for there is no relation whatever, either in composition, or chemical, or physical properties between carbolic acid and salicylic acid, except in their effects as antiferments, and the two may,

so far as present knowledge extends, accomplish these effects by similar, or by altogether different reactions. The agent which the German chemists selected to resolve the molecule of phenol into other molecules, one of which should be salicylic acid, was dry carbonic acid or carbonic anhydride as it is called in the new chemistry. Thus from the action of carbonic acid on carbolic acid, salicylic acid is produced, a process which is about as far from the original willow tree as a source of the acid as can well be imagined, and yet a process which is as much the result of human knowledge based upon human research as that by which Le Verrier and Adama discovered the planet Neptune. It appears that where phenol or cresol, and perhaps others of the class of phenols, are combined with an alkali metal such as sodium or potassium thus forming phenol sodium (often called phenate of soda) for example, and well dried carbonic anhydride is passed through the dry powder of phenol-sodium heated to 100 ° to 250 ° C.=212 ° to 482 ° F., the reaction occurs which produces salicylate of sodium and other compounds. The salicylate of sodium thus formed is dissolved in water and decomposed by hydrochloric acid which uniting with the sodium by superior affinity, sets free the salicylic acid in the forms of small crystals. These crystals are washed and re-crystallised from a hot solution, and when dried form a crystalline powder of a light brown colour somewhat resembling in colour the powder of pale cinchona bark. This is unbleached salicylic acid, and is probably pure enough for almost all, if not for all, the purposes to which the acid is at present applied to practical uses. The small proportion of colouring matter which it contains in this condition is held by it with great tenacity, and the future processes by which it may be obtained of various shades up to whiteness are so difficult, troublesome, and expensive, that they more than double the cost of production. This bleaching may be accomplished in various ways to a certain extent, but to get the acid quite white, Kolbe recommends that it be converted into an ether,

and this ether be again decomposed. In the writer's practice no good plan of decolourising has yet been reached, and as the decolourising has not yet been shown to be necessary or very useful, no great attention has yet been given to it. The acid imported from Germany at very high prices is occasionally quite white; but most of that sold at the more moderate prices of 2 to 3 dollars per ounce is of various degrees of whiteness, up to a very light cream colour with a reddish tinge. These varying shades of colour seem to show that bleaching processes, more or less effective, have been used with all the acid yet imported into this country; while, so far as known, none has been made here until the writer lately undertook it. Hence the entirely natural, or entirely unbleached acid, has not, so far as known, been yet used to any considerable extent; and it is a mere reasoning process based upon the quantity and qualities of the colouring matter in the well-made unbleached acid by which it is inferred that for most, if not for all of its present uses, this is as good as the more or less bleached product. If the well-made unbleached acid be found to subserve all the useful purposes to which the substance may be applicable, as is confidently expected by this writer; and if the substance of its importance in the arts, and in medicine, as ' indicated by the European authorities, the process of Kolbe will make it practically attainable in the necessary quantities at a far lower cost; whilst without some such process it would be of very limited use to mankind, whatever might be its powers. Whether bleached or unbleached, the acid is in minute broken acicular crystals, which give it the appearancs of a granular powder, soft and smooth under the pestle or knife, but somewhat rough or resinous when rubbed between the fingers. This powder is inodorous and nearly tasteless. It has, however, a sweetish and astringent after-taste with slight acridity in the fauces, but none in the mouth; and though tasteless, it leaves a disposition or inclination to expectorate, which continues for some time It is practically insoluble in cold water, but is very soluble

in hot water; and the water of a hot solution retains when cold, in proportion to its coldness, from about I part in 250, to I part in 500 of the solution. The presence of various neutral salts in small proportion in the water render it far more soluble. Up to this time phosphate of sodium seems to have been chiefly used in Germany to render it more soluble in water for medicinal purposes, and it is said that 3 parts of phosphate of sodium will render I part of the acid easily soluble in 50 parts of water. It is much more soluble in alcohol and ether than in water. It melts at about 125° C.=257° F., and sublimes at about 200° C.=392° F.† In common with other similar acids it forms salts with the principal bases, but these seem thus far to be difficult to make, and their effects have not been investigated.

It is used for medical and surgical purposes either dry or in solution. When used dry it is sprinkled on to wounds, ulcers, or dressings in the form of very fine powder, in very small quantities, either simply powdered or mixed in various proportions with some diluent, such as starch. When used in simple solution either for spraying surfaces, or for washes or gargles, it is used in tepid solution of about 1 part to 300 parts of water. Where stronger solutions are required for washes, gargles, or to moisten dressings, 1 part of the acid and 3 parts of phosphate of sodium to 50 parts of water have been used. When applied to wounds it appears immediately in the urine.

