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*BRAIN POWER, HOW TO PRESERVE IT.

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I AM CONFIDENT I am expressing the sympathies and feelings of this large audience, in the Capital of the Dominion of Canada, when I say that we, one and all, rejoice that His Most Gracious Majesty, King Edward, has been restored to health, and anointed King over a loyal and united Empire.

Twenty-one years ago, at a meeting held at Government House, Ottawa, this Society was determined upon by Lord Lorne, now Duke of Argyll, and shortly afterwards called into action with the late Sir William Dawson as first President. Since that date the meetings, with few exceptions, have been held at Ottawa, and the present records of the Society point to a widely diversified line of work, in its various departments, all of which gives undoubted evidence of intellectual development of which any colony in the empire might justly feel proud. The duty which, by the kindness of this Society, I am called upon to perform, I regret has not fallen into other hands. In accepting the task I feel confident of the sympathy of my audience. It is a matter of satisfaction to know that the success of such meetings does not depend on the occupant of the presidential chair, but is chiefly due to the eminent workers in the various sections of the Society.

The energy and marked ability of the late General Secretary, Sir John Bourinot, who, since the incipient stage of development of the Society, brought to light facts of the greatest moment, as to men and measures in all parts of our Dominion, redounding greatly to the credit of one, who by his painstaking research and scholarly attainments, has left an imperishable record on this continent. Edward Gibbon charmingly expressed the idea that diligence and accuracy are the only merits which an historical writer can ascribe to himself. So in scientific research, like qualifications a. ; cardinal qualities. To decide on the true significance of data springing daily from the vast sources of scientific investigation, the result of observations and experiments, a well balanced mind and careful reflection are necessary to winnow out the practical and careful from the doubtful and uncertain. Investiga-

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tion and experiment are widespread, and as to results, fortunately, there is greatly increased reliance. Doubt, says Thackeray, is always crying "pshaw."

We must not begin by doubting, but by doing, and then sifting. A thousand doubters would not make a Lister, a Pasteur, or a Koch. Aristotle says if you doubt you must doubt well, but to doubt well you must first work well. I feel confident that one of the highest aspirations of this Society is that its observations, from year to year, may fructify and extend into all lands, and the reciprocity of feeling and action thus aroused, strengthen the scientific and literary ties of the world. In this prospective development we must all endeavor to assist.

The flame of science must burn within as a vestal fire. Drudgery and long waiting for opportunity are truly discouraging, but the Divine Spark will not disappear while the investigator is true and honorable, and keeping such in view for pure purposes. As a rule lecturers are teachers in a sense, and their work lives after them.

Voltaire says of Virgil, that he was Homer's greatest achievement. Dante was Virgil's greatest light. In science we find precisely the same. The man passes away, but his work remains after him; and so, in the records of our Society, we trust an influence will be exercised such as will redound to the credit of this association.

Our annual meetings present a feature of great interest in the reports of the allied scientific societies throughout the Dominion. It is needless to say how welcome are the representatives, and how much we value their taking part in our discussions, and thus stimulating in a most encouraging manner the interchange of thought which widens the area of scientific research.

The subject which I have chosen for the present discussion is "Brain Power and how to Preserve it." In the days of the ancient Greeks the composition of the body was, in a measure, defined by Aristotle, as being composed of parts differing from each other in form, consistency, color and texture. In these diversified parts brain and nerve tissues are exceedingly important factors. Not, however, until the concluding years of the eighteenth century was an impetus given to anatomical research, by the Hunters of England, the Meckels of Germany, as well as Cuvier and St. Hilaire of France, by whose untiring researches the minute structure of animal tissues, was placed on a more defined and uniform basis. In the past century great light was thrown on the entire subject of general anatomy by Xavier Bichat, one of the most accurate observers in all France, in the Napoleonic Era. The most remarkable advance, however, was made in the third

decennium of the past century, by improving the method of examining minute objects by compound lenses. For more than half a century microscopes have extended the domain of biological science, as to bring within our comprehension, a clearly defined basis of human structure such as could not fail to convey a tolerably correct idea of functional activity in the human system. In 1831 the celebrated botanist, Robert Brown, announced for the first time that an aureola or nucleus was seen in many plants, and that this circular spot was present in each cell. In 1839, Theodore Schwann discovered that there was one universal principle of development in the elementary part of organisms, consisting in the formation of cells. This great advance in biological science is undoubtedly the most important feature of the past century, and one which has given an impetus to physiological investigations of vast moment to the entire human race, owing to the influence thus exercised on the progress of practical medicine.

