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# THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE,  
CRITICISM AND NEWS.

VOL. XVIII. TORONTO, NOV., 1885. No. 3.

## Original Communications.

### THE RELATION BETWEEN EPIDEMIC ERYSIPELAS AND PUERPERAL FEVER.

BY J. E. JENNER, M.D., C.M., L.R.C.P. L., PICTON, ONT.

About the middle of the last century an epidemic of puerperal fever broke out in Paris, and an eminent French physician writing on the subject, stated that the puerperal fever then prevalent was an erysipelas of the peritoneum. But this view did not attract much attention for about a hundred years, when several English and American writers published, almost simultaneously, accounts of numerous epidemics as well as isolated cases of puerperal fever evidently traceable to erysipelatos inoculation, and now the intimate and reciprocal relationship existing between these two diseases is admitted by all authorities, the poison of either disease being capable under favorable circumstances of producing the other. Thus, puerperal women exposed to the poison of erysipelas are almost certain to contract puerperal fever, and their babes frequently die within a few days of erysipelas neonatorum. On the other hand, wounds dressed by a surgeon in attendance on puerperal fever patients, often take on an erysipelatos nature. Dr. Cox relates, that a physician having bled an erysipelatos patient, soon afterwards used the same lancet to bleed a man injured by a fall and also a woman in labor. The man developed an attack of phlebitis and the woman of puerperal fever.

An instance which occurred in my own experience well illustrates the reciprocal relation between these two diseases. In April, 1884, I was called to see a woman who was "flowing badly." Her husband told me she was in the sixth month of pregnancy and had miscarried the day before. When I saw her she was quite blanched, the bed-

ding was saturated with blood and about a quart of clots were lying on the sheet. She had lost considerable blood the day before and was still flowing pretty freely. Having a fair pulse and not manifesting symptoms of immediate collapse, I determined to remove the placenta at once, which could be felt protruding from the os and partly in the vagina. Being accustomed to taking stimulants freely, I gave her a glass of brandy and water, and inserting my hand into the vagina, detached the adherent portion of placenta by insinuating two fingers between it and the wall of the uterus, first having tried—without success—Credé's method of expression. (The placental attachment was at the "meridian zone."—Barnes). I had no difficulty in removing the placenta and am satisfied it came away entire, and that no portion of the secundines were left behind. The hæmorrhage ceased immediately; I gave her two grains of opium in powder and washed out the uterus with a 2% solution of carbolic acid, using at least two quarts, the water being as hot as my hand could bear it. There was neither hæmorrhage nor pain after this, save some intermittent after-pains, the result, I presume, of the ergot I had given her immediately upon seeing her. This was in the morning; about 2 o'clock that afternoon she had a marked chill and when I saw her in the evening her temperature was 102.5° F. I again washed out the uterus and left two 10 gr. powders of quinine to be taken during the night. She had no pain whatever. The following morning I found her very restless and anxious about her condition, the features cold, pinched and bloodless, the expression haggard and anxious; temp. 104.5° F., pulse 140, resp. 48. There was profuse sweating, had been a rigor about an hour before, and the extremities were cold. She had all the symptoms of malignant puerperal fever, and died on the fifth day. I was at the same time attending a case of phlegmonous erysipelas some miles away, and although I had taken the precaution to disinfect myself thoroughly and change my clothing, I believe I was the means of carrying the infection to my puerperal patient. She had miscarried on several occasions before. On the evening after her funeral two of her children, a boy æt. 13 years and a girl æt. 6 years, were suddenly attacked with vomiting, sore throat and headache. I saw them on the day following and pronounced them both cases of scarlatina. The next day the

rash covered the body and there was then no doubt as to the nature of the disease. Both patients did well on the simplest treatment, the type being a mild one, they had reached the beginning of the fourth week, desquamation was almost completed and both children had been up some time—though this was contrary to orders—when the little girl manifested symptoms very similar to those which ushered in her recent illness. Her father prescribed some domestic remedies, salts, smartweed tea, etc., but the patient getting no better—but rather worse—he sent for me on the third day. I found the patient excited and tremulous, face flushed and swollen on one side; pulse 160, quick and full; temp. 104.5° F. She had intense headache and delirium at times, a dry, brown, tremulous tongue. Behind each ear was a patch of eczema, which had broken out afresh since desquamation after scarlatina. Her father said “she was subject to sore eyes.” The right ear was swollen to several times its normal size, and large blebs full of sero-purulent fluid were to be seen. The redness and swelling had spread well over the right side of the scalp and face, the right eye being swelled shut. The case was obviously one of cutaneous erysipelas of the head and face, the point of departure being doubtless the eczematous sore behind the ear. The inflammation extended over the head, face and neck, travelling over the entire trunk and down the extremities to the knees and elbows, where it stopped. In its progress over the body and limbs, the redness advanced about two inches each day and did not last longer than forty-eight hours in one place, fading away in about two days. The margin was well marked, raised and irregular. The temperature ranged between 102° F. and 104° F., until the beginning of the fourth week, by the end of which it had subsided entirely, and the skin—after a thorough washing with soap and water—had resumed its natural color and appearance.

I ordered rest in bed in an airy room, shaved the head and put on hot linseed-meal poultices, and painted the face and soft parts with a mixture of collodion and castor oil—equal parts. Prescribed quinine, iron, and chlorate of potash in full doses, digitalis and other diuretics as required, and restricted the diet to fluids, milk eggnog, beef tea, animal broths and some farinaceous food, keeping the bowels relaxed by castor oil, glycy-

rhiza and other mild aperients. The local treatment of the body and extremities consisted in poultices until the redness disappeared, followed by inunction with Kentish's ointment, repeated each morning for two or three days. There was some albumen in the urine, probably the sequel of the scarlatina she had just recovered from.

On the third day after I was called to see this patient, her brother, who had accompanied her through the attack of scarlatina, also developed erysipelas. In his case the eruption was confined to the mucous membrane of the nares, the bridge of the nose and the soft tissues below the eyes. It was perfectly symmetrical, and both nares were almost occluded for a time. His temperature ran up to 103° F. for a few days, with other constitutional symptoms of a mild type. Free action on the bowels, with quinine, iron, and chlorate of potash, rest in bed, topical application of ol. ricini and collodion, with the usual precautions in the matter of diet, sanitation, etc., constituted the treatment in his case. In a week he was quite well.

REMARKS.—Since the mother's death these two children had slept in her bed with the father. None of the other members of the household had been thus exposed, and there were several small children in the house, among them a babe two months old, belonging to the housekeeper. None of these suffered from either disease. Though the bed-linen and coverlets had been washed and thoroughly cleansed after the mother's death, and the mattresses and pillows aired, I still think that both the scarlatina and erysipelas in these two children may have been due to infection from the puerperal fever poison, by sleeping in the same room and on the same bedding so soon after the mother's death. There were no other cases of erysipelas in the neighborhood, and although scarlatina had appeared in the school, neither myself nor any members of the family had been exposed to the disease. Many authorities believe a close relationship exists between scarlatina and puerperal fever, but whether this relationship be reciprocal or not, is, I think, not yet established.

It is laid down as a rule and taught in the schools, that when a practitioner has been unfortunate enough to get a case of genuine puerperal fever, he should at once give up his midwifery practice for a period of at least three weeks, and

devote his attention in the meantime to daily ablutions until he is purified from the contaminating influence which attends him. Now if it be true, as it undoubtedly is, that the contagium of erysipelas is capable of developing in a puerperal woman genuine puerperal fever—and indeed the opinion is prevalent among the French that every case of puerperal fever is an erysipelatous inflammation of the peritoneum—it follows that during epidemics of erysipelas the practice of midwifery must be relegated entirely to inexperienced women—technically called midwives. There is no doubt that the doctor assumes some risk in attending the lying-in chamber while being daily exposed to the virus of erysipelas; still I believe it is quite possible for the accoucheur to so thoroughly disinfect himself, as to guard effectually against the danger of communicating such specific poison to his patient. During the past spring an epidemic of erysipelas spread over this district and several deaths from it, as well as from puerperal fever, were reported. One woman was confined in the same room where slept a child suffering from suppurating erysipelas of the head and face. She died from puerperal fever six days after confinement. The child was removed as soon as the physician arrived, but too late to protect the woman, who was already through with her labor and had flowed some before the doctor reached her.

I continued my midwifery practice as usual, although I was at the time in daily attendance on cases of erysipelas, some of which were of the phlegmonous variety, which is said to be more virulent than the simple cutaneous non-suppurating type. I adopted a rigid system of disinfection daily, taking a general bath after returning from my erysipelas patients, sponging the body—especially the hair and whiskers—with a carbolic lotion, using carbolic acid freely in the lying-in room; never wearing clothes that had been exposed to any infectious diseases. I handled my patients as little as possible, and used as a lubricant, carbolized tallow softened with turpentine. I observed in two cases where there was slight laceration, and where I was extremely anxious to guard against septic absorption, keeping the raw surface covered by a piece of lint soaked in a 2% solution of carbolic acid and using a carbolized vaginal douche three times a day, that after forty-eight hours the patients suffered retention of urine; using the

catheter and discontinuing the use of carbolic acid for a couple of days, had the effect of restoring the normal function of the bladder, which I believe was paralyzed by absorption of the acid. My precautions may have been overdrawn, but I had the satisfaction of seeing all my patients do well, not one of the twelve I attended during the epidemic manifesting any symptoms of septic poisoning.

### THE GROWTH OF A PROFESSION.

*Abstract of the address delivered before the Canada Medical Association, in Chatham, Ontario.*

BY WILLIAM OSLER, M.D., M.R.C.P., LOND.

President of the Association, Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia.

The incorporated body of the profession in each province of Canada is variously known as the "College of Physicians and Surgeons," the "Medical Council," or the "Medical Board," and, as you are all well aware, by the Act of Confederation, each province is left to regulate its own educational affairs. Within the past ten or twelve years, so many important changes have been effected, particularly in the older provinces of Ontario and Quebec, that the boards are gradually approaching a state of efficiency.

As regards education, the ideal board should perform the following duties: 1st. Test the fitness of young men to enter upon the study of medicine; 2d. Order the curriculum in a manner best suited to the country and the requirements of modern medicine; and, 3d. Control absolutely the examinations for the license to practise. Upon each of these points I propose to make a few remarks, referring particularly to existing conditions:

1. Preliminary education and matriculation. In most of the provinces a thoroughly satisfactory system prevails, and a young man, before entering upon the study of medicine, must give evidence that his general education is of such a nature as will enable him to pursue intelligently the study of a learned profession. A board should control its own matriculation examination, and should accept no other. It is directly responsible to the profession that no incompetent person shall be admitted to study. The check comes lighter to a young man, and is more easily borne at this time

than later in his career. The examiners should be independent persons, engaged in general teaching and there should be at least three or four. No one man can conduct a preliminary examination with entire satisfaction. The organization of the board of matriculation examiners in Quebec should serve as a model for all the other provinces. It was a decidedly retrograde step when the medical council of this province relegated the entrance examination to other hands. And the acceptance of the intermediate High School certificate is not without its disadvantages. Throughout Canada the subjects for matriculation have always closely followed those recommended by the British Medical Council, and embrace the elements of a good general education, with a fair amount of Latin. To these special subjects have lately been added Natural Philosophy, Chemistry and Botany (optional). The student has had in the past several difficulties to contend with which should be removed. He has had to pass in some cases two examinations: one before the board of his province, and the other before the university at which he wishes to take his degree. Now the matriculation examination of the boards should be placed on such a level, and conducted in such a way, that any university could consistently accept it in lieu of its own, and if it was universally recognized by the profession, by teachers of high schools, and by the candidates, that there was but one portal of admission to the study of medicine, and that through the medical board by means of its authorized examiners, a great deal of trouble and annoyance would be prevented. Again, in the interests of the student, the greatest care should be exercised in the selection by the examiners of subjects which the candidates will find taught in the advanced classes of the high schools. Similar books to those read for other matriculations should as far as possible be chosen.

2. The regulation of the curriculum. The general profession, through its delegates, has an incontrovertible right to regulate and frame the curriculum of study which men shall follow who aspire to join its ranks. The governments allow this right and have empowered the Boards to frame such measures as they see fit. In the exercise of this function there has been a little friction in the past, and in no one of their duties will the Boards of the various provinces require to proceed with

greater circumspection in the future. That there has been a good deal of tinkering, and not always of a satisfactory kind, is a complaint frequently made by schoolmen. That there has been very little and that the results have not been bad, will, I think, be the verdict of any one who looks into the matter fully. The curriculum is at present in a transition stage, and we must expect in the next few years to see important changes, but into these I do not propose to go in detail. One thing is clear, that the Boards and the teaching bodies must act in concert—in the interest of the student and of the profession harmonious action must be arranged. In this country the students of all classes seek the degree as well as the license and are not, as the majority are in Great Britain, satisfied with the latter. Hence the imperative need of a certain uniformity in the requirements of the boards of the universities. The teachers cannot possibly arrange the instruction on diverse plans. The duty of the Board is to lay down a minimum curriculum to which every student shall conform, and which the schools can easily carry out. The university requirements, while as much higher as the authorities choose to exact, should be laid down in the same lines, so that a student could easily proceed in his studies for the one or the other without inconvenience, and the teachers prepare a man for either examination without needless repetitions.

Among important questions which await settlement in some of the Provinces are the strict enforcement of the four years of study and the advisability of prolonging the session to nine months, or, what amounts to the same thing, making the summer session compulsory. The plan of allowing a student to pass one of his four years of study with a physician should be done away with at as early a date as possible. For two reasons: in the first place, it is, in a majority of instances, a farce, and we find on enquiry that the student has been pursuing his usual avocation, and perhaps going to a doctor's office in the evening: it is certainly not the equivalent of a session at college. If allowed at all, it should not be the first year, but the third, as permitted in the province of Quebec, for then a student is in a position to obtain really valuable instruction in practical medicine and surgery from his preceptor. I was surprised a few years ago, on obtaining the statistics from the registrar of one

of the boards, to find how many men there were who passed on the three sessions. In this matter, the boards should not be behind the leading universities, which no longer recognize the year with a physician as the equivalent of a session. And, in the second place, the change should be made in the interests of the schools themselves. On no possible scheme can you arrange a satisfactory three-session course. Either a man pays too much attention to his primary subjects in the first two sessions and leaves the important final branches for one short session, or he tries in his second session to work hard at both and ends in a muddled condition which unfits him for either. The prolongation of the session to nine months, as now exists in some of the schools in the Province of Quebec, must ultimately come in all the colleges. How the foolish habit arose of giving six months' vacation we need not stop to inquire—the folly of it is too evident to need remark; and we can safely predict that within ten years the nine months' course will be universal, either as a continuous session, as at Laval University, or by making the now optional summer session compulsory.

3. The control of the licensing power is the most important function of the medical boards. A uniform system has not yet been adopted in all the provinces. In too many the possession of a degree, obtained after a proper course of study, still entitles the holder to the license, all others having to submit to examination. In the Province of Ontario the most advanced position has been reached, and the one road to registration is through the examination conducted by a board appointed by the medical council. To this the other provinces must ultimately come. It is what the profession in Great Britain has been striving after for years, and so far striving in vain against the power of corporations and vested interests. In the Province of Quebec the medical board accepts degrees from the local universities to which it sends assessors—after the manner of the British Medical Council, who report on the nature of the examinations. Others than the holders of such degrees must submit to examination. Although this method has not worked badly, it is but a make-shift, and must finally be replaced by a central board of examiners, who shall test the qualifications of all candidates. Unfortunately the prevalent conditions of that province are such that

dual boards will be needed, one for the French and one for the English.