Its alleged advantages over all other antiseptics are: First, that it is far more powerful and effective in smaller quantities; and secondly, that it is, in all quantities necessary for complete effectiveness, entirely devoid of irritant action upon the living tissues, It is not caustic nor corrosive in any quantity, and never produces inflammation. In large quantities it may be irritant and painful, but rarely surpasses a stimulant effect, while it appears to be quite neutral in the very small quantities which are yet thoroughly effective; thirdly, it is said to reach and prevent processes

of decomposition which are beyond the reach of all other antiseptics or antiferments. These processes are of two kinds, namely, vital, or those in which living organisms have an important part, such as that produced by yeast and many of those which occur in putrefaction; and chemical, or those which occur independent of vitality, as the production of the volatile oils in mustard and bitter almonds, the effect of diastase &c. Now, while carbolic acid and other anti-ferments are azymotic, or completely arrest or prevent fermentations of the first kind, they are powerless with the chemical processes. Salicylic acid is said to be more effective with the vital ferments, and equally effective with the chemical.

Fourthly, in quantities said to be thoroughly effective, it is entirely odourless and tasteless, and harmless, whilst it has no poisonous effect in any reasonable quantity.

It prevents or arrests the souring of worts, washes, and beers of the brewers, and prevents or arrests the putrefactive agencies which are so troublesome and destructive to the glue manufacturers; and these and similar trades have thus far seemed to be its principal consumers. Separate portions of fresh milk set aside to become sour, one to which 0.004 per cent. of salicylic acid was added, soured thirty-six hours later than the other. Urine thus protected was on the third day still clear, and free from ammoniacal odour.

Varying proportions of the acid added to accurately measured separate portions of sweet milk, and these carefully observed afterward until they sour—or, by the use of meat juice instead of milk, observed closely for signs of putrefaction—would offer good indications of the quantities required to arrest these varieties of fermentation.

Professor Thiersch, of Leipsic, used it upon contused and incised wounds, and in operations, with excellent general results, destroying the fetid odour of cancerous surfaces and pyæmic ulcerations. To such uses this writer would add the suggestion that for washing out the cavities of the

abdomen and chest after those operations which tend so strongly to septicæmia, solutions of salicylic acid would seem to offer very great advantages should it prove to be as bland and unirritating as it is stated to be, and yet so effective.

Most of these statements are summed up from the periodical literature of continental Europe during the past six months, little having appeared upon the subject in Great Britain, or in this country, and nothing having been done with it so far as known in either county.

In occasional paragraphs and allusions benzoic acid has been coupled with salicylic acid as being only second to it in effectiveness as an anti-ferment, and with similar advantages

These statements are collated and condensed here as being well worth attention in themselves, and in their relations to the phenomena of septic poisoning as already known. But they have a new significance, or at least suggest to this writer a new train of thought when viewed in connection with some researches now in progress and but just appearing in the periodical literature.

Experiments were made upon animals by the injection of measured quantities of septic blood. The blood of a healthy animal was allowed to become putrid. Increasing doses of this were injected into healthy animals until the amount necessary to cause death was ascertained. This quantity proved to be large, the animals recovering from all the small doses. Blood from the animal whose death was caused by injections of putrid blood was injected in increasing doses into healthy animals until the fatal dose was reached, and this dose was found to be smaller than that which killed the first animal. The blood of the second dead animal was used on healthy subjects in the same way as that of the first, and proved fatal in still smaller quantity. The experiments were continued upon the same plan until finally a point was reached when a very minute portion—the fraction of a drop perhaps—from the last animal proved fatal to the next, with more violent toxic symptoms