John Goodsir, the great Anatomist of Edinburgh, announced in 1842, that the nucleus is the reproductive organ of the cell, and that new cells are formed from it; in fact that an organic continuity existed between the mother cell and its descendants. through the nucleus. Virchow, in his "Cellular Pathology," 1858, maintained that, in pathological structures, there is actually no cell development *de novo*; where a cell is found, there must have been a cell before, in fact cell development is continuous by descent.

In 1842, John Goodsir established the principle that cells are the ultimate secreting agents. A nerve cell is not a secreting cell, however, like the general glandular cells of the system. Nerve cells, through the remarkable changes which take place in them, generate that form of energy, known to exist as a special outcome of a nervous system, and defined as "Nerve Energy" or "Nerve Force." A nerve fibre is actually an essential part of the cell with which it is continuous, and the cell and nerve fibre associated make up what is termed a neuron, now known to play so important a roll in the entire nervous system.

The Brain, like other parts of the body, may be in a state of activity or fatigue. When active, the nucleus increases in size, and when fatigued, the nucleus diminishes, and finally shrivels up, becoming in fact useless, as far as functional activity is concerned. It is very remarkable that nerve cells have not the power of reproducing their kind, their especial power being closely connected with the evolution of nerve energy. This is a point on which I desire to place particular stress, as once a portion of the brain, or other nerve centre, is destroyed, new brain material, or a new nerve centre cannot be produced, to replace the injured parts, as

takes place in other portions of the human frame, where when bones, tendons, and such like, are injured, nature comes to the relief, by new tissues, in every respect analagous to the part destroyed. This forms *the key note* to the subject matter in hand, and demonstrates beyond doubt with what care and watchfulness nerve tissue should be guarded, to retain intact normal mental vigor and ordinary nerve power.

Passing now from minute cellular facts to general principles, I am confident you will agree with me in the statement that "brains rule the world and the individual." The great problem of the present day, with which our educationalists, as a whole, have to deal, in the midst of a varied practical experience, is "How to build the best brains out of the material at our disposal;" not for men only, but for women as well. The best possible brains for both sexes is the surest way of strengthening the fabric of our generation. As good a brain is required for the management of the home, as for the guidance of the State; as in both sexes the force evolved, more than any other force in the system, enables men and women by independence and normal aptitude, to bear the burdens of life, and perform their duties and responsibilities with dignity, grace and home spun individuality. These are the peculiarities which make a people and crown with success their efforts in life. The great social problem of the present day is "The building of the Brain," and the influence exercised in this direction devolves largely on our teachers, the very pioneers of our Educational System, It must be built up with careful attention to the rest of the body, as no perfect brain crowns an imperfectly developed body. As the brain furnishes the physical support of mental activity, it is reasonable to expect this will vary with the precise condition of this organ. Excessive brain work tends to exhaust nervous energy and, at the same time, to lower mental power and efficiency. In children, where the stock of brain vigor is in proportion to structural development, the indications of fatigue crop out much sooner, and it is exceedingly important that brain energy should not be overtaxed, but rather in proportion to the normal supply. As Herbert Spencer has charmingly expressed it, "The development of the higher mental faculties is only safe, and in fact normal, when a firm basis of physical strength and well-being is laid down." To force on the functions in advance is likely to endanger the very structure of the brain, and in time diminish seriously intellectual activity. Fabre tells us that "childhood is a time of endless learning," not of endless cramming, and, fortunately, this view of the subject is gaining ground rapidly. Beecher said, "the power of doing is education, not how much a man knows, but how much he can accomplish by putting his faculties into

operation. Many know, and know, and know, and actually keep on knowing until they have lost the power of doing; and so with eating, some go on eating and eating, until it takes the entire strength of the system to carry them along." So by excessive knowledge the mind is liable to grow stupid and fat. True education, sound brain culture, is the faculty of turning it to practical account. How absolutely useless is the man who knows everything and can do nothing perfectly. The very common sense being educated out of him. This is, in fact, almost a diseased state of mind, not likely to result in the highest achievements of either mental or physical development.