In carrying out the details of a central examining board, there are inevitable difficulties which at first cause worry and discontent, but, with patience and mutual forbearance, gradually vanish. The choice of suitable examiners is a delicate matter, and one on which the schoolmen are apt to air grievances more or less just. They certainly should not be selected at random from the members of the council. A few years ago a friend of mine was nominated examiner in chemistry at the Quebec Board. He was a remarkably able practitioner, but with a very indistinct and hazy knowledge of chemistry, and it was hard to say who was most uneasy at the examination, Dr——— or the students. Teachers in the schools have good grounds for complaint when the Boards select as examiner on special subjects—such as anatomy, chemistry, physiology, and pathology—men who have been for years in active practice without any possibility of keeping their own knowledge on these subjects fresh and practical, and who to “brush up” require to work as hard, may be, as the poor candidates. With the more practical branches these difficulties do not exist, and the Councils have a wide field for selection. Where special technical knowledge is needed, it would be preferable even to override the law which forbids the selection by the Boards of any teacher as an examiner on his own subject. For the “Staats Examen,” in Germany, the professors in different departments are usually chosen by the government to conduct the examination in their special branches. The point is one to which the Boards should attend carefully in the future. They lose the respect of the profession and of the students in nominating as examiners men without special qualifications in certain fields.

The examinations for the license should be made in all respects as practical as possible, but to do this a Provincial Board must possess its own building and appliances, and make arrangements with hospital authorities to have free access to a sufficient number of patients. As the work is done primarily in the interests of the public, it is clearly the duty of the Legislatures to assist in making suitable provision, and it seems probable that Ontario, the first to set the example of a one-portal licensing system, will also be the first to have a

local habitation worthy of her incorporated profession. Such a building should contain the paraphernalia necessary for examination purposes. The division into a primary and a final examination, as at present made in most of our universities, and at the Ontario Medical Council, seems the best arrangement. The former embracing anatomy, physiology, general and medical chemistry, and materia medica; the latter, the practical branches of medicine, surgery and midwifery. In practical details the "Staats Examen," of Germany, might in many particulars be followed.

A serious difficulty has been felt in conducting the examinations satisfactorily as regards time, place and rapidity. They should come off after the university examinations have been completed, and not, as now, immediately at the close of the session. More time could then be given, which will be necessary if the tests are to be made more practical. As the number of candidates increases, the the examiners on each branch should be doubled. One centre in each province should be chosen for the sittings of the Board, and in almost each instance this will be the chief town. To go to Quebec for one meeting and Montreal the next, as is the practice in the Province of Quebec, and to hold an examination in Kingston as well as in Toronto, are touching and tender tributes to age with which a harder generation must soon dispense. Very much more time must be hereafter given to those practical portions of the examinations which afford the only true test of a man's fitness to enter the profession. The day of theoretical examinations is over. An anomaly which has been the source of no little irritation results from our close connection with the mother country. Any registered practitioner of Great Britain under the present British act can claim registration in the colonies without further examination. After graduating, Canadian students are enabled to give the Board the slip by taking an English or Scotch qualification, and registering in Great Britain, when they return and are entered upon the register without further examination. In the past five years 378 men have registered in the Province of Ontario, and of these there were 93 Canadians, who did so on their British registration; that is to say, about one-fourth of the number have avoided the enactments of the Board by proceeding to Great Britain and passing at one of the Colleges. No

one can doubt that these 93 men were greatly benefited by the period of additional study and by contact with men of other schools and countries, but they would have been still more benefited if they had first conformed to the requirements of their own province, and aided the profession in maintaining regulations the benefits of which are universally recognized.

The fees demanded by the boards excite a good deal of grumbling on the part of students and practitioners. A sum of \$70 is charged by the Ontario Board for the three examinations, matriculation, primary, and final; and in Quebec the registration fee is \$20, and the matriculation \$10. It is the old story, those who are best treated often complain the most. In the matter of fees, the medical students of Canada are in too easy a position, and they must expect changes in the near future. While the expenses of conducting a medical school have quadrupled in the past twenty-five years, the fees have not increased ten per cent. The charges of the boards are just and reasonable, as well as necessary to meet expenses. The annual tax on physicians of \$1 in Ontario and \$2 in Quebec, is often spoken of as irksome, but surely it is a trifling contribution to the general welfare of the profession.

It seems extraordinary to outsiders that in a country like Canada, with scarcely five millions of inhabitants, there should be so many licensing boards, and a still greater anomaly, that a licentiate in one province cannot practise in another—that there should be no reciprocity. So it seemed also to many earnest minds a decade or so ago, when in this Association a strong attempt was made at several meetings to frame a Dominion Medical Bill. It failed, as will, I think, subsequent ones, should they be made. Only one remedy remains, the boards of the various provinces may in time so assimilate the curriculum and examinations that reciprocity may become possible, but this we cannot expect for some years. For certain purposes a Dominion Registration Bureau at Ottawa seems specially indicated; thus the surgeon of a Quebec regiment doing duty in Ontario would be practicing illegally, and in the marine the surgeons sailing in the passenger steamers must be registered in the province of the port from which the vessel hails. There would be great if not insuperable objections raised to any such bu-

reau, though it might be feasible to devise a plan for the military surgeons and those belonging to the mercantile marine.

I have dealt thus fully with the constitution and functions of the medical boards of the provinces, because I feel convinced that the safety of the profession rests with them. Of inestimable service in the past, their work in the future will be even more beneficent. Do arouse to a sense of your professional advantages. Where else do the medical men of a country enjoy the rights of conducting their own affairs in their own parliament? Look at Great Britain, where our mighty sister Association, with all her influence, and backed by eleven thousand members, could not force the principle of professional representation into the last medical bill, and at the best was only able to secure three or four members from the profession at large. Rest content when in each Province of this Dominion you have (1) an elective representative assembly (medical board, council, or college), with members from each teaching body; (2) absolute control of preliminary qualifications, curriculum, and examinations for the license to practise; (3) appropriate accommodation for the meetings of the boards, for the conducting of examinations, and for preservation of the local and general archives of the profession. The full development of the Acts of 1788 and 1815 will not be reached until these things are accomplished. The first two you have already won in a majority of the Provinces, the last will perhaps be the most difficult of accomplishment; but I feel confident that the day is not distant when in the capital of each province the incorporated profession will have a stately Æsculapian temple worthy the traditions and aspirations of our high calling.

#### CASE OF NEURALGIA OF THE TRIGEMINAL NERVE.\*

BY T. OVENS, M.D., ETC., ARKONA, ONT.

MR. CHAIRMAN,—I shall not weary you with a description of this affection in general, nor shall I attempt to say anything of its pathology, because in any of our works on the diseases of the nervous system you can read a better description of the malady than I could give you in this paper, but

\* Read before the Ontario Medical Association, in London, June, '85.

unfortunately, none of our authors give us an adequate knowledge of the pathology of this terrible disease. What I purpose doing, is to bring my patient before you, and to describe his case in particular.

The patient is now twenty-one years of age, a beekeeper by occupation, having always lived in the country in a locality free from malaria and containing good water in abundance. His parents, brothers and sisters are living. No neuralgia, insanity, epilepsy, syphilis, cancer, phthisis, nor any other disease in the family. When about eight years of age he fell from the scaffolding to the barn floor, a height of about fourteen feet; was unconscious for some hours; blood flowed freely from the mouth, nose and ears; made a good recovery.

Was in good health till the spring of 1879, when he complained of severe pain in right upper jaw; the extraction of a carious tooth relieved the suffering for a few weeks; the pain again returned, several teeth were extracted but without mitigating its severity in the least. From that time till the middle of April of the present year, the patient suffered terribly. Each autumn, winter and spring the pain seemed to be more atrocious than it was the preceding year. During the warm weather the pain was not nearly so severe, but never entirely ceased. The patient was under treatment during all this time by different physicians.

On the first of February of this year, he consulted me. He had just returned from a three months' sojourn in Quebec, whither he had gone for treatment and change of scene. At that time the pain came on every five or ten minutes, lasting from half a minute to a minute; it was of a burning, boring, lancinating character, darting lightning-like along the three branches of the trigeminal nerve on right side of the head, in lower jaw, upper jaw, upper lip, brow and right side of forehead.

The patient was entirely free from pain during the intervals between the paroxysms. Excessively tender points would develop during a paroxysm, and continue throughout the duration of the pain. These points corresponded to the position of the mental, infraorbital and supraorbital foramina, inner angle of eye, side of nose and other places. At the close of a paroxysm, tears would flow from the right eye, mucus from the nose and water from the

mouth, causing an eczema to develop on the right cheek. Pulse varied from 100 to 120; temperature from 99 to 100.

*Treatment*.—I tried all the more important drugs recommended by the best writers, as morphia, quinia, arsenic, iron, pot. iodide, cannabis indica, gelsemium, chloroform, aconitiae, etc., etc. Of drugs, the only ones that relieved the pain were aconitiae and morphine. Chloroform was the only agent which would prevent a paroxysm. Aconitiae given in 1/60 gr. doses till the physiological effect of the drug was produced, would mitigate the severity of the paroxysms. A grain of morphia injected hypodermically would not prevent the occurrence of a paroxysm, but would lessen its intensity. Chloroform would prevent the paroxysms for from three to six hours, and thereby give the patient sleep, and was by far the best remedy tried. In April, a discharge of pus occurred from right ear, and continued for a month. As the discharge continued, the pain gradually lessened, and finally ceased altogether.

As to the cause of the neuralgia, it was probably due to caries of the petrous portion of the temporal bone or periostitis causing pressure on the Casserian ganglion.

### ARTIFICIAL LACTATION, IN OVARIAN AND UTERINE DISEASES.

BY JAMES STIMSON, M.D., PLUM CREEK, NEB.

Marriage is the Divine institution in which the Divine purpose of child-bearing is carried out. To marry and to bear children is the normal lot of woman. Happy the woman who becomes a wife! Happier the wife who becomes a mother. Thrice unhappy the childless wife—the “barren woman who has no blessings of the breasts and of the womb.” ’Tis this unsatisfied, unhappy woman who seeks the physician, fondly hoping his skill will avail to remove the cause of her reproach, and secure the fruition of her desires. In the interest of such, these thoughts are offered to the profession.

Three great steps, in regular sequence, occur in normal child-bearing—viz: Menstruation, uterogestation and lactation. Three sets of organs perform these functions, viz: Ovaries, uterus and mamma. A trio of functions founded on a tripod of organs. The ovaries furnish a germ, the uterus

carries a crescent burden, and the breasts nourish a new being. This cycle of events recurs, with varying intervals, during the functional life of the ovaries of a fertile woman. The ovaries contribute the ovum; that impregnated, they rest. The uterus receives its treasure, retains it during the earlier stages of development, casts it for further nutrition and development upon the breasts, returns to its former proportions, and rests. The breasts receive the babe for a variable time, furnish it with food specially adapted to its needs, then cease their function, and rest. So, to each of these sets of organs, in this procession of events, there comes alternately, a season of activity and a period of repose. Such the events, their order and effects in normal child-bearing. But, unhappily, all wives are not child-bearers. In the childless woman, but one of the three essential child-bearing steps are taken. The ovaries only, perform their function. The uterus fails to afford “fruit.” That “child-link” missing, the chain of child-bearing events is broken, and the breasts abide functionless, at rest. Barrenness is the unbridged span between the ovaries and the breasts.

Returning to child-bearing, we find that *rest* is a factor in the healthy condition of each, in turn, of the organs concerned in its normal course. Contrasting sterility with normal child-bearing, we find that the chain of alternate action and repose in each set of organs is broken, the rythm of events interrupted. Two sets of organs are functionally active—that constantly—and one set of organs does nothing. Two sets of organs have no rest, (so to speak,) one has no functional activity. The question now occurs, “Can the inactive organs, the breasts, be artificially excited to perform their function in a sustained manner, and, if so, will that functional activity of the breasts, so induced and sustained, have the effect of lulling to rest the active organs, the ovaries and the uterus?” In other words, “Can artificial lactation be induced, continued and made useful in treating ovarian and uterine disease, sterility, etc., by reason of its causing an arrest of menstruation, and so affording needed rest to the diseased organs?”

It is a fact that sucking the breasts causes uterine contractions. It is a fact that during lactation menstruation is absent. May we not infer from these facts that a bond of vital relationship exists between all the three sets of organs directly con-

cerned in child-bearing? But who can tell precisely, what the vital relations of the ovaries, uterus and mammae are, each to the other, or in what manner or to what extent the functional activity of any one of them affects the organic, vital condition of the others? In the child-bearing woman, the ovaries, uterus and mammae, each in turn, has a term of rest. In the sterile woman the ever active ovaries and uterus need rest. Can it be procured for them by arrest of menstruation, the result of artificially induced lactation? If so, the sterile patient may well rejoice over the brighter prospects for her "keeping house." If so, the gynecologist will rejoice over his power to substitute one function for another, for thus he will get rid of the hindrances caused by the monthly menstrual nixus, and secure greater facility and ability to completely cure his patient. Given the substitution of functional activity of the breasts for functional activity of the ovaries, more happy results of treatment of "female diseases" will gladden the hearts of patients and physicians.

### Correspondence.

#### FILARIA SANGUINIS HOMINUM.

To the Editor of the CANADA LANCET.

SIR,—In your October issue there appears some correspondence on the very interesting subject of *Filaria* from Dr. E. A. Hall, of Glamis, and inviting additional information with regard to it. With your kind permission I will endeavor to add a few of the points desired, without attempting to exhaust what is already known.

*Filaria Sanguinis Hominum* is associated with, and generally considered now to be the etiological factor in chylous urine, some forms of hæmaturia, and nævoid elephantiasis. The knowledge we possess is of very recent date, as fifteen years ago it was entirely unknown. Dr. Lewis, an Army Surgeon, at Calcutta, was the first to discover in 1870 the embryo form of *filaria* in chylous urine. In 1872, he made a further discovery of the same species of *filaria* in the blood taken from the finger of a Hindoo patient. There are two forms of the hæmatozoon, viz: the adult and embryo. The former measures about three to four inches long and about the thickness of a hair, is supposed to dwell in the lymphatic system, and from there

pour forth its young, but has been found in hydroceles and lymphatic abscesses. The latter measures about  $\frac{1}{10}$  to  $\frac{1}{5}$  of an inch in length, and of the diameter of a red corpuscle, thus enabling it to pass wherever blood can go, even through the finest capillaries. It is enclosed in a transparent sheath or pellicle, and found chiefly in the blood and urine. The majority of cases reported have been residents of warm countries, but four or five have been recorded as originally from Europe. Of these, Dr. Beale mentions one as never being out of Norfolk, and Dr. Roberts another who had always lived in Lancashire.

One of the most peculiar and interesting features in connection with the habits of this parasite, is the regular periodicity with which it makes its appearance in the blood. Dr. Stephen Mackenzie, in 1881, before the pathological society in London, exhibited a soldier, born in India, suffering from chyluria and hæmaturia, accompanied by *filaria*. The blood was examined every three hours with the following results. The *filaria* were far more plentiful or only found at night; they usually appeared about 9 p.m., reached the greatest number at midnight, and entirely disappeared by 9 in the morning. Experiments were made with this patient, to see if this periodicity could be changed, and strange to say, when the time for sleep was reversed, by making the patient sit up all night, the *filaria* were more numerous in the daytime.

Dr. Manson, of Amoy, from whose observations, the profession has reaped much of interest on this subject, has recently been fortunate enough to discover, that the mosquito, is an intermediary host. He has satisfied himself, that the proboscis of the mosquito enters the capillaries, and the *filaria* are withdrawn and probably deposited in water along with the larvæ of that insect, hence to the human subject and so on.