and a shorter course. The important indications of this series of experiments is of course the rapid accumulation of potency in septic poisoning. And the question put by this indication is not only as to how this potency accumulates, but also how to prevent and arrest it. Metroperitonitis and common pyæmia would, doubtless, unobstructed, accumulate potency in the same way without visible inoculation, and often do continue and acumulate even against the vigorous application of the best means of prevention yet known. No hypothesis can be constructed that will embrace the phenomena of septic poisoning, as they are now rapidly being investigated without including zymotic diseases and the cachexiæ, and none will account for the phenomena already observed without bringing it within the sphere of what is called, in some of its degrees or phases, fermentation. Hence if the medical art is to keep pace with the progress of the physical sciences, physicians cannot afford to pass by such articles as salicylic and benzoic acids when offered by chemistry, without investigating their effects upon disease, even though not one out of ten should repay the labour of investigation, for it is certainly in this direction of research that medicine must look with greatest hope of success to control those abnormal vital processes which so far may be modified, but not stopped. For example; Suppose a primary syphilitic or cancerous sore, or a diphtheritic patch, or even a cachectic pulmonary infection, while these are merely the localised phenomena of an external inoculation, or of an internal taint,—they must all be considered to partake of the nature of a fermentation, and by some such process invade the whole organism. Then supan anti-ferment, which when the islated any surface not covered by an impervious cuticle very soon appears unchanged, first in the blood, and then, in the secretions and secretions,—the manifest logical antagonism of such substance to the diseased conditions becomes too important to be neglected, and the counsels of wisdom demand that its claims to such antagonism be disproved before it be dis-

missed. The question as to what may become of the cancer-cell, or of the less tangible precedent cause of it, or of the bacteria, or the precedent conditions which increase their fertility, under the well-directed influence of this class of agents, is, perhaps, the most important one in all medical science. And just in proportion as accurate research developes agents of greater and greater power, will be the prospect of better succes in treatment.

The phenols, especially the so-called carbolic and cresylic acids (phenol and cresol), were, and must always remain to be, most important additions to this class of agents, surpassing in power all that had been previously tried. And if now salicylic acid shall prove more potent than the phenols the further gain will be very great, and the researches upon it will again lead up toward future discoveries of still greater power.—Chemical News.

On a Case of Nearly Complete Deafness of One Ear, after an Apoplectic Seizure. By J. Hughlings-Jackson, M.D., F.R.C.P., Physician to the London Hospital, and the Hospital for the Epileptic and Paralysed.

That different kinds of ear disease occur with different kinds of nervous symptoms in different kinds of relation is well known. I have never known, however, complete deafness after apoplexy of any kind. I here use the word apoplexy in its wide sense, as including sudden coma from many causes. It is believed that disease of the labyrinth will cause grave nervous symptoms mostly vertigo with retching and vomiting. The labyrinthine disease, it is supposed, may be either primary—a hæmorrhage in it, for example-or secondary, there being increased pressure in the labyrinth, consequent on disease in the tympanum. think, considering that there is what Knapp calls limitation of the field of audition, in the case which I am about to relate there is disease of, at any rate, the cochlea, and probably there has been a sudden hæmorrhage. It is not certain, however, that a hæmorrhage in the labyrinth, however sudden and extensive, would produce such deep apoplexy as this patient had; his coma was like that from a large cerebral hæmorrhage. I think there may have been a separate lesion to produce the apoplexy. I suggest the possibility of another lesion because I do not think that any disease of the encephalon, which might account for the apoplexy, would produce deafness. I except, of course, disease of the auditory nerve or its nucleus; but of disease of this nucleus I knownothing. It may be theoretically maintained that a hæmorrhage in the medulla would produce the two symptoms—deafness and apoplexy. But diagnoses without the anticipation of post-mortem examinations are not very profitable in case like this. My patient was we'l in general health when I saw him last, and I hope he is so still. His case is of sufficient clinical rarity to deserve record

At 9 p.m. on Christmas-day, 1871, I saw with Dr. Fredrick Marsh, a man, forty-eight years of age, who was suffering from apoplexy. He was profoundly unconscious. I could find no local paralysis. I regret that I did not take any notes of the case. I never expected to hear of him again. We both of us beleived the man was dying. It was a case of apoplexy; there was deep coma, and the question in my mind was whether the case was one of simple apoplexy or of large clot in the pons Varolii. Having seen a good many cases of apoplexy, I was able to come to the conclusion that I did not know, or, as I may be permitted to put it, that there was no evidence to warrant a diagnosis. I mention these things to show that, at any rate, the case was severe, and one likely to prove fatal. To my astonishment I heard, some weeks later, that the man was well again, except that he was deaf. As this was a rare sequel of apoplexy of any sort, I asked Dr. Marsh to send the patient to me. From the patient's wife, and from the examination of the patient I took the following notes on March 7:—

On Christmas eve, about 10.30 p.m., he blew his nose

very violently, and afterwards said he had pains from the back of his head down the spine to the calves. He then turned "on his stomach and on his hands and knees" with pain, seemed to faint, and then became unconscious. As I say, when I saw, him about twenty-four hours later, all I could determine was that the patient was apoplectic and, as I thought, dying. His wife told me that he came fully to himself in about fourteen days, but as he spoke in four days and seemed to know his wife, he was probably only partly unconscious the latter part of the fortnight. When he got out of bed at the end of the fourteen days he tottered, but only slightly. But he was deaf; at first he thought it was his wife who could not speak.