This is a progressive age, an age of speciality, and when the natural bent of the youth's mind is known, greater excellence will be attained in the future life of the child by directing education to meet natural capacity. As Gorst has well and ably expressed it, "The aim of education should be to get the best out of each individual, and not to obtain an average of mediocrity," and "that the enormous expenditure of public money upon machine-made human automata is sheer waste. Fortunately, a marked change for the better is now in progress in educational matters. Normal schools, manual training schools, such as introduced into Canada by Sir William McDonald, and technical education, as advocated by Mr. Carnegie, all have their places, and, exercised prudently, their power and educational influence. The kindergarten system, at the ages of six or seven years, as advocated by Froebel and his successors, in the primary grades of our public school system, is accomplishing much good and safe educational work, intellectual and physical development keeping pace with each other.

Dr. Newsholme, Health Officer for Brighton, England, has recently pointed out the lower age limit of children for school attendance. (*Public Health Record*, 1902). The chief plea is that children under five years of age should be excluded from public elementary schools. On the roll of infant schools in England and Wales, between the ages of two or three years and four or five years, constituted in 1900, there is about 10.9 per cent. of the total scholars of all ages in elementary schools, chiefly owing to the fact that many mothers, engaged in other daily work, seek this method of being relieved of the charge of their children for four or five hours daily. The occasional advice of school teachers that the sooner children are sent to school the better, leads to the same result. Premature school attendance is most decidedly injurious, and gradually saps brain vitality, and is followed, in time, by both mental and physical deterioration. Doubtless, the first seven years of life are for growth rather than for elaboration of structure and function; and,

by far, the most important point is that a large preventable loss of life is the result of school attendance at ages under five years, the difficulty being in the greater proportion of the deaths, commencing by the overstrain of the brain in the very formative process of thought. The important point is the death rate from communicable diseases, under five years of age, is greater and the fatality more than in ages higher. Physical training and the cultivation of observation and discipline are precedent in the young child, but any serious attempt at intellectual education, before five years, is contra-indicated by the present knowledge of brain structure and function.

Fortunately, in Canada, children rarely attend school before five or seven years, and every degree of care and prudence are exercised to guard the gradual development of intellectual activity.

Nowadays, we really want our young people trained so as to become, in every possible way, useful members of society. Right judgment is only developed by discipline, all of which springs from method and study. No educational training, no turning over of the pabulum of thought, the brain, will at once fit a lad for any particular calling in life. The chief test of education is the outcome of his life at maturity. This constitutes the practical examination of life, and the practical verdict is the outcome at the period of manhood. Here we have the very process of development and the result attained. This training is the actual building of a brain. It is difficult to give even an outline of the extremely delicate and complicated operation of the human brain, of which there are not two alike in the entire human family, and yet we frequently expect equal results of brain power, contrary to the very gifts of natural capacity. The school of life is the one for which our young generation has to be fitted, and, as Bishop Creighton of London has ably expressed it, the chief teacher is the actual experience which one undergoes. The best built brain is that which arouses some interest which will follow through life, and lead to results of a practical and telling character. Thus, the mind becomes equipped so as to enable it to grapple successfully with the emergencies of life. This is in fact the very basis of technical education, so much in keeping with the progress and general advancement of the age. The indispensible object of education is to build a brain, and, if possible, to build one strong and vigorous, guarding carefully surrounding circumstances, so that strength of body and strength of brain may constitute the balance, so requisite for a useful and practical calling.

In brain weights and intellectual capacity, according to Esquirol, no size or form of head is incident to idiocy, or to superior talent. The

largest weight of brain known is that of the Russian Novelist, Turgenieff, whose brain weighed, at the time of his death, 65 years of age, 71 ounces. The following celebrated group, Jeffery, Thackeray, Cuvier, Combe, Spurzheim, and Sir James Simpson, had brain weights from 54 to 58.6 ounces. A second important group of men with rare genius and marked ability, Hubert, Grote, Babbage, Leibey, Gull, and Gambetta, had an average brain weight from 40 to 49 ounces. Colder climates appear to favor large brains, which may in a measure account for the marked intellectual activity of our Canadian people. The table of average brain weights of various nationalities, from the Anthropological publications of Topinard and Manouvrier, produces evidence of greater brain weights in colder climates. As proof of such, it is known that the colder air of the United States produces larger brains in the negroes than the warm air of South Africa. Weighing the brain is the only certain method of settling its exact proportions. The fluid inside the skull, known as the Cerebro-spinal, may occupy considerable space in the cranial cavity, and a small brain may be present. It is not unusual to find large brains, with small minds, in proof of which Dr. Sims, *Popular Science Monthly* 1898, records 125 persons of ordinary or weak minds, whose brains were larger than those of many distinguished and well-known men, such as Daniel Webster, Agazziz, Napoleon I., Lord Byron, Baron Dupuytren and General Skoboleff of Russia, world renowned men, whose brains weighed less than 53 ounces. In fact, the present impression is that very intelligent men do not differ greatly, as to brain weights, from the less gifted. Dr. Oliver Wendall Holmes, the well-known author of "The Professor at the Breakfast Table" and a celebrated anatomist, said "The walls of the head are double with a great chamber of air between them, over the smallest and most crowded organs. Can you tell me how much money there is in a safe which has thick walls by kneading the knobs with your fingers? So when a man fumbles about my head, and talks about the organs of individuality, size, etc., I trust him as much as I should if he felt over the outside of my strong box, and told me that there was a five dollar bill under that rivet." Again, larger and complicated brain convolutions are by some supposed to be associated with superior mental power. In the lower animals such is not borne out. Rodents, such as beavers, rats and mice, have little brains and no convolutions, and the beaver particularly exhibits great mechanical skill in the construction of dams, and the storing of food for the winter. The sheep has numerous convolutions in the brain with well marked evidence of great stupidity. Wagner, of Göttingen, states he has never seen examples of highly complicated convolutions even