That the *filaria* produces hæmaturia and chyluria, there cannot be the slightest doubt, but how, is not clearly established. It involves too many theories for a letter of this kind. The most probable is the mechanical one. It is extremely likely that the embryo ultimately casts off this translucent sac or sheath in which it is enveloped, becoming then possessed of boring propensities, perforates the capillaries and lymphatic vessels, thus producing those symptoms which almost invariably accompany their presence.

I have no doubt that Dr. Hall possesses a very valuable, rare and interesting patient. I am sorry he did not examine the blood and give us the patient's former history and residence. I hope he will do so yet, at the same time test their periodical appearance in the blood, and give the result in your esteemed journal. I have examined most of the Canadian medical literature of the last fifteen years, and fail to find one case recorded, still I do not see why cases should not occur in Canada, as well as in Norfolk or Lancashire. At the recent meeting held in Chatham, of the Dominion Medical Association, Dr. Bethune, of Wingham, exhibited a parasite three or four inches long, which he obtained from an abscess in the thigh, but whether it belonged to the filarida family or not, was not decided. Dr. Osler, the worthy president, and able pathologist, took possession of it and promised his verdict at a future day.

As to treatment. I will give Dr. Lewis' own words, "This has proved extremely unsatisfactory in almost all cases recorded. Iodide of potash has been tried in large doses, and in some cases appears to have been beneficial. In others the tincture of iron has seemed to be more successful. Perhaps the most satisfactory results, are those which have followed the administration of large doses of gallic acid.

Yours, etc., WILLIAM GRAHAM,  
Brussels, Oct. 6th, 1885.

To the Editor of the CANADA LANCET.

SIR,—I have read carefully, and with a good deal of interest, an article in the Sept. No. of the LANCET, headed "Meddlesome Midwifery." With the general tenor of the article I heartily agree; though some of the statements do not entirely accord with conclusions drawn from my practice.

The first is the following clause: "But we would all prefer that somebody else's wife or sister should be the subject of all doubtful practices." This, I think, would hardly be in keeping with the rule given in Matthew vii. 12, which, I presume, most medical men will admit to be binding. We certainly should not encourage doubtful practices even on somebody else's wife or sister. But what particularly interested me was your pen pictures of scientific and unscientific practitioners of meddlesome midwifery. I take it that this applies to registered practitioners, who, if they lack the

necessary qualifications to practice, are as much sinned against as sinners, by the Medical Council, which has taken upon itself the task of protecting the community from improperly educated pretenders. If such still exist it is a proof that our Council has, at least in some measure, failed in its mission, in giving a license to them.

While I look upon your scientific bungler as a dangerous character so full of himself and his own importance, that he is unlikely to improve, I feel that I can safely predict, at least, a respectable future for the other, "Conscious of his lack of skill but desirous of earning his fee." This consciousness, and this desire which all should possess, will, if properly used, be the making of him. The former will make him careful and at the same time prompt him to read and so post himself where most deficient; he will also watch his cases closely and as his years increase so will his knowledge. His desire to earn his fee is an indication of honesty, which of itself would make him more to be relied upon, and is very different from a desire which we too often see, of finding an excuse for making visits that are of no real use to the patient simply from a desire to charge fees. As to his too frequent examinations I think he will soon get over that, as but few women will be found to submit to it when it gives them pain. It may, as you suggest, produce a tendency to laceration, though I have never seen one clearly traceable to that cause, but I have often found the soft parts dry and tender, where no examinations had been made and yet the labor terminated without any appreciable laceration.

As to your scientific bungler, did he confine himself, in his use of chloroform, to a small quantity, sufficient to mitigate the pains as the head is distending the perineum, I presume no damage would be done, in most cases, and if it did delay the labor a little without materially adding to the patient's sufferings so much the better, as it would give the parts more time to stretch and so render laceration less likely. But what I have known such bunglers do is, under the pretext of giving chloroform to relieve pain, to put the patient profoundly under its influence, and then without the knowledge of either the patient or friends, put on the forceps and drag the child forth, producing laceration of the perineum, followed in many instances by puerperal fever or septicæmia.

As to the use of antiseptics, like any other therapeutic agent, they should of course only be used when required, but then in such a manner as to thoroughly cleanse and disinfect the parts requiring it. But where the patient is kept clean, and at rest, on a clean bed, with fresh air and frequent change of napkins, they will not often be required.

Yours respectfully,

R. WHITEMAN.

Shakespeare, Oct. 14, '85.

To the Editor of the CANADA LANCET.

SIR,—I send you the following unusual case for insertion in the LANCET :

M. L. aged 82 years, had for several years been troubled with pain and distress on making water. One day he noticed a hair protruding from the penis about an inch. He pulled at it and withdrew it about 4 inches, when there appeared to be something preventing its coming, and on pulling harder, it caused pain in the region of the left kidney, as if something were tearing the flesh, so he called his wife, an old lady aged 76 years (now) and she assisted him. After about twenty minutes, they succeeded in removing it without breaking. It was 24 inches long, of a dark brown color, with a bulb at the end like a hair from the head. He says he felt greatly relieved afterwards from the peculiar feelings he used to labor under. The hair was shown me, and I have the utmost confidence in the correctness of the statement, which was corroborated by the old lady, who assisted in its removal, as well as by the son and others of the family. A similar case (or cases) may have been met by others, but I have never read of a recorded one.

Yours very sincerely,

R. W. CLARK.

Hastings, Oct. 16, '85.

P. S.—The above case is not more singular than, —a potato bug which, a son of mine, met with in an egg, last summer, after it was cooked for breakfast.

### THE USE OF THE FORCEPS.

To the Editor of the CANADA LANCET.

SIR,—There was an article in your last January number by Dr. Sweringer, of Ind., advising practitioners always to "carry their forceps with them to every labor case." I cannot agree with the Doctor in this, for the proportion of cases really

requiring instrumental aid are so few, that to carry them always entails a deal of unnecessary trouble. I would except a case a long distance off. The forceps are very often used unnecessarily. In a practice of fifty-five years I have not used them a dozen times, and in that length of time, I have had but two fatal cases, and those from puerperal fever and peritonitis.

The forceps are sometimes used to save time, sometimes to gain a little notoriety, sometimes for the double fee, and sometimes from ignorance. I remember a case that occurred a few years since, where the doctor in charge, had been two nights and off and on for two days in attendance on the woman. He said that he had a very troublesome case, and was going to use instruments that night (the third night) but asked me to visit with him before so doing. I went, and found the woman was not in labor at all, and had not been—simply false labor pains, which a full dose of laudanum checked, I told him she would not be confined for a week at the least. Ten days afterwards she was delivered of a fine child without the forceps. Therefore, looking at it from my point of view, I say that carrying them all the time to every case is unnecessary; for if not too far off you have always time to send for them, except in a case of convulsions, which are rare. Dr. Thatcher, Professor of Midwifery, in Edinburgh, laid it down as a rule, "to allow seventeen hours for a natural labor, before having recourse to instruments, except in cases of deformity.

I remain, etc.,

R. W. CLARK,

Hastings, Ont., Sept. 8th, 1885.

### Reports of Societies.

#### MEDICO-CHIRURGICAL SOCIETY, MONTREAL.

The annual meeting was held on the 9th ult., Dr. Roddick in the chair.

Dr. Trenholme exhibited three pathological specimens. The first was a parovarian cyst, removed from a patient from Shawville, Que., 42 years of age, 9 years married, and no children. Patient was of spare habit, nervous, and had suffered for 16 years. Her trouble began in the bladder, as she supposed, accompanied by pains in the back, inability to sit,

irregularity of menses, and insomnia. Has had no menstrual flow for last 6 months. At the present time her trouble is chiefly confined to the regions of the back and over the womb. Examination per vaginam showed the presence of a large tumor filling the brim, occupying true and false pelvis. It was in the median line, very dense to the touch, and uniform over surface. On the left antero-lateral aspect a small tumor was detected; this was supposed to be the left ovary, and is seen to be such in the specimen now passed round. The cavity of the uterus was three inches deep, and this organ was carried on the face of the tumor, above the brim of the pelvis. The diagnosis was first ovarian cyst, but later, fibroid of the uterus, owing to the slow growth and hardness of the tumor, immobility and position of the uterus. On 12th August, 1885, Dr. T., assisted by Drs. Kennedy (who had also examined the patient, and regarded the tumor as fibroid), Cameron, Perrigo, and Reddy, made an abdominal section to the extent of three inches, and removed the cyst in the usual way. Fitch's trocar was used, but the Dr. was not so well satisfied with it as the Well's trocar. The points requiring tying were all secured by the Dr.'s favorite ligature, No. 20 shoemaker's white thread. The incision was closed by three deep silver sutures and superficial horse-hair sutures. The only serious after-trouble arose from irritation of the bladder; and, though rather too soon, she returned to her father's home, Iroquois, just three weeks and one day after the operation.

The second specimen was a cancerous uterus, removed from a lady 42 years old, who had been suffering for some time past, but only consulted Dr. T. about herself in August last. Upon examination it was found that the disease had invaded all the os, lower part of the neck, and the vagina on the left side to the extent of about half an inch. The uterus was moveable, and depth of cavity three inches. Hoping that the disease was confined chiefly to the parts seen to be affected, and that infiltration of the broad ligaments had not yet taken place, Dr. T., at the urgent and repeated requests of the patient, thought it right to give her the possible benefit of short respite from her sufferings by removing the uterus. On 20th August last, assisted by Drs. Kennedy (who, also, thought it right to give her a chance of temporary relief), Perrigo, and Cameron, Dr. T. cut through

the posterior wall of the vagina, brought down the fundus, then tied the right broad ligament in small segments, and divided the enclosed tissues with the scissors; the same procedure was found to be impossible on the left side, on account of the infiltrated state of the tissues. After separating the uterus from its anterior attachments, the left ligament had to be divided guided only by the sense of touch, and the entire organ was removed. Very little hemorrhage followed the operation, or the scooping out of some cancerous masses with Thomas' spoon. It is now seven weeks and one day since the operation, and though the opening into the peritoneal cavity could not be closed, and there was presentation of the intestines at the upper part of the original incision, yet the patient has so far recovered that she is able to walk round her room, and intends soon to return home. She has suffered no pain from the operation; in fact says she has no pain, and feels well. The chief cause of her weakness has been the large and constant flow from the peritoneal cavity, but now this drain is almost stopped.

In the discussion which followed, Dr. T. said he would not perform the operation again under similar circumstances. *Where the disease was confined to the uterus*, he would consider the operation a justifiable one.

The third specimen was a fibroid uterus, removed from the patient, who was the *first* person ever spayed (in 1876), for the arrest of uterine hemorrhage. The removal of the ovaries at that time gave the patient a new lease of a life that was then fast drawing to a close. As has been stated by me upon several occasions, this patient had irregular hemorrhages, seldom of any extent, and without the periodicity or appearances of the menstrual flow. In March last she was in good health, but over-fatigue brought on severe uterine congestion, accompanied by severe nervous derangement, that threatened to end her life. These attacks, very curiously, recurred every nine days and lasted for nine days, during which time she was unable to take solid food, lost flesh and strength, and suffered with a numbness, amounting almost to paralysis of the right arm and side; loss of sight, irregular and rapid action of the heart. These attacks were becoming more and more severe, when, in the hope of obtaining relief, she came under my care. The uterus was low down in the pelvis and about the

size of a fetal head, the bulk of the mass being rather to the left of the uterine canal, which was almost five inches deep. As the patient was in a wretched condition of health, the operation was delayed for a week, when, upon 24th Sept., the tumor and uterus were removed by abdominal section. Strong adhesions existed throughout, especially with the bladder, which was incised to the extent of about half an inch. The broad ligaments were tied in segments, and separated as far as the neck, when a wire ecraseur was applied, and tightened just enough to prevent hemorrhage. The tumor was removed by a V shaped incision, and the cut surfaces brought together by a double running suture (silk). The wound in the bladder was brought together by the same suture. The abdominal wound was coapted by three deep silver and a number of superficial horse-hair sutures. A catheter was kept in the bladder for five days, after which she passed her urine without trouble. It is now 16 days since the operation, and both temperature and pulse have been almost normal throughout.

In the discussion which followed nothing new was elicited, and the Society then proceeded to the election of officers. On account of the illness of Dr. Roddick last winter, and his absence in the North West Territory during the summer, it was felt to be but an act of justice to re-elect him President. *Vice-Presidents*, Drs. J. C. Cameron and Geo. Wilkins; *Treasurer*, Dr. Perrigo; *Secretary*, Dr. Gurd; *Council*, Drs. Kennedy, Geo. Ross, and Roddick.

Before the meeting adjourned, the question of the treatment of the small-pox patients and the management of the Hospital was fully discussed.

#### HAMILTON MEDICAL AND SURGICAL SOCIETY.

At the regular meeting in September, Dr. Case, senior, presided. Dr. Malloch exhibited a pathological specimen, with the following history. He had performed abdominal section in a case of peritonitis with symptoms of obstruction of the bowels and a history of previous attacks of colic. The colon was so much distended that it could not be returned. To relieve this distension, an opening was made with a scalpel, of its own width simply, and the gas pressed out. The wound was then

closed with interrupted sutures of the finest catgut. The patient only survived the operation 47 hours. At the autopsy it was with great difficulty that the site of the wound could be found, the union was so good. There were no signs of inflammation to be found, and no adhesions were present about the wounded intestine.

The October meeting was presided over by Dr. White, the President. Dr. McCargow showed the larynx of a man who was in the City Hospital for but a short time. His history was as follows:— He was 28 years of age, had been working on the railway, and caught cold. When admitted to the Hospital was much emaciated, had a bad cold, enlarged glands, and was unable to swallow. He was ill only six months. Family history was good, there was no record of either phthisis or syphilis. Post mortem, as seen by the members, there was ulceration and partial destruction of the epiglottis. The lungs, which were unfortunately mislaid, were full of miliary tubercles. In the left apex there was a cavity the size of an almond, and the lung was adherent. There was also softening in the right apex. The other organs were normal. Dr. A. Woolverton had seen the patient during his lifetime, and noticed that he was specially anæmic and had the characteristic appearance, but not the physical signs especially, of tubercular trouble; but there was dulness of the left apex. Patient resembled more one with typhoid fever with a slight cough. Dr. Mullin recollected a case in the Hospital that was at first thought to be syphilitic laryngitis, as there was laryngeal trouble, and the patient was an old soldier. Dr. McCargow had seen suppurating kidney in similar cases. Dr. White remembered a case, taken for typhoid, where miliary tubercles were found in the lungs and kidneys, but no suppurating cavities or foci. Dr. McCargow then gave the history of two cases, he had seen in practice, of foreign bodies entering the larynx and being found in the right bronchus. The first case was that of an infant who was playing with some green coffee beans, and had some in its mouth; some one made the child cry; it was seized with an attack of coughing and strangling, and evidently, from the history, would likely have returns of the cough, and did. Acute bronchitis set in, tracheotomy was advised, but not permitted, and the child died in two days. Post mortem— three green coffee beans were found in the right

bronchus. The second case was that of a boy aged 7, who was running while holding a head of timothy in his mouth; he stumbled, and the head disappeared; he was seized with a fit of strangling, but rallied. A few days afterwards he was found to have pneumonia of the right apex. Active treatment was used, and the symptoms would yield, and then exacerbations would occur. A cause was sought by Dr. McCargow, such as an insect in the windpipe, but nothing of the sort was known of or remembered, till suppuration took place and some seeds of timothy came away; the sputa were rigidly examined twice a day; then the mother remembered about the head of timothy, which she had tried to remove at the time. A consultation was asked for, and the late Dr. Strange and Dr. Malloch went out to see the patient. The morning they went to Caledonia (where Dr. McCargow was then practicing), the boy coughed up a foreign body, apparently the head of timothy. But as there were signs of a cavity and gurgling was to be heard, the prognosis was bad, and there was not much improvement, though he continued to expel seeds. Two weeks after the consultation, the foreign body actually did come up, quite hard, and divested of seeds; it was two and a half inches long. The boy was carefully watched by his father, who however, by mistake, on one occasion gave him a dose of tinct. iodini. instead of tinct. opii., the fetor was then relieved but not the cough, so the dose was increased. The mistake was discovered, but on the suggestion of Dr. McCargow, the remedy was continued, and the boy recovered entirely.