When I saw him his general health was good. There was no albumen in his urine. There was no paralysis and he did not reel. His optic nerves were normal. The only alteration made in him during the apoplexy was the deafness of the left ear.

He had for twenty or thirty years been considered deaf of the right ear, but now the right ear is the only useful one; he calls it his good ear, but he can, with it only hear when his wife puts her mouth close to it. The state of hearing on the "bad" side may be inferred from this state of the "good" ear.

He could not hear the tuning-fork placed on his forehead in either ear; when placed on the left mastoid process he heard it faintly. Moreover, he spontaneously remarked that it was the note C; this was engraved on the fork. He himself found out this and mentioned to me that he could hear the tapping together of two wooden stethoscopes better with his worse (left) ear, and that "it was very remarkeable" that he could hear the nipping together of his nails on the left side, and not on the right. A medical friend helped me in my examination, and reported that both membrana tympani were concave, but the right the more; the Eustachian tubes were open.—The Medical Times and Gazette.

### CANADA

## Medical and Surgical Yournal.

MONTREAL, SEPTEMBER, 1875.

# THE CITY BY-LAW TO ESTABLISH A BOARD OF HEALTH.

We have before us a copy of the by-law of the Corporation of our city "for the establishment of a Board of Health "in the city of Montreal, to enforce an efficient system " of vaccination, and to provide sanitary regulations for the " said city." This is the objectionable document which gave rise to the uproar and breach of the peace which recently While not in any way giving countenance to extreme measures, we must say that from the tenor of some of the provisions of this by-law we are not at all surprised that it had such a remarkable effect on the people who gave way to riot and disturbance. For instance, in clause 17 we read: "The Board of health shall have power to take effec-"tual measures to prevent the entrance of any contagious " or infectious disease into the city, to cause any person in " the city infected with such disease to be sent to the contagious " disease hospital, or such other place as the said board may "determine upon." This particular clause (the italics are ours) if the by-law had been passed would have occasioned endless trouble, and would in many instances have been resisted. It is hard enough to suffer from disease which is preventible, but to have superadded the infliction of removal to a pest house without one's consent is to say the least highly objectionable and would be justly resisted. We are perfectly in accord with those who believe in isolation, but the measures for attaining that isolation should not be extreme or else they will not work.

Again, at clause 25 we read. "Immediately on a case of "small-pox or typhoid fever, or any contagious or infectious "disease being reported to the board of health one of the "medical officers shall visit it, and ascertain whether in his " judgment removal to hospital or such other place as the "said board may determine upon is necessary, and if such " removal be decided upon, the patient shall be immediately "conveyed to such hospital or other place in the ambulance "provided by the health department for that purpose." Let us take this home to ourselves and ask the question whether with Spartan stoicism we would peacefully stand by and permit the removal from our own nurturing care, of a wife or child and that at the dictum of an officer of health. a person whom we do not know, perhaps have never before seen, and in whom we have not the slightest confidence but then as if to add insult to injury the sick person is placed in a filthy vehicle styled the city ambulance to be conveyed to a hospital which is yet a subject of contemplatiom and not of fact. Before any such by-law is enacted, the city must provide a suitable establishment, with all the appliances necessary and not a make shift such as exists in the Hall House in the mountain park. We have heard much of a fifty thousand dollar grant for the purpose of erecting a small-pox hospital, but so far there has been nothing but talk on the subject. The city council must give the citizens an carnest proof of its honesty in this matter, otherwise it will not be seconded in this attempt at sanitary reform. We do not suppose that the measures before us would have passed without very considerable modifications And it is to be regretted that it was brought up at all, unless at a full meeting of council, to be then coolly and dispassionately discussed, and all objectionable clauses struck out. It is greatly to be lamented that so much fuss has been made over the disturbance which occurred at the City Hall on a late occasion when this city by-law was infroduced. rioters were composed chiefly of persons without any stake in the city, many of whom went there we doubt not with