among eminent men whose brains he examined. Special mental gifts have not, so far, been proved to be the result of many convolutions.

Again, we know that exercise and training strengthen the brain and increase its weight and size in man, of which Gladstone was a remarkable instance. All things considered, the prospect is that brain will still go on developing towards marked increased activity, and practical usefulness in the Genus Homo.

The physical aspect of brain power presents many points of interest. We can observe and study the brain and determine upon what conditions this complicated organ acts, vigorously or otherwise. Is a good brain likely to accompany a good physique? It has been most conclusively pointed out that the brain of marked ability in any particular line of thought and action, is superior in size, weight and complexity of structure, to the ordinary brain. A popular idea is that brain must be developed at the expense of muscle, and vice versa. Such views fortunately are not borne out, by either science or history. Professor Beard's views on the longevity of brain workers is an important document. Taking members of the Cabinets of England and Canada, or the Congress of the American Republic, the average in height, weight, girth and physical development generally, is most remarkable. The law of the dependence of mental activity is, in fact, closely allied to physical vigor. Lincoln, Conkling and Gladstone retained a quantum of physical power, each in a particular line, rail splitting, boxing and tree felling, and so with Tennyson, Beecher, Huxley and Webster, each had his day of physical training, as well as of mental culture. With such evidences, is intellectual greatness the only thing worth striving for, and physical powers a matter of secondary consideration? Gorging the brain in ordinary schools, from six to nine hours daily, with only one to three hours each day in the open air, is really not likely to bring about such results, as frequently sought after. With many years of practical observation on this point, I feel confident the intellectual development and physical growth of the young generation around us will be greatly promoted by four hours of exercise in the open air and four hours of study, and the final results better in every particular than by the system now in operation. The facts noted by Chadwick, of England, of factory children, are most valuable. The "half-time system," giving four hours of regular work in the factory, and four hours of study, has been followed by remarkable results; in fact, the progress in education is more marked than with children who spent the eight hours in study. The leaders in brain work, in both England and the Continent to-day, give three to five hours daily to the desk or laboratory. Such data point to

the necessity of an equal exercise of mental and physical capacity, in order to build up successfully mental and physical power. The most precious truths, like the most precious metals, are in small space. All are agreed that the problems of the universe, so far as physiologists have been able to define them, are really locked in "the Cerebral Cell." This is an interesting time in the new life of our Dominion, and the sports and games of University men, and young people generally, are such that we cannot agree in the idea that the reign of bone and muscle is over, and that the reign of brain and nerves is taking its place, even with the cerebral cell, under lock and key. Many suits of armour in the tower of London would not fit our youths of eighteen to-day, and it is a well known fact that the stone coffins, *sarcophagi*, are fully half a head too short for our average Canadian. As to feats of physical prowess, such as foot-ball, hockey, running and leaping, our young athletes hold first rank, and such developed activity has not lessened their mental culture. Under such circumstances the brain is not a silent receptacle, but "a copious promptuary" of learning and device. Games, says Sir James Paget, are admirable, in all the chief constituent qualities of recreation, but besides this, they exercise a moral influence of great value in business or in daily work. Professor Sir Michael Foster, in two recent Rede lectures to the Royal Society, London, tells us that even in muscular work, the weariness of the brain, like the work of the muscles, is accompanied by chemical change; that the chemical changes, though differing in detail, are of the same order in the brain as in the muscle. "If there be any truth in what I have laid before you," says Foster, "the sound way to extend those limits is not so much by rendering the brain more agile, as by encouraging the humbler help-mates, so that their more efficient co-operation may defer the onset of weakness." Games not only keep a man healthy, but encourage his work and give him a better knowledge of his associates. The Duke of Wellington truly said: "The Battle of Waterloo was won in the playfields of Eton." Let games, in the proper sense, be the recreation and not the business of life. Thus will brain power gain full force, and conduce to the success of the varied duties of life.