Dr. Malloch referred to a case where a surgeon had operated in the dark and alone, and effectually, for the foreign body was loosened by the suppuration and escaped through the opening in the larynx. Dr. Malloch himself had had two cases lately: In one (a child), a piece of almond shell had entered the larynx, but operation failed to discover it; bronchitis set in, and the child died. In the second case, the foreign body was not discovered either, but the patient recovered without inflammation setting in. Dr. Rosebrugh related a case in which he had operated: A lad of 14 was attacked with suffocation every few minutes; the trachea was opened. During the operation he ceased breathing, and it was thought due to the chloroform, but probably was caused by the foreign body,

a piece of glass  $\frac{3}{4}$  in. long, which was removed when the trachea was opened, in this case from the left bronchus; the boy recovered all right. He thought inversion often helped the operation. Dr. Ryall related the case of a boy in whom a piece of nut had entered the larynx. He afterwards had asthmatic attacks, which lasted 9 months, and ceased one day after coughing up blood and the piece of nut, which was quite smooth. Dr. Stark remembered a case where a pear-shaped glass ornament had entered the larynx. The breathing was interfered with, sometimes on the left, sometimes on the right. Tracheotomy was performed, and on inversion the foreign body was removed. Dr. Mullin gave some particulars with reference to Dr. Malloch's second case: The boy was whistling with a whistle made of two pieces of tin,  $\frac{3}{8}$ th in. square, tied together. Although never found, it had been heard before the operation, and there had been attacks of laryngeal spasm. The boy has done well and the wound has healed. Dr. McCargow called attention to the fact that when a foreign body is loose there are always attacks of spasm.

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### Selected Articles.

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#### THE COMPARATIVE RESULTS OF OPERATIONS IN BELLEVUE HOSPITAL.

BY STEPHEN SMITH, M.D.,  
Surgeon to Bellevue Hospital, New York.

As we drift with current events, we but imperfectly estimate the real advance which any art or science, with which we are daily familiar, has made within a limited period. It is only when we considerately pause and deliberately compare, in detail, past methods and results with those now practised and obtained, that we fully appreciate the vast changes which have so insidiously and imperceptibly taken place.

Perhaps there is no better place in which to test the progress of practical and operative surgery than the wards of Bellevue Hospital. This ancient institution has within its walls and its immediate environments all the conditions that in modern times are regarded as unhealthful and unsanitary. It was built between the years 1811-16, on the made lands of a cove of East River, without drainage, or adequate sewerage, and without regard to ventilation. During nearly three-fourths of a century the sluggish tides have ebbed and flowed through the sodden soil of its foundation, depositing far more filth than they have removed. Since its

occupation it has been used for a prison, an almshouse and a hospital. Its wards have, from time to time, been crowded with patients suffering from all forms of contagious and infectious diseases. It has been the common receptacle of typhus and typhoid fevers, small-pox, puerperal fever, cholera, and yellow fever. Although many changes have been made in its interior, yet the great and most serious defects of location and construction have remained unaltered, and may be regarded as permanent.

Bellevue may be regarded as having been a surgical hospital only since 1850, a period of about thirty-five years, during most of which period I have been personally very familiar with the practice in the several surgical divisions. The amount of surgery in the wards of Bellevue has been a gradual increase. With the removal of the New York Hospital, and during the long interval of its non-existence, the surgical practice of Bellevue became large and important, and has remained so to the present time. The surgeons of Bellevue have always ranked among the best in the city, and, as much of their practice in hospital has been public and clinical, it must be assumed that they have endeavored to the best of their ability to illustrate to their classes the highest type and best results of the science and art of surgery of their day. And yet the practice of surgery in Bellevue Hospital has, within the period mentioned, undergone so complete a revolution that one of the older surgeons would scarcely realize that he was in the same hospital where he had practised a decade ago. He would see, with horror, operations fearlessly performed that he had formerly regarded as without the pale of legitimate surgery. He would witness procedures in the after-treatment of operations which would seem to him to be fantastic, and even ludicrous. His astonishment would be extreme on finding that the first week passed without fever, and that no change in the dressings had been made. But, perhaps, the most remarkable feature of modern practice would be the rapid convalescence and final complete recovery without complication or exhaustion of ordinary operations, which formerly gave so much trouble and anxiety. To make more evident the change in practice, we may contrast in detail the several steps of operations in general, and of individual cases, the methods of treatment, and the results.

The older surgeons of Bellevue Hospital had practiced in the period anterior to the use of anesthetics. The most important general principle governing the operator was *celerity*—in order to limit as much as possible the amount of pain. Long after anesthetics came into general use surgeons dwelt with much emphasis upon the necessity of cultivating the habit of operating rapidly. The preparations for an operation were all made with reference to this one feature. So much did this

thought absorb the operator that he often became excited and annoyed by the delay. One surgeon, noted for the rapidity of his operations, was often seen, during the last moments of preparation for an amputation, to seize involuntarily the saw and move it rapidly, as if sawing a bone. Now, while every surgeon aims to diminish the period of anesthesia, mere haste at an operation is only mentioned to be condemned. No part of the elaborate preparations are designed to render the operation simply more rapid. One thought and purpose occupy the mind of the surgeon, and that is recovery without suppuration. To this end all his preparations are made, and the entire procedure is subordinated. Formerly the surgeon prepared his instruments only by keeping them free from rust, and giving them a fine edge. When he operated the instruments were taken from the case, and, without any cleaning, were so placed that he could most readily select the one required. During the operation he laid them down, or dropped them, and without cleaning applied them again to the wound. Now instruments are not only protected from rust and all soiling and kept sharp, but long before the operation they are placed in a carbolic solution, in order that any possible septic matter on them or their handles may be destroyed.

During the operation one assistant devotes himself entirely to the duty of handing the instruments to the operator, and of receiving them from him and at once submerging them in the disinfectant liquid. To avoid the possibility of laying an instrument down on an unclean surface, and then putting it in the wound soiled, towels wrung out of the antiseptic fluid are spread around the wound.

In preparing a part for an operation, an amputation, the surgeon used to do nothing farther than, perhaps, to have superfluous hair shaved off, and that, too, often without soap and water. Patients brought directly from the street or shop, with limbs begrimed with dirt and filth, were subjected to operations without bathing. Even when there was ample time for preparation little or no thought was given to the immediate condition of the part about to be incised. The accumulated secretions of the skin, and the dead epidermis, charged with poisonous animal matters, become part of the wound and its immediate surroundings. Through this layer of filth the surgeon passed his knife into the living tissues beneath, conveying to the deepest parts of the wound matters of untold septic virulence. In this simple failure to secure ordinary cleanliness of the surface, more wounds were poisoned and induced to suppurate than from any other cause. In the closure of the wound the filthy margins were often brought in direct contact with the cut surfaces, and thus the propagation of the germs of fermentation or putrefaction were implanted in a fertile soil. Now, the greatest pains

are taken to cleanse the part about to be operated upon. In addition to a general bath, the entire limb, including the hand or foot, is washed with soap and water, with a flesh-brush, and all the hairs are shaved cleanly from the part. This washing is followed by a douche of an antiseptic solution, and then all the parts adjacent to the wound are covered with towels, wrung out of bichloride solution.

The personal preparation of the surgeon and his assistants for the operation was limited to self-protection against soiling their clothes or person. No special thought was ever given to the condition of the hands and nails. The assistants came directly from other ward duties, their hands soiled with the thousand impure matters which they must handle, and with slight or no washing, engaged actively in the manipulations of the operation. Now the surgeon and his assistants take infinite pains with their hands. Soap and water and the flesh-brush are brought into active use, to be followed by a douche of bichloride solution. The nails, the most fertile source of filth in the body, are rendered scrupulously clean. Many will recall with a shudder the long claw-like nail of one surgeon, which penetrated, unwashed, every wound where he was present. Not only is no bystander invited to put his finger in the wound, but scarcely an attendant at Bellevue would allow such an intrusion.

The sponges of former times were universally believed to be the carriers of filth to the wounds, and yet little was done to purify them except to cleanse them in water. They may have been boiled at first to free them from sand, but they were not purified by any adequate means when first prepared, nor after their use in suppurating wounds. Now, the process of purification of sponges is elaborate in the extreme, and is so exact in details as to render them positively harmless in wounds.

The ordinary silk ligatures were formerly regarded as necessarily foreign bodies in wounds, and no care was taken of them to improve their condition. They were carried about in any convenient pocket, and at the operation the silk was cut of proper lengths, waxed, and then drawn through a buttonhole of an assistant, or laid on any convenient surface. Now, the ligature thread undergoes a long process of cleansing and disinfection at the hands of a chemist, and is then applied to a reel enclosed in a corked bottle filled with antiseptic fluid. From this bottle it is removed only as it is drawn out at the moment of using it. Considering the well-recognized fact that the ligature, as formerly used, was an intense irritant to wounds, it is not surprising that surgeons applied as few as possible. From time to time they resorted to other methods of closing arteries, as by torsion, or metallic wires, to avoid the use of silk. But all these devices bore no comparison to the simple and efficient antiseptic ligature of to day. Reeled off

from the bottle, clean, strong, and supple, the surgeon applies them without other limit than the complete suppression of hemorrhage.

Recognizing the silk ligature as an irritant, the surgeon always used to cut off but one end, and left the other depending from the wound, to be removed by traction when it had finally separated from the end of the vessel to which it had been applied. And well and faithfully did the ligature meet its indications, for, during the first week, the most critical period in the history of the wound, it did not fail to induce free, and often profuse, suppuration. But now, not only does the surgeon apply the ligature, but he cuts off both ends, and closes the wound as completely as if there was no foreign substance left between its surfaces. Nor is he disappointed. No suppuration follows the presence of the ligatures, and union takes place as promptly as if no ligatures had been used. The operation being completed in the shortest possible time, the operator concluded by exploring all parts of the wound with his unwashed fingers. If it was a hernia, he thrust his fingers as far into the abdominal cavity as possible, and explored it freely. This act completed it was a very common occurrence, also, for the surgeon to invite any bystander to examine the wound with his fingers, and sometimes several persons would avail themselves of the opportunity to improve their tactual sensibilities.

Many a wound that may possibly have escaped previous poisoning at the hands of the operator and his instruments, has received the final charge of septic matters from the dirty fingers of a casual looker-on. Now, the most scrupulous care is taken to protect the wound from injury, either at the hands of the surgeon or his assistants. Exploration is cautiously made with fingers cleansed and disinfected, and even that act is completed by a douche, over the entire surface examined, of the bichloride solution. If the finger of a bystander was introduced into the wound unwashed and undisinfected, the surgeon would regard the act as probably fatal to recovery without suppuration. Hence, no one is now invited by courtesy, or to obtain an opinion, to examine the wound by digital exploration unless they have made due preparation for the act.

In closing an ordinary wound the surgeon formerly took great pains to provide for the drainage of pus. The most dependent part of the wound was left open, and all the ligatures were drawn out at that point. The edges of the skin were brought into apposition by the interrupted suture, at intervals of half an inch, and the intervening skin was approximated by adhesive plaster. The suture and adhesive plaster were alike unprepared by any process that would relieve them of filth, and far too often both contained the germs of putrefaction. Now the surgeon employs sutures that, like the ligatures, have been relieved of all possible elements

of poisoning, both in their preparation and in the method of preserving them. In closing the wound he aims to avoid suppuration altogether, and to secure the immediate union of parts. The suture being non-irritating, he freely stiches together all the deeper structures first, wherever they can be approximated, and then the more superficial parts are brought into firm and exact apposition. Instead of the interrupted suture, which leaves the wound gaping at intervals, and necessitates the use of adhesive plaster, he employs the uninterrupted, or glover's suture, which closes the wound throughout, and relieves it of all necessity of additional support. Wherever there is liability of the collection of fluid from the immediate drainage of the surface of the wound, he inserts a drainage-tube, as a temporary expedient to prevent distension of the wound, and possible putrefaction. The advantage of this latter dressing over the former are apparent. No irritant is allowed to enter the wound. The suturing of the deeper structures brings into close and permanent apposition parts that formerly separated.

The continuous suture has great advantages over the interrupted suture, especially when it is taken deeply in the margins of the wound. It not only brings the surfaces into firm apposition at the points where it traverses the wound, but by whipping in the edges, in the parlance of the tailor, where it passes over the wound externally, it relieves us of the necessity of any additional supporting dressings. The advantages of this method of dressing, therefore, are great, and, indeed, vital, in the effort to secure immediate union.

The final dressing of the wound formerly was the adhesive plaster and the bandage for support and retention. The plaster was never rendered aseptic, and by its close relations to the wound was dangerous. The bandage was usually of unbleached muslin, and had no special cleansing or preparation for the wound. It may not have been harmful, but it added to the risks of infection. Now, the wound once closed, is protected from external infection by dusting the surfaces with iodoform. Then pads of disinfected materials, with iodoform sprinkled between the layers, are applied; sometimes over a large area around the wound, and in considerable numbers. The whole is retained by bandages of disinfected materials carefully preserved in a disinfected atmosphere. The addition of these external dressings, prepared with so much care, and adjusted with so much painstaking, has been very much criticised. It is possible that they are often unduly multiplied, but the results justify the faith which so many surgeons have in them.

In speaking of the closure of wounds, it should be stated that while the older surgeons did not close many wounds, as those of amputation, surgeons now close all such wounds. This difference in treatment is one of the most striking features in the comparison of the surgery of the present time

and that of a decade past. The former surgeon prepared the wound for suppuration, the later surgeons dressed it as for union without suppuration. Both uniformly realized their expectation.

If we follow the wounds treated by these two methods from the first to the last dressings, the contrast is remarkable. If the wound were large, on the second or third day the fever formerly began, announcing suppuration, and from this date, for weeks after, the dressings were changed daily, one two, or three times. The pus-basin, the irrigator, and the dressing-forceps were in constant demand. In many wounds the suppuration was so profuse that vessels were placed under them which received the continuous discharge. The fever generally ran high, with consequent exhaustion and depression of the patient. Septicæmia, as we now understand it, was the intermediary fever of that day, and was regarded as a usual, if not a necessary, sequel of all considerable operations. Following this fever, or rather insidiously engrafted upon it, were chills, fever, and profuse sweatings, now recognized as pyæmia, but then regarded as only another stage of surgical fever. Few indeed survived this fever; and in the diffused or metastatic abscesses revealed at the autopsy the surgeon discovered a cause of death quite beyond his power to prevent, control, or even comprehend. The vast change in the progress of operated cases during the past ten years can scarcely be realized. Surgical fever with all its disastrous variations, is, in practice, rare in Bellevue Hospital. Pus, as an outcome of surgical operations, is a thing of the past. On one occasion last winter, a teacher in one of the medical colleges sent to the wards of Bellevue for a specimen of pus for exhibition to his class, but none was to be found in the four surgical divisions of the hospital, although there was at that time an unusually large number of wounds and operated cases under active treatment. The wound is now dressed with no expectation that fever will rise, or that suppuration will occur, or that the dressings will require renewal on account of the presence of pus. The patient sleeps and eats well from the first, and the surgeon removes the dressing, often only to find the wound united. This remark is true, not only of incised wounds, but equally of wounds of amputation, excision, ligation of arteries, etc.