purposes of plunder. We believe that they would have been dispersed by a corporal's guard of resolute men and the honor and dignity of the city preserved. With regard to compulsory vaccination we think it is a matter for the Dominion Government to legislate upon and not the municipality of any one city or town. It is a subject of vital importance to the inhabitants of this growing country, and should engage the earnest and careful consideration of the highest legislative tribunal amongst us. Compulsary vaccination has in other countries almost stamped out the disease small-pox. We cannot conceive why our French Canadian fellow colonists are so averse to vaccination. Let any unprejudiced person stand at the door of any one of their churches, when the vast congregation is dispersing to their homes after service, and he will observe that every second face presented, exhibits the marks more or less of small-pox. Let him now turn to a catholic church of Irish or old country worshipers, and it will be exceptional to observe a single seared or pock pitten countenance. We will not seek to ascertain the cause of this difference, it is not a question of race or of religion, but of education. The French Canadian does not fear small-pox, heroically he will expose himself and those dear to him to the chance of contracting that disease, the possibility of preventing its spread through his family, does not appear to enter into his calculations, and should death remove a victim or two he with the Turk exclaims that God is great and the event was inevitable. This state of things proceeds from an imperfect knowledge of facts. Our French Canadian is proud of his origin and continually speaks of La Belle France as though no other country on the face of this globe existed where almost perfection was to be met with. We honor him for this love of the country of his forefathers, and as a British Canadian we confes to a like feeling as regards Merry England, but if he would put in practiae with the same earnestness the sanitary measures adopted by France in this question of vaccination, the coming race of French Canadians would be as free from the ravages of small-pox as are the people of old France.

#### THE CANADIAN MEDICAL ASSOCIATION.

In another column will be found Dr. Botsford's address at the opening of the eighth annual session of the abovenamed Association which for this year met in the city of Halifax, N.S. In the course of that address the worthy President drew attention to the subject of Registration of of Births, Marriages and Deaths, stating that in some of the Provinces of the Dominion the custom of registering these events does not exist. We question if there does exist in any of the Provinces a system of registration which can be regarded as reliable.

In Ontario, we believe, that some two or more years since, a registration act was introduced into the local house and became law, but the mischief of the thing is in leaving these matters to the local legislatures of each Province to act upon. The Province of Ontario finding that vital statistics were not attainable in the absence of a registration act, and recognizing the many difficulties of obtaining such an act from the General Government, decided on introducing and pressing such an act through the local house. Ontario has set us an example of progress for which she deserves a full meed of praise, and we trust that this action of our sister Province will be followed by the other Provinces.

In this Province we are badly off if this matter is left to the local authorities, as the powerful influence of the Roman Catholic Church will be brought to bear to crush out any contemplated move in the right direction. We were highly gratified to observe the reference made to this important subject by the President in his address, and still more so to notice that at his suggestion a committee of associates was named for the purpose of memoralizing the general government on the subject of a comprehensive act of registration of births, marriages and deaths for the whole Dominion, and he expresses a hope that this movement on the part of the Canadian Medical Association will hasten that most to be desired action of the Dominion Legislature."

#### ROYAL COLLEGE OF SURGEONS, ENGLAND.

We record with pleasure that R. F. Gcdfrey, M.D., Bishop's College, Montreal, and R. A. Stevenson, M.D., McGill University, passed the necessary examinations for the diploma, and were admitted members of the Royal College of Surgeons of England on the 22nd of July last. Dr. Godfrey is the eldest son of our esteemed fellow citizen Robert Godfrey, M.D., Professor of Hygiene, McGill University, who is at present travelling in Europe with his family.

#### A REMARKABLE CASE OF WORMS.

(From the White Cloud Chief.)

An old man named Christel Poff, of German descent, living in Missouri, in the locality known as "Cracker's Neck," has been for years afflicted with a disease, which took the form of inordinate thirst, that water would not allav. He grew worse from year to year, until finally he became partially insane, and imagined that all manner of reptiles were after him. About this time a celebrated physician of the Uroscopian school happened in the neighbourhood, and was called in to examine the case. Having applied the tests used in his practice, he pronounced it a chronic case of worms, and immediately set to work to compound a remedy from well known vegetable medicines. The mixture was composed of equal parts of castor oil wormwood, tansy, rue and assafætida. After administering repeated doses of this compound, he finally succeeded in starting the patient to vomiting, when the whole cause of his disorder came to light. He threw up ten fish worms, three lamprey eels, seven crawfish, one mud turtle, five lizards, two tree frogs, one bull snake, a section of a snake fence. and the worm of a copper still containing sixteen coils. He at once complained of being better, and has steadily improved ever since.

He has no idea how or when these things got into his stomach, but remembers having taken a drink of water when a boy, which act was performed by lying on his stomach.