After all, a young man with nothing but brains would be a poor object in life. It is the battle of ideas we require, and he who is not up to the mark must eventually take a back seat. A combination of brain and muscle won the battle of Paardeberg, which has placed Canada to-day in an honored position throughout the civilized world.

I have presented to you on the present occasion the known groundwork, as to the best and safest means of preserving brain power, and, at

the same time, to so guard the complicated nervous machinery of the human system as to preserve health and strength, and develop the pabulum of thought to meet the wants and requirements of an exacting age. Owing to the progress in brain knowledge within the last thirty or forty years, we look forward with great hopes to the outcome of this twentieth century, during which many of the principles presented on the present occasion will doubtless be established on a sound and substantial basis. Throughout let that idea guide and direct our efforts with the hope that the charming words of Wordsworth may be fully realized:

> "In the unreasoning progress of the of the world,
> A wiser spirit is at work for us,
> A better eye than ours."

MEDICAL REMINISCENCES OF TORONTO.

By JAMES H. RICHARDSON, M.D., M.R.C.S., Eng.
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MY recollections of "Muddy Little York," date back to the early thirties of the last century, my father having brought the family there from Presque Isle,—my birthplace in 1823 to York in 1826. My maternal grand father, John Dennis, had his homestead, with a few acres of orchard and garden, on the north-east corner of King and Yonge Sts., and my father, about 1832 (I cannot state the exact date) built a residence on the west side of Bay street near the place now occupied by the National Club. Although there were scattered residences beyond, the town might be said to be bounded by Bay street on the west and by Newgate, now Adelaide street, on the north. At such an early age my experiences were very necessarily limited. Between the ages seven to nine, I was a terrible sufferer from inflammatory rheumatism in my legs, followed by "strunous inflammation of the eyes," toddling round for a long time on crutches, and with my eyes protected by green goggles—I mention this fact because I consider that my illnesses were protracted on account of my treatment being conducted in accordance with the prevailing antiphlogistic theory; rheumatism and phlyctenular opthalmia were regarded as "inflammatory," and as all inflammatory diseases were treated "antiphlogistically," I underwent the usual processes of purging, blistering and bleeding, and here on my arms now are five distinct scars from venesection, resorted to at that time.

There are two circumstances which I remember of this time, which, although trivial in themselves, may be of interest.

One day an elderly gentleman, named McLaney, visited my grandfather, having walked around the head of Lake Ontario from the short hills in Pelham, and during the conversation alluded to the commercial value of Gensing, or Ginseng, a plant which grows freely throughout this country. I have a distinct recollection of his stating that it was held in high estimation, as a medicine, amongst the Chinese, and that its cultivation and collection might be a source of profit.

Pereira, in his work on Matera Medica, published in 1842, describes it as the root of the Panax Quingue-folium, and says: "The Chinese physicians ascribe the most improbable and extravagant virtues to Ginseng. They regard it as an invigorating and aphrodisiac agent. At Pekin it is said to have been sometimes worth its weight in gold. In Europe it is believed to possess very little power."

It is a curious fact that, to this day, Ginseng has maintained its singular reputation.

The other circumstance refers to the tomato. I recollect seeing some of these growing in my grandfather's garden. The fruit was smaller than those now grown, and they were regarded merely as curiosities which he called "Love apples," and were not considered to be edible.

Apart from my own personal experiences as a sufferer, to which I have alluded, one of my earliest recollections is of the outbreak of cholera in 1832, which carried off my grandfather, and many other prominent citizens. It was noted at the time that meat underwent rapid putrification. During the epidemic a remedy was in general use, called number six, whose efficiency was supposed to arise from its heating properties, in accordance with a system of medicine called "Thompsonianism," which was extensively embraced in town, and more largely in the country.

One Samuel Thompson had published a book, which I have still in my possession, called "Botanic family physician, and a complete system of practice."

The "system" was beautifully simple. He starts with the proposition that "the component parts of which man is made are the four elements, earth, water, air and fire. The earth and water are the solids, the air and fire are the fluids."