If now we turn from this review of the several stages of operations in general to particular operations, we find many curious instances of the remarkable progress of practical surgery in this hospital. It must be understood that in every operation all of the general precautionary measures already described are scrupulously taken and carried out, and, therefore, only special differences in treatment will be mentioned.

Compound fractures were formerly regarded as proper cases for amputation, if the local injury exceeded a single fracture, with a simple penetration

of the soft tissues. And even the simplest cases of compound fracture were reserved for treatment with many misgivings as to the result. The dictum of Hunter that "compound fractures commonly suppurate" was ever the guiding principle in the mind of the surgeon. If, therefore, the wound was extensive, or the bones comminuted, or a joint involved, amputation was the rule. If it were decided to endeavor to save the limb, the only measures adopted were sealing the external wound with some imperfect substance, and placing the limb in a comfortable position. The old fracture-box for the leg and the fenestrated gypsum bandage were the only measures employed. The fracture-box, with its bed of bran or sawdust, was regarded as a remarkable advance in the treatment of compound fractures of the tibia. Placed in the box, with the foot fixed to the foot-board, the wound was covered with bran, and suppuration allowed to go on *ad libitum* and *ad infinitum*. The contrivance had no merit whatever. On the contrary, it greatly aggravated the suppuration by fixing the lower fragment, while it allowed the upper fragment to move freely upon it every time the patient moved. The gypsum splint and bandage had the merit of keeping, or aiming to keep, both fragments at perfect rest. This method of treating compound fractures was a real step in advance, but it did not prevent suppuration in some measure. To-day compound fractures are welcomed to the wards of Bellevue as a class of cases which give the most satisfactory results.

Amputation is not thought of unless arteries and nerves are so far destroyed that death of the extremity must follow. Even when the wound involves a joint, the question of amputation is not more pressing. The treatment pursued is designed—1, to remove from the wound every particle of matter liable to injure the tissues and induce suppuration; 2, to place in fixed apposition all of the tissues composing the wound; 3, to cleanse and disinfect the wound, and protect it from becoming soiled during recovery; 4, to protect the wound from any movement of the parts entering into it while the process of repair is going on. The procedure, so far as concerns the wound, consists in freely exposing the injured parts by incision, removing all effusions of blood, shreds of injured tissue, fragments of bone, and then wiring the bones together so that fractured parts exactly fit each other, next stitching together all cut or torn tissues with prepared catgut thread, as far as they can be brought together; then the final closure of the wound, except where a drainage-tube may be inserted into a cavity of the deep parts; and finally, the external antiseptic dressings and a light bandage of plaster-of-Paris, and over all a wire gauze splint for suspension. This treatment of compound fractures is so uniformly successful that the surgeon has none of that care and anxiety after the

final dressings which formerly harassed him. If there should be symptoms indicating suppuration, the dressings are at once removed, and the source of the trouble searched out and destroyed.

Amputation wounds rarely, if ever, recovered at Bellevue, except after long-continued suppuration. From the smaller amputations patients recovered in due time, but often greatly enfeebled by the drain of suppuration. The larger amputations were terribly fatal. A resident surgeon once made the statement that a recovery after amputation of the thigh had not occurred in Bellevue Hospital "since the time that the memory of man runneth not to the contrary." Though this remark was not strictly true, it had a painful significance to the surgeons of that period. Suppuration with its sequela, septicæmia, pyæmic, and hectic fevers, was the scourge of the surgical wards. The open method of treatment of amputation wounds, advocated by Dr. James R. Wood, had only the merit of not confining the pus within the wounds, and of thus diminishing somewhat the liabilities of septicæmia and pyæmia. It did not prevent suppuration, the source of all the evil. The treatment consisted in closing the upper part of the wound, and placing the stump in such a position that the pus flowed freely out into a vessel placed to receive it. The period of suppuration was undoubtedly diminished by this free exposure of the wound to the air, and the application of balsam of Peru, a favorite remedy with Dr. Wood. The open method was, therefore, a decided improvement upon the old method of closing wounds, but it came far short of the present method, which prevents suppuration altogether, or reduces it to a minimum. Except for the unfavorable conditions incident to the injury, amputations are now among the most successful operations at Bellevue. Death by suppuration and its results, does not occur.

Excision of the larger joints was formerly a most doubtful and dangerous operation. The wounds were flooded with pus for months; and if the patient survived, it was only after the most desperate struggle. The specimens of exsected joints in the Wood Museum, honey-combed with channels through which pus flowed out from the deeper parts of the wound, will be lasting witnesses to the destructive pathological processes which the surgeons of a former period could not avert, and which brought to an untimely issue the best-planned operations. In dressing exsection wounds the older surgeons made ample preparation for suppuration. The wound was left open, and the limb was placed in such position as would allow the pus to escape most freely. For months the patient lay in the same position, waiting under the excessive drain, and often having as a dreaded complication extensive bed-sores. Now the surgeon completes the operation by firmly and accurately closing the wound at all points, except where the draining-tube

emerges. This tube is used only for the temporary purposes of relieving the wound of accumulating serous fluid, and is soon removed. As a rule, excision wounds now do not suppurate; union takes place by rapid and healthy granulation,

During the past year or two we have had under observation many cases of excision of the knee-joint, the hip-joint, the elbow-joint, and the ankle-joint, which have been repaired with suppuration. In one instance of old and destructive inflammation of the ankle-joint the articular ends of the tibia and fibula, the surfaces of the astragalus and os calcis, and all of the surrounding tissues had to be thoroughly scraped to remove the dead bone and fungous granulations. When the cavity was prepared for dressing it was enormous. But as all diseased structures seemed to be removed, and the wound appeared everywhere clean, it was dressed for union without suppuration. The wound did heal without other suppuration than a slight amount of pus, which discharged from a small carious surface. The health of the patient began at once to improve, and in due time she was about the ward, on crutches. We may now say of excisions as of amputations, that they are regarded as simple and very safe operations.

The ligation of large arteries was formerly justly estimated as a very serious operation. The common silk ligature, prepared by unwashed hands, was left depending from the wound. To do its work properly it must in due time sever the strangulated artery by the ulcerative process, and then be removed by traction. With the keenest and often most painful anxiety, the surgeon daily watched the wound to note the amount of suppuration, and gently tested the firmness of the ligature. If after the separation of the ligature the suppuration diminished, and finally ceased, the surgeon was happy and boastful of his success. But far too often the suppuration did not diminish, and to the dismay of the surgeon a slight oozing or gush of blood indicated to his practiced eye a fatal issue by secondary hemorrhage.

How desperately yet vainly he struggled against fate, by resorting to pressure, position, styptics, etc., the older surgeon can alone realize. The repeated hemorrhages, or uncontrollable outburst, at length placed the case in the category of unsuccessful operations. Now, how completely are all the conditions of the operation changed! It is no longer necessary to divide the artery by the ligature to accomplish our object, and thus endanger life by hemorrhage; but, on the contrary, we seek, while we interrupt the circulation sufficiently to effect our purpose, to strengthen the artery by our operation. The indications now are the opposite of those which before obtained. The ligature now selected is non-irritating, and preferably absorbable, as catgut. When applied, it may, or may not, divide the internal coats of the artery. In either

case the wound is completely closed and no sup-puration occurs. In the repair the artery enlarges externally at the seat of the operation by nutritive action, while the coagula organize internally and close its calibre. Secondary hemorrhage after the ligation of arteries has, therefore, become an incident of the past. The conditions no longer exist which make it possible. Ligation of the common carotid is a familiar operation at Bellevue, and was often performed with great skill by Dr. Wood, who published an elaborate monograph on that subject. I aided him in the examination and collection of cases, and in the preparation of the text, and was impressed with the destructive effects of the ulcerative process which attends the separation of the ligature. Some time since I had occasion to ligate this artery, and applied the catgut ligature, cutting both ends close to the knot, and closing the wound perfectly. Union promptly followed, and nothing further was seen of the ligature. The patient died at the end of two months of cancer of the mouth and pharynx, and the autopsy revealed an enlargement of the artery at the seat of the ligature to twice its normal size, by a ring of new tissue completely encircling it. On incising the artery at this point, the remains of the ligature were found in this ring, and the coagula had organized and closed its cavity permanently. It was evident that the ligature had greatly strengthened the artery instead of destroying it, as in the old operation.

It follows that, if the major operations are now performed with so much success, the minor operations are correspondingly successful. If we take as an example the treatment of cold abscesses, the improvement is very noticeable. Formerly a cold abscess unconnected with bone, as in the thigh or on the back, were preferably allowed to open themselves. If the surgeon ventured to operate, he usually made a "valvular incision," and allowed part of the contents to flow out, and then closed the wound. This operation was repeated many times. When aspiration was introduced, it was regarded as a great advance. The fear of the surgeon was that air would enter the abscess cavity, and set up active suppuration. I recall a case of large abscess of the back, in a young woman, which, after consultation and much deliberation, Dr. Van Buren ventured to puncture directly. The interest taken in this bold operation was very great, and the progress of the case was watched with much anxiety by the operator. Profuse suppuration followed, and the patient nearly lost her life. Now these abscesses are promptly cured and without suppuration, by opening them freely, and with the curette, scraping out all the old granulations and diseased tissues; then thoroughly cleansing the cavity with bichloride solutions, and finally pressing the walls gently together with disinfected sponges and bandages, or other antiseptic

dressings. The walls of these abscesses, sometimes of enormous size, and many square feet of surface, promptly unite, and often under the first dressings.

And not less important is the change in the treatment of abscesses connected with carious bone. Abscesses in the lumbar and femoral regions, caused by caries of the spine, were once greatly feared at Bellevue.

Billroth's advice was very rigidly followed, viz: "If the abscess comes from a bone on which an operation is impossible or undesirable, do not meddle with it, but be thankful for every day it remains closed, and wait quietly until it opens, for thus there will be relatively the least danger." Now these abscesses are immediately opened and kept thoroughly cleansed, together with their sinuses, by bichloride solutions, with a marked diminution, and in some cases, a complete suppression of suppuration. In several instances of both lumbar and femoral abscess from spinal caries incisions have been freely made, the pus evacuated, and by means of the soft rubber catheter gently passed along the sinus, the carious abscess itself has been thoroughly and repeatedly cleansed and disinfected with carbolic or bichloride solutions, followed by rapid diminution and final complete cessation of suppuration. Meantime, the patients have rapidly recovered from the symptoms of blood-poisoning from which they have been suffering.

At a recent period a method of treating large abscesses and diffused collections of pus in cellular tissue by the introduction of large perforated drainage-tubes, was practised. Through these tubes the antiseptic solutions were frequently injected, with a view to irrigate the diseased surfaces and tissues. It was a most unscientific method, and was soon abandoned. Instead of it, we have the present rational practice of carefully opening all collections of pus, cleansing the cavities, removing all granulations and other diseased tissues, and closing the wound permanently. The former method often resulted most disastrously; the present never fails of complete success when properly performed.

Perhaps the most marked illustration of the great improvement in operative surgery in Bellevue, may be found in the unvarying success which attends the treatment of simple fracture of the patella by wiring together the fragments. It was eminently fitting that this operation, so novel and startling as to be received with almost universal ridicule by older surgeons, should have first been proposed by the great apostle of antiseptic surgery. By proposing and successfully executing this operation, he expressed his faith in his teachings in form more emphatic and convincing than language could. This procedure does, indeed, embody the very spirit and genius of the surgery of to-day, viz.: Boldness to audacity in the conception of an operation, and

conservatism the most absolute in the method and means employed in executing it. And yet this operation is now accepted as legitimate in Bellevue, and is of almost weekly occurrence in one or the other of its surgical divisions. And no operation, so inherently dangerous when performed according to old methods, has ever proved more successful. It has now been performed in more than a score of cases without an unfavorable result.

Though this paper was to be limited to a review of the comparative results of the ordinary surgical practices of Bellevue, formerly and now, with a brief commentary upon the means and methods employed, I cannot pass unnoticed the success which attends the practice of gynecology in that hospital. The surgery of the pelvic organs of the female is based on the same principles as those which govern the general practice of surgery in Bellevue. And the results are equally remarkable.

Septicæmia and pyæmia are almost unknown in the pavilion devoted to this branch of surgery, and recovery after operations is rapid and complete, unless the case is complicated with conditions quite beyond control. The following statistics show the great success of operations in this branch of practice at Bellevue. Dr. Wylie states that since November, 1883, he has performed laparotomy thirty times, chiefly in the Marquand and Sturgis pavilions, with five deaths. Of the cases proving fatal, two were hysterectomies, one for cancer of the uterus, and the other for a myoma weighing fifty pounds; two were cases of pelvic abscess, complicated with purulent collections in the fallopian tubes. All of the cases of ovarian cysts recovered.

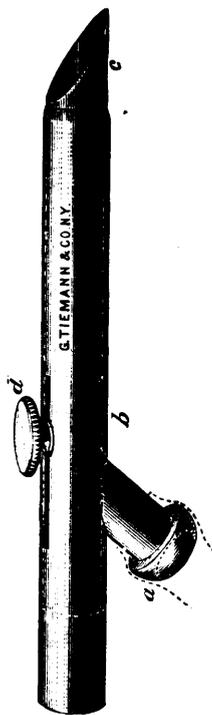
In reviewing the surgical practice of Bellevue, it is not difficult to determine the essential feature of the present methods as compared with those of the past. Cleanliness is the one great object sought to be attained in all operations. Whatever may be the final conclusion of scientific students as to the cause of putrefaction in wounds, practically it is determined that the surgeon may, with the most absolute certainty, protect an ordinary open wound from suppuration. To effect this object he finds that he has simply to resort to those measures which are known to secure perfect cleanliness of the wound. The agents now relied upon and found efficient are: 1. Soap and water to external parts. 2. Carbolic solutions for the instruments. 3. Bichloride solutions to all surfaces and tissues. 4. Iodoform for external dressings. We may summarize the conditions regarded as essential to success as follows, viz.: *A clean operator; clean assistants; a clean patient; clean instruments; clean dressings.—Med. Record.*

OXIDE OF ZINC, according to Prof. Peterson, of Kiel, is just as good as iodoform in the treatment of wounds, is not poisonous, is cheaper, and does not smell offensively.

## A NEW OVARIOTOMY TROCAR.

BY E. S. DUNSTAR, M.D., ANN ARBOR, MICH.

With a view of obtaining a less complicated as well as a less expensive ovarian trocar and canula, than the well-known and excellent instruments of Sir Spencer Wells and the "Fitch dome," I suggested to Mr. Stohlmann (senior partner of the house of George Tiemann & Co.), to make for me the instrument illustrated in the accompanying wood-cut engraving. The drawing (which is of half size) shows so clearly what the instrument is, that no elaborate description of it is necessary. It



consists simply of two concentric and accurately adjusted tubes, one sliding within the other, thus making a canula and trocar proper. The canula (*c*) is adjusted by the set-screw (*d*), and has in it a fenestrum shown in dotted lines at *b*. When the cutting point of the canula is withdrawn into the trocar, this fenestrum comes directly opposite the outlet tube (*a*), to which rubber tubing, at convenience, is to be attached. The instrument, in using, is held in one hand just like a pistol; the proximal end of it, which is capped with a solid convex plate, is placed in the hollow of the hand; the middle ring, and little fingers grasp it in front of the outlet (*a*), while the thumb and index-finger are free to fix or move the canula forward or backward as required by means of the set-screw (*d*). When the cutting

point (*c*) is withdrawn into the trocar, there is no sharp edge or point which can damage the tissues into which it may be introduced.

The special advantages claimed for the instrument are: 1, it can be held and used with one hand alone, leaving the other hand free for the operator to use as may be required, while the grasp (pistol-fashion) is so firm that the instrument is under perfect control; 2, the construction is so simple that the instrument can be cleaned and kept clean with ease; in these days of antiseptic surgery this feature in an instrument is an important consideration. By removing the inner from the outer tube every portion of both inner and outer surfaces of the instrument can be easily reached with a carbolized cotton swab, and there are no sharp angles, corners, or crevices in which septic matter can lurk to do its deadly work by being

carried into the tissues in operating; 3, it is, or ought to be, furnished at much less expense than either the Spencer Wells or the "Fitch dome."

The instrument is nickel-plated and burnished inside and out. I have used it in several ovariectomies, and it works with perfect satisfaction. I would suggest that if made of various smaller sizes and lengths it will be found an excellent and handy substitute for the trocars in use in general surgery.

## TREATMENT OF PELVIC HÆMATOCELE.

[This affection is so comparatively rarely met with that we are apt to become rusty in the treatment, hence it seems well to reproduce the following remarks of Dr. Alfred Wiltshire's from the *Lancet*.]

As to the treatment of pelvic hæmatoceles, the cardinal injunction in most cases is absolute rest and opium. The value of opium is here transcendent. It tranquilizes, relieves pain and enables the exhausted and collapsed patient better to bear the blood loss, while it compels repose, both mental and bodily. But to procure these desirable ends it must be given in full doses, and be repeated as may be necessary. The best method is to give it in one grain-doses of the solid opium, either in pill or powder. Next to solid opium, Battey's sedative solution of opium is good; but morphia is much less useful in these hemorrhages, especially in the cataclysmic forms. Ice and brandy, champagne, or other suitable stimulants may be requisite; and, above all, Valentine's meat-juice is most valuable. Peptonized meats and other foods (Bengers's, Darby's and others) may be useful adjuncts. In certain cases the hypodermic injection of ergotine of Tanret (Paris) may be helpful, and tincture of hamamelis may help in certain forms. The bladder should be relieved by catheterism with antiseptic precautions, as may be required. The use of astringents, such as gallic and other acids, is not great in these accidents, nor can I recommend the use of heavy bags of ice to the abdomen. But besides medical treatment, certain grave surgical questions arise in some cases, and demand urgent solution; for example, in cases where there are reasonable grounds for suspecting the source of internal hemorrhage to be a ruptured tubal or other pregnancy, and in similar accidents, such as bursting of a vein in the pampiniform plexus or elsewhere, where the diagnosis is sufficiently clear; in short in those cataclysmic intra-peritoneal bleedings where rapid dissolution is threatened, prompt operation may not only be justified, but become imperative to rescue the patient from impending death. It must not be forgotten, however, that even in ruptured ectopic gestations many patients recover without operation, as has happened several times within my own experience.

The difficulty of accurate diagnosis is no doubt sometimes great, but not always; and when the well-balanced judgment arrives at reasonable grounds for belief that hemorrhage threatening to be rapidly fatal is going on unchecked from a controllable vascular lesion, then a bold, but not rash, interference is justifiable, and in these days of heroic abdominal surgery, laparotomy should be done without delay.

During the later stages of pelvic hæmatoceles watchful supervision of the patient is necessary. The bladder should be carefully attended to with scrupulous cleanliness and great gentleness. Bed-sores should be prevented if possible. The bowels as a rule should seldom be opened. The mouth often becomes sore from the glazy and raw condition of the tongue and lips, therefore all food should be bland. Sedative mouth washes give much relief (borax, myrrh, wine of opium, mucilages, and orange flower or rose water). The better patients are fed and cared for, the sooner does the effusion disappear according to my experience. Care should be taken to guard against relapses or exacerbations, which are apt to occur about the time of the next catamenial period. I have been able occasionally to predict a fresh effusion at these epochs; and when such happens, it is followed by fresh manifestations of hæmatic jaundice. There is periodicity about these forms of hemorrhage, and the explanation of effusions occurring at the inter-menstrual or fortnightly periods is that it is part of a minor *nisus* that happens then. The condition of the vascular system will warn the physician, and the sphygmograph or finger may indicate increased arterial tension, while the eye can see the venous turgescence. Undue vascular excitement may be reduced by aconite, amyl-nitrite, nitro-glycerine, the bromides, etc. The pelvic viscera may be quieted by *actæa racemosa*, monobromide of camphor, Indian hemp, conium, gelsemine, and so on, given internally, and by vaginal pessaries of iodoform, conia, morphia, atropia, etc., or by rectal suppositories. An atmosphere of turpentine about the sick chamber is good, both for styptic and purifying influences. With reference to the puncture of hæmatoceles, I should as a rule, deprecate opening, and would counsel caution in resorting to any operative measures. Should relief become necessary in the latter stages from suspicion of suppuration or decomposition of blood, or from clear evidence of intolerable or dangerous tension, then aspirate by the vagina and not by the rectum; but operation is generally undesirable, and should be carefully resorted to. During convalescence hot air and water will be found beneficial, and where absorption is tardy, poultices of scalded sea-sand and brine baths are essential.—*Med. and Surg. Reporter.*

ABSORPTION OF INTRA-PERITONEAL LIGATURES.—

Dr. J. C. Irish, of Lowell, Mass. (*Boston Medical Journal*.) says:—Since the intra-peritoneal treatment of ovarian pedicles with short ligatures has so universally replaced the older modes by clamp or ligatures brought out at the lower angle of the wound, it has become a question of great interest to learn what becomes of these foreign bodies enclosed in the abdominal cavity. This subject has been extensively investigated by Spiegelberg and Waldeyer, with a series of experiments upon animals. Doran, also, reports ten cases in which he has examined the pedicle at some time after an ovariectomy.

These observers found that a plastic effusion extending from the proximal side of the pedicle to the distal, over the ligature, would establish a vascular connection with the ligature portion, sufficient to prevent its necrosis. Afterwards, young granulation cells would spring up and insinuate themselves among the individual fibres of the ligatures, separating the threads and unravelling them, and finally, that these fibres would become entirely absorbed.

In exceptional instances, however, the ligatures would slip off the stump, become encysted, and remain without further change.

I have been unable to learn the length of time required for the completion of this process of absorption, or the variations in extent of time that occurred in different cases. The following case, however, demonstrates that complete absorption of the ligatures may take place, as it seems to me, in a very short space of time.

January 13, 1885, I removed an ovarian tumor from a patient at Lowell. The pedicle was ligated in two sections with "Tait's Knot." The ligatures were cut short and enclosed in the abdominal cavity. The patient made a rapid and complete recovery from the ovariectomy. But May 5th, that is four months less eight days after the date of the ovarian operation, she died of acute pulmonary tuberculosis. At the post-mortem examination, a very careful search was made for the ligatures. All trace of them had disappeared from the pedicle. Although it was very improbable, from the manner in which the pedicle had been tied, that they could have slipped off and become encysted, still so thorough an examination of the pelvic cavity was made as to convince us that it was impossible that they had found any place of lodgement there. Therefore, in this instance, the entire absorption of the ligatures had taken place in twelve weeks or less.

EXTERNAL TREATMENT OF NIGHT-SWEATS.—The *Therapeutic Gazette* (August 15,) remarks concerning the treatment of night-sweats by external applications, that Nicolai (*Gazette Médicale de Paris*, June 6, 1885) obtained very good results in the case of night-sweats of phthisical patients, and

others, by the employment of eight grammes of chloral dissolved in two tumblersful of a mixture of equal parts of brandy and water. Every evening before going to sleep, the patients are washed off with a sponge soaked with this solution, and if that does not serve to control the sweating, the shirt in which the patient sleeps is soaked with the same solution and then dried. The effect of this treatment is claimed to be especially satisfactory in cases of children, not suffering from phthisis, in whom night-sweats are present. Sometimes four rubbings with this solution are sufficient to entirely arrest the night-sweats for several weeks.

The tincture of belladonna is also highly recommended by Radakow for the suppression of the night-sweats of phthisis by external friction with a mixture of four grammes of the tincture of belladonna with thirty grammes of water, the friction to be made about two hours before the ordinary onset of the sweating. The fluid is to be poured into the palm of the hand and then rubbed over the entire body, with the exception of the head and the extremities, and the manipulation may be continued until the skin becomes quite moist. This treatment has been employed by Radakow in fifty cases, and he claims that it has not failed in a single instance, although sometimes localized sweatings appeared on the parts which had not been bathed with the tincture of belladonna.—*Boston Med. & Surg. Journal.*

**JAUNDICE AND PAIN IN BILIARY COLIC.**—Mr. Lawson Tait, in the *Lancet*, July, 1885, offers some suggestions as to the reason why, during the passage of gall-stones, there is frequently no jaundice. In fifteen cases of cholecystotomy there has been no history of jaundice, and Mr. Tait has found that the occurrence of jaundice, either in the skin or in the urine, during and after the passage of the gall-stone, is of extreme rarity, and not, as has been believed common. Mr. Tait believes that the explanation of this fact lies in the following anatomical conditions of the cystic and common ducts. The common duct is not so long (3 inches) as most text-books assert, and is much less rigid and more easily dilatable than the cystic duct, which is larger than is usually described, namely, one inch. Hence, we can understand how a stone, if not of very great size, will cause intolerable agony while passing through the unyielding cystic duct, and without a trace of jaundice ensuing, the gall-bladder alone being its propellent force; but the moment it enters the common duct the extending impulse will be increased by the influence of the whole excreting force of the liver, so that its passage through the common duct is more rapid. The chief symptom then, that of pain, is due to the slow passage of the calculus through the unyielding cystic duct, whilst its rapid passage through the easily distended and much larger common duct

gives no time, in the majority of instances, for the production of jaundice, which only takes place after long-continued obstruction of this the common duct.—*Brit. Med. Journal.*

**VACCINATION AFTER EXPOSURE.**—According to the last quarterly report of the proceedings of the Illinois State Board of Health, 144 persons suffered from small-pox, the disease having been contracted at a negro "protracted meeting," and of this number 120 had never been vaccinated. Within from three days "to about a week," 14 of these 120 persons were vaccinated. Amongst the remaining 106 cases 38 died, being a mortality at the rate of 35.84 per cent. Of the 14 vaccinated after exposure all recovered; and amongst the 37 who had been vaccinated prior to exposure, one single person, vaccinated once twenty-five years before, died. The late Mr. Marson attached no value to vaccination if performed after an interval of four complete days from the exposure, his statement being as follows: "Suppose an unvaccinated person to inhale the germ of variola on Monday; if he be vaccinated as late as the following Wednesday the vaccination will be in time to prevent small-pox being developed; if it be put off until Thursday the small-pox will appear, but it will be modified; if the vaccination be delayed until Friday it will be of no use—it will not have had time to reach the stage of areola, the index of safety, before the illness of small-pox begins." But the Illinois report gives prominence to the belief that vaccination has a positive therapeutic value as well as the prophylactic power to which Mr. Marson referred, and in the fifth annual report of the Board of Health it is alleged that "if a patient be vaccinated during the febrile stage and the vaccination progress normally . . . the areolar stage of vaccination will be reached before the dangerous tenth day of the variolous disease, and, as has been repeatedly witnessed, the graver disease will be aborted, jugulated, or materially modified." Hence it is inferred that it is never too late to vaccinate; we prefer, however, the alternate maxim laid down, which is that in cases where there has been possible exposure "it is never too soon to vaccinate."—*London Lancet*, Aug. 22d.

**CALOMEL IN BOWEL COMPLAINTS.**—The older practitioners were great advocates of the mercuric salts—particularly of calomel—in bowel complaints; and some of our recent therapeutists of the "physiological school" adhere to the old practice only with a modified dosage. The old explanation of the *modus operandi* of mercury in these complaints was that it induced a flow of bile, and the bile in turn arrested putrefactive changes in the contents of the alimentary canal. It would appear from recent experiments by Sternberg (*Med. News*, Sept. 12), that calomel does correct decom-

position in the alvine contents, not necessarily, however, if at all, by stimulation of the hepatic secretion, but by its direct destructive action upon the bacteria of putrefaction. Sternberg says:—

“The following simple experiment may, perhaps, serve to explain the demonstrated value of calomel as an “alterative” in bowel complaints attended with offensive discharges: If a little calomel is broken up in a test-tube with putrid beef-tea, a black precipitate is thrown down. I have made no attempt to examine this black precipitate chemically, but it can scarcely be anything else than the black oxide of mercury which my recent experiments show has decided antiseptic power when present in putrescible material in the proportion of 1:1000, and entirely prevents the putrefactive decomposition of beef peptone solution in 1:500.”

**SALISBURY STEAK**—The Salisbury steak is made by taking the best slices of the “round” of the beef, and chopping it with *dull* knives. The object is not to cut, but rather pound the meat. By thus treating it, the pulp comes to the top, and the tough, fibrous portion remains below. This pulp is scraped off and made into cakes, like sausage-cakes, or in the shape like a good-sized steak and *gently* broiled on a gridiron. It has been found that meat gently cooked is more digestible than raw. The fire must be good, so that the meat may be rapidly broiled—that is, be cooked on the outside and almost raw inside.

A little salt and pepper and a small amount of butter added make a not at all unpalatable dish, and one which contains *all* the strength of the beef, with the tough, indigestible portion entirely separated. This diet is used exclusively in chronic cases, by physicians professing to treat according to the Salisbury method. They use but few drugs, and what they use are mainly tonics. The diet is used not only in diseased digestion, but diseases of liver, kidneys, stomach, bowels, nerves, etc., and remarkable results are said to have been obtained. —*N. Y. Medical Times*.

**CHRONIC ATONY OF BLADDER**.—P. Donovan, F.R.C.S.I., Kingstown, writes: In answer to the inquiry of “Old Member,” as to the treatment of chronic atony of the bladder, I would recommend him to pass an electric current each day for a period of five minutes, from a Stohrer’s battery, from the sacrum to the pubis, and along the perinaeum, and to try the following mixture at the same time, with the cold sitz bath, or, better still, sea bathing every morning: R Tinct. ferri perchloridi, ʒ ii.; liquor strychniæ. P.B., ʒ ss.; liquor ergotæ, P.B., ʒ ii.; syrupi limonis, ʒ i.; aquam ad ʒ viii. One ounce to be taken twice daily.

I have lately had a gentleman under my care, who had lost all power over his bladder, and had

to be relieved two or three times each day by the catheter. He is now perfectly well, with full power over the organ, although he is seventy-eight years of age. The above treatment in this case was most successful.—*Brit. Med. Jour.*, Aug. 22d.

**EDINBURGH MIXTURE FOR GOUT**.—The solution of the biniodide of mercury in potassic iodide, known as the Edinburgh mixture, is of great service in the treatment of gout. Dr. C. R. Illingworth (*Brit. Med. Journ.*, May 30, 1885) prescribes it as follows:

R Sol. hydrarg. bichlorid. (P.B.)	ʒ vj
Potass iodidi	ʒ ss
Inf. quassia	ad. ʒ vj

M.—Sig. Teaspoonful every three hours.

If there be much pain, he adds two-minim doses of the solution of morphine, or five-grain doses of chloral and bromide of potassium with simple syrup. Of course when congestion or actual inflammation of the kidney or other internal organs exists, this preparation should not be used.—*Therap. Gazette*.

**THE CAREFUL PATIENT**.—The following joke is at the expense of a Chicago doctor. He was about to anesthetize a patient, when, in answer to a question, he informed the victim that he would be entirely unconscious and know nothing until the offending growth had been removed. The patient accordingly commenced to fish his loose change out of his pocket. “Oh, you need not mind the fee until I am through,” remarked the considerate doctor. “I don’t intend to pay you yet,” returned the patient, “I wish merely to count my money, to see how much I have.” The doctor saw the point and was much amused.

**SUBCUTANEOUS LIGATURE OF THE BRACHIAL ARTERY**.—Dr. Raimondo Cannizzaro, being called upon to ligate the brachial on account of a wound involving the radial and ulnar branches, made a valvular opening by drawing the skin tight, tied the artery with carbolized silk and allowed the skin to slip back covering the wound. The superficial wound healed by first intention, and in seven days the patient left the hospital cured.—*Revue de Chirurgie*, August 10, 1885.

**THE USE OF IODINE IN DIPHTHERIA**.—Adamson (Practitioner) adds his testimony to the efficiency of the iodine treatment. He lost only two patients out of 55 treated with the tincture alone, although some of the cases were very grave. For adults he gives from five to seven minims every hour, and for children between six and 12 years of age from two to three minims every two hours. Special mention is made of syrup of quince for disguising the taste of the drug.—*N. Y. Med. Journal*.

# THE CANADA LANCET.

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TORONTO, NOVEMBER, 1885.

*The LANCET has the largest circulation of any  
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## THE PHYSICAL IMPROVEMENT OF MANKIND.

The physical improvement of mankind is no new problem. From a remote period it has received more or less attention; but not until our own time has it received that attention which its importance demands. Gradually this problem, in one form and another, has been forcing itself upon the attention of thoughtful minds, until now it has come to the front as a question of the first magnitude. To this end all civilized governments make money appropriations, and in various ways promote sanitary work. All this is highly gratifying; no better evidence could be afforded of the spread of knowledge. The common schools of a country are the most powerful agents employed in sanitary reform. Filth, no less than superstition, is the patrimony of the ignorant. Witness the opposition of the ignorant masses of Spain, Italy, and our own country, to necessary sanitary measures, in the present terrible visitations. Wholesome sanitary conditions are not only evidences of advanced civilization, but are part and parcel of civilization itself.

The physical improvement of the race through improved surroundings, presents an attractive field to the philanthropist. In none are good results more fruitful or more self-satisfying. It implies less disease, less suffering, and saving of time and the expenses incident to sickness; it means more power for the wage-earner, more food and clothing,

and more home cheer and comfort. Such are a few of the blessings that unfaillingly come to mankind through the adoption and practice of well-known sanitary laws. Sickness, suffering, and premature death are seen on every hand in all lands, even in the most favorable to health and longevity. Especially is this true of the young, of whom one-fourth die before it can be said they have commenced to live, and hence, so far as human eye can see, were born to no purpose, leaving the pain, sorrow, labor and expense incident to their birth, life, and death, wholly uncompensated. Of the number who survive the earlier years of infancy, a large per centage die before reaching maturity; another large per centage are cut off in the earlier years of manhood and womanhood. Early death is the rule, and ripe old age the exception. The remedy for all these ills, the sanitarians tell us, lies in improved modes of living—cleaner surroundings, abundance of food, better clothing, and more comfortable dwellings.

Good and commendable as all this is, it does not meet the whole case. In the present day, thousands are living surrounded by sanitary conditions as favorable as can reasonably be looked for. They are well fed, well clothed, and well housed; but are they free from sickness? do they rear their young, and die of old age? All these blessings they have in a fuller degree; but they, too, are sick, lose their children, and die before old age overtakes them. True, the cottage of the poor is, *par excellence*, the home of infantile disease, contagious diseases, consumption, and kindred affections; but the palaces of the rich are by no means exempt. Possessed of all that money can do for them, even they have been unable to solve the problem—how to live out their allotted three score and ten years, to say nothing of the additional years of promise through extra vigor of constitution. Hence we see that outward conditions, however beneficial, are of themselves inadequate to raise the standards of health and longevity to the degree intended by an overruling Providence. It could never have been intended that half the race should perish before reaching years of usefulness, and that but a few of the other half should die of ripe old age. Clearly enough there are elements of destruction other than hunger and dirt at work, and it behooves us to search them out, in order to be able to shun them, and induce others so to do.

In point of fact, these destructive elements are already known, though but little heeded. This neglect arises partly from the delicacy of the subject, and partly from the difficulties in the way of applying a remedy. We should not, however, be deterred from doing our duty by such considerations. Effects are often avoided by a proper knowledge of causes, even where compulsory laws would be inoperative. That the sins of the fathers are visited upon the children, is a truth no less certain in a physical than in a moral sense. "Like begets like" is a truism as applicable to the human family as it is to the herds of the stock-raiser. Robust parents produce, almost infallibly, healthy, vigorous children. We do not look for such results from parents of diseased or enfeebled constitutions. The remedy is obvious. The stock-breeder would say, Weed out all the weaklings, and prevent the mating of all but the perfect in form and development. That would be a sure and scientific remedy, one readily enough applied to dumb brutes, but largely impracticable as regards mankind. That would be a practical working out of Darwin's theory of the survival of the fittest; but man, as a moral, free agent, and king of all the earth, would refuse to come under laws and regulations so much calculated to thwart his passions and inclinations, however much in the interests of the race such laws might be.

How much could be accomplished by restrictive laws is a question for the political economist. Probably such a law would be found oppressive and inoperative. Man's two-fold nature is a barrier to the application of laws restricting his liberty in this behalf. Besides the undesirable unions based on mutual attachment and affinity, many more are the result of social and material considerations. Evidently the springs of action are too numerous, and motive power too strong, ever to be regulated or controlled by statutory laws. Amongst savages such laws are unnecessary; Darwin's theory has full play. The hardships and exposures incident to their mode of life kill off the weak and sickly, so that only the healthy and strong survive. Hence transmitted disease is rarely met with amongst the uncivilized. It is in civilized life, where circumstances favor effeminacy, and where the life of the sickly offspring is preserved by intelligent care and the skill of the physician, that the blighting, painful, and destructive influences

of transmitted debility and disease are mostly seen and felt. Strange indeed, and most unfortunate too, that the very conditions which we most covet, and to which we point with most pride, should be freighted with danger to health and life. Paradoxical as this may seem, it is, nevertheless, true. Here extremes meet: In the lower strata, hunger, dirt, and exposure, productive of suffering, disease, and death; and abundance, cleanliness, and comfort, productive of effeminacy and transmitted debility, in the upper strata. A noteworthy illustration of this fact was recently given to the public by the St. Louis Medical Society, some of whose members have a world-wide reputation. That learned body actually had the temerity to discuss, openly and frankly, woman's enjoyment of the sexual function. The consensus of opinion arrived at was, that desire and pleasure were the rare exception; pleasure without desire, more frequent; neither desire nor pleasure, common; while loathing and pain were far from uncommon. Here we have a certain proof of lack of vitality and physical development, as productive of evil as it is contrary to nature. It was ordained that woman should bring forth her young in pain, but to ask her also to conceive in pain is the acme of cruelty. Mothers so constituted cannot be expected to produce a healthy, vigorous offspring. Consider also the conjugal unhappiness resulting from such unnatural physiological conditions. The women of St. Louis are probably a fair type of womanhood in general, on this continent at least; and, if so, civilized life must undergo a reformation before it can be said to favor a high degree of physical development. It is important that medical men should know and consider these matters. Perhaps they cannot do a great deal to mitigate the evils to which we have called attention, but it is to them alone suffering woman can look, and society at large, for counsel and guidance in these difficult and delicate matters. We all can do a little, if we only would, and drop a hint here and a word there, as we pass in and out amongst the people. In this quiet way each can impart information which is certain to bear good and abundant fruit. The medical profession is open to criticism for neglecting to supply popular works treating of these and kindred topics. No kind of information is more eagerly sought after, and none more difficult to obtain. What literature the people have, of this

kind, has been disseminated by quacks, and written with an eye to business more than the imparting of useful knowledge. What is wanted is more light, which is, after all, the surest remedy for all errors, be they physical or moral.

#### BRITISH MEDICAL ASSOCIATION.

The fifty-third annual meeting of the British Medical Association was held at Cardiff, Wales, July 28th to 31st, under the presidency of Dr. Edwards, of Cardiff. The proceedings were opened by a short address from the retiring President, Dr. Cuming, of Belfast. The report of the Council of the Association was the next order of business. The report recommended the purchase of a site and the erection of a building for the use of the Association, at an estimated cost of \$75,000 for the site and \$50,000 for the building. This occasioned considerable discussion, but was finally carried, and the Council was authorized to buy or lease a site, and erect a building for printing and publishing the *Journal*, etc.

The President then delivered the annual address, in which he gave a description of Cardiff, its mineral resources and other natural advantages, its sanitary work, etc. He said that the health officer of to-day stands, as did the Hebrew priest of old, between the living and the dead. He next referred to the British Medical Association, which had now come to be a power in the land, socially, politically, and morally. He also alluded to the advances in medical science which had been made during its growth, as, for example, the use of chloroform, ether, iodoform, the bromides, antiseptics, the study of disease-germs, etc.

The address on medicine was delivered by Dr. Samuel Wilks, of London. He claimed that diseases arise from peculiarities of climate, food, race, and surroundings, influenced by heredity. Bacteria and bacilli in pathology were now in the ascendancy, but he believed the fashion would, in a measure, pass away, as Liebig's theory about zymotic ferments had done. He ridiculed the idea that each microbe had its specific pabulum. Disease was often the result of irregularities in development of organs, and want of harmony in the functions of various organs; in illustration of which he referred to the curious intermittent or remittent action of many organs. Dr. Wm.

Roberts delivered the address on therapeutics, in which he fully considered the important subject of dietetics, treating first of milk, to which he gave the first place among liquid foods. Next to milk he ranked beef-tea and other meat decoctions and infusions. Beaten-up eggs also received a due share of attention, as being a highly nutritive form of liquid food. He also alluded to the enormous trade which has grown up of late years in "prepared foods," and stated his preference for the several articles of food in their simple state, with which a skilful nurse could prepare what was necessary for the patient if provided with proper cooking utensils and materials for preparing peptonized articles of food.

The address on surgery was delivered by Dr. E. H. Bennett, of Dublin, on "Injuries of the Skeleton," and the best method of studying fractures. This, he claimed, was accomplished, not by dissecting cadavers or experimenting on animals, but by studying many cases of the same kind. He had studied one hundred cases of Colles' fracture, and found no less than forty-eight cases of impaction. According to this statement, we must be prepared to meet these two conditions in nearly equal numbers. In Pott's fracture, he found a number of specimens in which the fibula was broken in the upper third instead of the lower. Where the symptoms resemble a sprain of the ankle, the fracture of the fibula may be overlooked. He cited a number of fractures in different parts of the body in support of his views regarding the study of fractures.

In the section on obstetrics, the address was delivered by Dr. Henry Gervis, London, upon the subject of "Death-rates from childbirth and cancer, and the value of antiseptics in midwifery." The decline in the general death-rate was first touched upon, and then the decline in death from childbirth, which he expected would continue. He warmly advocated the early and judicious use of the forceps, great care in the prevention of hemorrhage, and the use of antiseptics both before and after labor. He advised careful examination of the parts after labor, and the stitching up of lacerations. Corrosive sublimate or boracic acid solutions he considered preferable to carbolic acid. He hoped much good would arise out of the series of seven questions proposed by the collective investigation committee on the subject of puerperal

fever. In regard to cancer of the uterus, he approved of early operative interference whenever practicable, and had hopes that much good would be accomplished. While admitting the influence of heredity, he believed in the local origin of cancer.

The papers in the sections were of great interest, and the discussions very profitable. The social side of the meeting was also well sustained.

### NEW METHOD OF TESTING WATER.

As is well known, all methods of testing the sanitary qualities of water have hitherto been very imperfect. The chemist has been able to determine the presence of mineral substances and gases, and to trace the existence of organic impurities; but the biological condition of the water was unknown to him, and he was, therefore, unable to say whether it was fit for sanitary purposes, or not. Through the labors of Koch, a new method has been introduced, which is called the biological test. This method has been satisfactorily tested by Dr. Percy Frankland, of London, England, (*LANCET*, Sept. 26) in his recent study of filtering and precipitating agents, and has met with great favor. A complete account of the process, by Prof. Warden, of the Calcutta Medical College, has been published in the *Chemical News*, and reprinted in pamphlet form. The test consists essentially in mixing a known volume of water with "sterilized liquid meat peptone gelatin," counting, after a definite period, the colonies of micro-organisms which develop, observing the extent to which they liquefy the gelatin, and, if necessary, cultivating them in various ways. The utmost possible care is, of course, necessary in these operations, and special apparatus is required. The paper gives full directions and illustrative drawings; and the importance of the system is well illustrated by Prof. Warden, when he reminds us that a drop of a cholera stool added to a liter of pure sterilized water, could not be detected by chemical analysis, whereas the bacteriological examination would "with absolute certainty demonstrate the presence of a comma-shaped micro organism, while subsequent cultivation would indicate whether the organism was the cholera bacillus or not."

The scientific and practical value of this new method cannot be over-estimated. The testing of the sanitary purity of water will become a matter

of certainty, instead of a hap-hazard approximation of the truth, as was formerly the case. It will open up a new and interesting field for the expert micro biologist, as it can only be undertaken by one who has had experience in the study of bacteriology.

**STRYCHNIA IN DIPHTHERITIC PARALYSIS.**—In the *Deutsche Medicische Wochenschrift* for May, Dr. Reinhard, of Bautzen, relates the case of a boy aged three years, who after an attack of diphtheria, suffered from symptoms of paralysis in the muscles of the palate and various parts of the body, his gait being uncertain and staggering. Tonic treatment, including iron, was of no avail, and twelve days later the symptoms had advanced so far that death seemed imminent from paralysis of the respiratory muscles. Internal remedies were useless, as the power of swallowing was lost; recourse was therefore had to the subcutaneous injection of sulphate of strychnia, 1 milligramme (0.015 grain) daily. The next day the breathing was quieter and the muscles were less flaccid, and only fifteen doses were required to establish convalescence on a firm basis. No unpleasant symptoms were set up by the strychnia. Dr. Reinhard mentions this case, not as anything new, but as bringing an old remedy to the remembrance of his fellow-practitioners.

**BATHS FOR RHEUMATISM.**—Turkish baths are now largely prescribed in New York for those forms of rheumatism resulting in deformity of the joints. The baths are ordered twice a week. Several ladies who have passed through the alkaline treatment, find that these baths afford them great relief. The medicine which seems to give the most satisfaction is liquor ammonia, in twenty-drop doses, three times a day, in a half tumbler of cold water. The bicarbonates of potassa and soda are objectionable, because they are liable to produce a skin disease resembling herpes.

**A NEW THERMOMETER.**—A new fever thermometer has been invented by Immisch Bros., of London, Eng. It has the appearance of a lady's small silver watch, with one hand moving over the dial, which is graduated according to Fahrenheit's scale. Owing to its small size it may readily be placed in the axilla, and takes but  $3\frac{1}{2}$  minutes to reach its maximum temperature. It is absolutely

water-tight, and is therefore not affected by dampness. There is also no danger of breaking, even should it fall upon the floor.

**KOUMISS IN CONSUMPTION.**—In an article in the *Medical Bulletin* on the use of Koumiss in the treatment of consumption, Dr. Clifford Dock says that after two months' trial in one of his patients the results were most gratifying. The nausea which had been troublesome was entirely removed, and all ordinary articles of food were taken with impunity. The dyspnœa was greatly relieved except on vigorous exertion. The affected lung was greatly improved, and the general health bid fair to carry the patient many years into the future. This remedy can be obtained from W. S. Robinson, Druggist, 732 Yonge Street, or R. R. Martin, 171 Yonge Street, Toronto. Samples sent on application.

**PARALDEHYDE AS A HYPNOTIC.**—This new remedy bids fair to supplant chloral hydrate as a hypnotic in certain cases.

The drug may be administered as follows :

R.—Paraldehydis . . . . . ʒ j  
 Pul. Tragacanth, Co. . . . . grs. xx  
 Syr. Aurantii . . . . .  
 Spts. Chloroformis . . . . . ℥ xv  
 Aquæ . . . . . ad ʒ iij—M

Sig.—The whole to be taken at one dose at bedtime.

**ANTIDOTE BAG.**—Dr. Murrell advises that every physician should keep an antidote bag, which should contain every drug and instrument needed in ordinary cases of poisoning. It should always be kept filled and ready for use ; so that, in case of emergency, the doctor could take it along or send for it, and not be compelled to look for stray bottles or instruments at a time when a life may depend upon a minute.

**ENUCLEATION OF DISEASED GLOBES.**—Dr. Noyes, of New York, in a discussion on a paper read by Jonathan Hutchinson at the meeting of the Ophthalmological Society, London, Eng., said that after twenty-five years' experience with enucleation he had come to the conclusion that indiscriminate removal of diseased eyes for the purpose of preventing sympathetic ophthalmia was a doubtful practice. Of late years he had not so largely advised

enucleation, and in so doing he believes he has saved many eyes. We agree with Dr. Noyes, and hold that an inoffensive globe should not be removed simply because it useless.

**TREATMENT OF GONORRHEA.**—Gonorrhœa may be successfully treated with the following injection :

R Zinci sulph. . . . . grs. xxv ;  
 Bismuth subnit. . . . . ʒ iss ;  
 Ext. belladonnæ, . . . . grs. xx ;  
 Aquæ, . . . . . ʒ viii.

M.—SIG. Inject one or two teaspoonfuls four or five times a day, and just before retiring.

We have found this more generally useful than any other injection we have ever employed.

**MODERN SURGERY.**—We desire to call attention to an article in another column, from the pen of Dr. Stephen Smith, of New York (*Med. Record*), on the comparative results of operations in Bellevue Hospital. The article is worthy of a careful and attentive perusal, indicating as it does the line of advance in modern surgery in one of the leading hospitals in America.

**REMOVAL.**—Dr. J. M. Cochrane, who has held the position of Medical Superintendent of the Hamilton Hospital, has removed to this city to commence practice. He carries with him the best wishes of the Hospital trustees and many friends in Hamilton, and we heartily welcome him to our midst.

**CORONER.**—Robert Mark, M.D., of Ottawa, has been appointed Coroner for the County of Carleton ; Chas. P. Pitcher, M.D., of Jerseyville, Ont., for the County of Wentworth ; W. H. Hamilton, M.D., of Port Arthur, for the District of Thunder Bay ; and J. M. Hutchinson, of Brussels, for the County of Huron.

**APPOINTMENTS.**—Dr. R. M. Fairchild, of Brantford, has been appointed Assistant Physician to the London Asylum ; Dr. T. W. Reynolds, of Hamilton, Assistant Physician to the Hamilton Asylum ; and Dr. J. Simpson, of Bowmanville, to a similar position in the Rockwood Asylum, Kingston.

In speaking of premature menopause, Dr. T. Gaillard Thomas said : " When called upon to express an opinion in the early part of a supposed

pregnancy, you should always say that up to the end of the third month no one can decide the matter by even the most careful examination."

The death of Dr. J. L. Atlee, of Lancaster, Pa., brother of W. L. Atlee, M.D., of Philadelphia, is announced in our American exchanges.

### Books and Pamphlets.

POISONS, THEIR EFFECTS AND DETECTION, by Alexander Wynter Blyth, M.R.C.S., F.C.S., etc. 2 volumes. W. Wood & Co.

"And if a man did need a poison now," surely these two volumes might supply him with a very comprehensive catalogue of all sorts, from both the organic and the inorganic world, and in this age of wondrous discoveries, murderous inventions and lightning speed, it behooves every person to press to the front, and possess himself of the very latest intelligence from the great battle-field of science, and get hold of good books before they pass, as their predecessors have done, into the dark vale of the forgotten. Uncle Toby said that nothing was made to last forever. It must be a paragon of a good book on any branch of medical knowledge, that will not die out in ten years, otherwise how could the infinitude of new ones find either buyers or readers, to say nothing of shelf room or dimmed eyesight. Still we hope that this work of Wynter Blyth will have sufficient vitality to elongate its existence over a dozen winters, and when it ceases to present the blythe aspect of youth, we would trust that its author will continue able to write with vigor, and to bring it into harmony with the requirements of advancing science, of which he has certainly been an assiduous cultivator. The paper and typography of these volumes are both very creditable, and well entitle the publishers to the grateful respect of the profession.

THE BLOT UPON THE BRAIN: Studies in History and Psychology. By Wm. W. Ireland, M.D., Edin., formerly of H.M. Indian Army, Corresponding Member of the Psychiatric Society of St. Petersburg, and of the New York Medico-Legal Society; member of the Medico-Psychological Association. Edinburgh: Bell & Bradfute. Toronto: Williamson & Co.

This excellent work, by Dr. Ireland, of Preston-

pans, Scotland, will be read with delight not only by psychologists, but also by those not directly interested in the subject. Technical terms have been avoided as far as a clear understanding of the subjects under discussion would allow. A careful study of diseased brain function has enabled the author to give explanations of some important events in history. The work deals with the hallucinations of Mohammed, Luther, Swedenborg, and Joan of Arc; the insanity of power, as exemplified in the Claudian-Julian family, Marcus Aurelius, etc.; the hereditary neurosis of the family of Spain; unconscious cerebration; the relation of words to thought; dual functions of the double brain; and many other equally important subjects. The book is written in a popular style, and yet deals with abstruse subjects of absorbing interest. Many of the papers have already appeared in the *Journal of Mental Science* and in *Brain*. The author acknowledges advice and assistance from Dr. Clouston, of Edinburgh, Dr. Grierson, Prof. Turner, and others, in the preparation of the work.

"'Tis the blot upon the brain  
That will show itself without."

TENNYSON.

A COMPLETE PRONOUNCING MEDICAL DICTIONARY, embracing the terminology of medicine and kindred sciences, with their signification, etymology, and pronunciation; with an Appendix, comprising the Latin terms and phrases occurring in medical works, etc. By Joseph Thomas, M.D., LL.D. Philadelphia: J. B. Lippincott & Co. Toronto: Williamson & Co.

Thomas' Dictionary really fills a long felt want, viz., that of a thoroughly reliable pronouncing vocabulary of the terms used in medicine and kindred sciences. The etymology of the various terms used in medicine has received special attention, the importance of which can scarcely be over-estimated. Another special feature of the work is the giving of a literal translation of the various Latin phrases occurring in the Dictionary. The work has been prepared with great care, thoroughness and accuracy, and cannot fail to be appreciated by all intelligent readers. We bespeak for the work the most favorable consideration at the hands of the profession, and unreservedly give it our highest commendation. It is printed on good paper, in clear type, and bound both in cloth and sheep. Price \$5; in sheep, \$6.

**THE PRINCIPLES AND PRACTICE OF SURGERY**, by John Ashhurst, jr., M.D., Prof. of Clinical Surgery in the University of Pennsylvania, etc. Fourth edition enlarged and revised, with 597 illustrations. Philadelphia: Lea Bros. & Co., 1885. Toronto: Williamson & Co.

The above work furnishes in a concise manner a condensed but comprehensive description of the treatment of surgical affections and the principles upon which it is based. No pains have been spared in the present revision of this most excellent work to render it worthy of the continued favor and support of the profession. The general arrangement of the volume is the same as in previous editions, but there has been a slight increase of new material which has necessitated the addition of upwards of fifty pages. The series of illustrations have been improved by the introduction of a large number of original wood-cuts. The work is, upon the whole, a faithful and complete representation of the advanced condition of modern surgery, and is especially to be commended to the attention of students and general practitioners.

**THE SCIENCE AND ART OF MIDWIFERY**, by W. T. Lusk, A.M., M.D., Prof. of Obstetrics and Diseases of Women and Children, in the Bellevue Hospital Medical College, etc. New edition revised and enlarged, with numerous illustrations. New York: D. Appleton & Co., 1885. Toronto: Hart & Co.

The new edition of this excellent work is just to hand, and is cordially welcomed. We do no injustice to any other author when we say that Lusk's Midwifery is surpassed by no other work of the kind in the English language. Great care has been exercised in its revision, and the work is fully abreast of the most advanced views on this important subject. We commend the work to the attention of our readers.

**INSOMNIA AND OTHER DISORDERS OF SLEEP**, by Henry M. Lyman, A.M., M.D. Chicago: Keener & Co. Toronto: Williamson & Co.

The above is a well printed minor octavo, on good paper, containing 237 pages. The author has probably had in view general popular instruction, rather than that of the medical profession. He has therefore very appropriately treated his subject in a manner sufficiently plain and untechnical to render the work acceptable and useful to the laity. The chapters on dreams, clairvoyance,

somnambulism and hypnotism, are very interesting, and by the lovers of the marvellous some parts of them will be read with unusual interest.

**BURR'S MEDICAL INDEX**, adapted to the use of Physicians, for the annotation of particular references to matters found in Text-books, Medical Journals, &c. The Burr Index Co., Hartford, Conn.

This will be found a most useful auxiliary to the library of every physician by enabling him to make notes for future reference in the course of his reading. It is conveniently arranged with thumb holes cut in the edges of the leaves, arranged with a projecting alphabet printed in gold letters on Morocco leather. It is scientifically and specially arranged for the needs of the physician and surgeon. All words entered are indexed by the first two letters. We heartily commend the work.

**FOWNE'S MANUAL OF CHEMISTRY**, Theoretical and Practical. A new American, from the twelfth English edition, embodying Watt's "Physical and Inorganic Chemistry." With one hundred and sixty-eight illustrations. Philadelphia: Lea Bros. & Co. Toronto: Williamson & Co.

Fowne's Chemistry is too well known to require any special notice at our hands. It has been for years the standard work on chemistry in all our medical schools and colleges. The present edition has been prepared with great care and is worthy of continued favor. We welcome it to our library, and commend it to the attention of our readers.

**RENAL AND URINARY AFFECTIONS**, by W. Howship Dickinson, M.D., Cantab, F.R.C.P.

This is the August issue of the enterprising house of W. Wood & Co. It is both comprehensive and minute, and it cannot fail to be highly appreciated by every member of the profession, who desires to be well instructed on the numerous morbid conditions of the whole urinary system. The illustrative plates are presented in a better style of art than heretofore.

**INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, U. S. ARMY**. Vol. vi. Heastie—Insfeldt. Washington, 1885.

Great credit is due Dr. Billings in carrying out so satisfactorily this great enterprise. It is without parallel in the history of catalogues. There

are already six immense volumes, and yet the letter I is only reached in the category.

**ELEMENTS OF MODERN MEDICINE.** For the Use of Students and Practitioners of Medicine; by R. F. Stone, M.D., Prof. of Materia Medica and Clinical Medicine, College of Physicians and Surgeons, Indianapolis, Ind. New York: D. Appleton & Co.

This is an abridged work in pocket-book form, presenting the more advanced views of leading authorities, with reference to general pathology and therapeutics. Under general pathology are included articles on the origin, nature, and duration of disease, chief symptoms, diagnosis, prognosis, and treatment. In the second part will be found what is regarded by the author as an improved classification of drugs, followed by articles on their physiological action, indications, and methods of use. The work contains a fund of useful information culled from the best authorities in the old and new world.

**A HANDBOOK OF OPHTHALMIC SCIENCE AND PRACTICE,** by H. E. Juler, F.R.C.S., of St. Mary's Hospital, London, etc., with one hundred and twenty-five illustrations. Philadelphia: Lea Bros. & Co. Toronto: Hart & Co.

This work has been favorably received both at home and abroad. Some valuable additions have been made by Dr. Charles A. Oliver, of Philadelphia; for example: the description of a new astigmatic disk, and its use; the effectiveness of different mydriatics, etc. The test-types of both Jaeger and Snellen will be found at the end of the volume. The work will be found a reliable and useful guide in this branch of medical science.

**THE YEAR-BOOK OF TREATMENT FOR 1884.** A Critical Review for Practitioners of Medicine and Surgery, by various contributors. Philadelphia: Lea Bros. & Co. Toronto: Hart & Co.

In the preparation of this work the medical literature of all countries has been placed under contribution, and care has been taken to include such recent pathological and clinical work as bears directly upon treatment. It contains not only a complete account of all the more important advances in the treatment of disease, but also a critical review of the same by competent authorities.

**A TREATISE ON PRACTICAL CHEMISTRY AND QUALITATIVE INORGANIC ANALYSIS, FOR THE USE OF LABORATORIES AND SCHOOLS,** by F. Clowes, D. Sc., Lond., Prof. Chemistry, University College, Nottingham. Third American, from the fourth

English edition. Philadelphia: Lea Bros. & Co. Toronto: Williamson & Co.

The work before us is divided into seven sections. 1. The preparation and use of apparatus. 2. Preparation and properties of gases and liquids. 3 and 4. Analytical operations and reactions. 5. Analysis of simple substances. 6. Full analytical course and tables. 7. Laboratory fittings, apparatus, chemicals and reagents. It will be found a systematic, intelligible, and fully-equipped laboratory guide for students in practical chemistry.

**AIDS TO THE ANALYSIS OF FOOD AND DRUGS,** by H. Aubrey Husband, M.B.C.M. F.R.C.S., Eng., author of "Students Handbook of Forensic Medicine and Medical Police," etc., etc. London: Balliere, Tindall & Cox. New York: Putman & Sons.

The object of the work is to place in the hands of medical practitioners, medical health officers, and medical students, short, concise, and reliable processes for the detection of the commoner adulterations in foods and drugs. A list of the apparatus required is given, also the preparations of the standard solutions used and the method of testing their accuracy. The work will be found very convenient and serviceable.

**APPLIED MEDICAL CHEMISTRY; a Manual for Students and Practitioners of Medicine,** by Lawrence Wolf, M.D., Demonstrator of Chemistry, Jefferson Medical College. Philadelphia: P. Blakiston, Son & Co. Toronto: Willing & Co.

The arrangement of the volume has been made in accordance with the author's system of demonstration. 1. Apparatus and Manipulations; 2. Chemistry of Poisons; 3. Physiological Chemistry; 4. Excretions and Concretions; 5. Sanitary Chemistry. The latest forms and processes, as well as their modifications, have been given wherever advisable.

**THE PEDIGREE OF DISEASE;** being six Lectures on Temperaments, Idiosyncrasy, and Diathesis, delivered in the Royal College of Surgeons, Eng., by Jonathan Hutchinson, F.R.S. New York: Wm. Wood & Co.

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### Births, Marriages and Deaths.

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On the 20th ult., Calvin McQuesten, M.D., of Hamilton, Ont., in the 85th year of his age.