His next proposition is: "Heat is life, cold is death" for, "as death approaches the patient grows cold," and "as soon as life ceases the body becomes cold, which is conclusive evidence that its gaining the victory is the cause of death."

"All diseases arise from the same cause and are to be treated by the same means," and "Disease was a battle between cold and heat."

The remedies he used were all vegetable, as all mineral medicines being "deadly poisons," and some ranked as No's. 1, 2, 3, 4, 5, 6.

No. 1 "To cleanse the stomach, overpower the cold, and promote free perspiration. Emetic Herb Lobelia Inflata."

No. 2 "To retain the internal heat, and cause a free perspiration. Cayenne capsicum."

No. 3. "To scour the stomach, and remove the canker."

No. 4. "Bitters to correct the bile."

No. 5. "Syrup for the dysentery."

No. 6. "Rheumatic drops to remove pain, prevent mortification, and promote a natural heat."

This No. 6 was composed of "high wines or fourth proof brandy, gum myrrh and cayenne," and was therefore specially indicated in such a disease as cholera, where coldness of the whole body was an invariable and prominent symptom. If "promoting heat" could ward off death, No. 6 should have been pre-eminently beneficial, for a teaspoonful, the ordinary dose, made a man feel, from the lips to the stomach, as if he had swallowed so much liquid fire.

Thompsonianism survived for many years, especially in the country districts, and was succeeded by eclecticism which, while discarding the theory of disease as laid down by Thompson, continued the prohibition of everything but vegetable remedies. I am free to confess that eclecticism has conferred a benefit, inasmuch as, unhampered by pharmacopœias, it has investigated the medicinal properties of many vegetable substances, which have proved to be of great benefit in the treatmemt of disease.

Regular Medical Practitioners.

In these early days, York enjoyed the services of several practitioners of great attainments and skill, of whom the Hon. Dr. Widmer was the admitted head.

I have no means of ascertaining the exact date of Dr. Widmer's settlement in York, but it must have been long prior to 1826 for in that year notice was published, in "*The Loyalist*," of his entry into partnership with Dr. Diehl on account of "his extended professional engagements."

Dr. Widmer had had great experience in surgery, having served through the peninsular wars, retiring as staff surgeon in the cavalry.

His portrait, which adorns the office of the General Hospital, was taken in his declining years, and gives but a faint idea of his former energy. His jaunty step and his consummate horsemanship, were the admiration of the town. He was quick and generally correct in his

judgment, skilful with his knife, and beneath an abrupt manner, acquired during the wars, carried a kind and sympathetic heart, ready to succour all, rich and poor alike, by his professional ability. He was frank and fearless, expressing himself in clear, forcible language, often with expletives when he thought the occasion required them.

Naturally he was sought after by the higher official classes, and was appointed an Hon. member of the Executive Council, during the palmy days of the "Family compact."

In his later years he became more liberalized, and thereby offended some of his old friends. It used to be said that on one occasion one of them accused him of ingratitude. "Ingratitude," Widmer replied, "you would all have been in hell long ago had it not been for me."

He was reputed to be an infidel, but I know—for I had most intimate conversations with him for some years before his death in 1858—that he had great respect for consistent Christians. He was greatly shocked at the death of his only son, Christopher Rolph, and paid almost daily visits to his grave in St. James' cemetery, and one day remarked to me: "Richardson, I cannot bear the idea of never seeing my son again."

Another of the prominent physicians and surgeons in my early days was Dr. John Rolph, a member of the Inner Temple, and M.R.C.S., Eng. Profoundly versed in all branches of the medical profession, most polished and courtly in his manner, most dignified in his appearance, and gifted as an orator, he enjoyed high distinction in the teaching and in the practice of his profession.

I make no allusion to his political career, that is not relevant to the subject of this paper.

Next to him came Dr. Morrison, a plain, honest, well educated physician, who endeared himself by his kindness to his many patients, and secured the friendship of all who knew him. He was one of the first mayors when the town of York became the city of Toronto.

Dr. Lang was another general practitioner worthy of mention. He took great interest in the Mechanics' Institute, and the small public library.

Dr. Burnside was a physician who came from New England. He left quite a large bequest to found the Burnside Lying-in Charity, and also to aid Trinity College, who erected a monument to him in St. James' cemetery which informs us that "he was a sincere christian and a faithful member of the Church of England," that "he acquired considerable fortune which, notwithstanding his strict exactness in business, he distributed with a generosity rarely equalled in this community," and finally "he was called (we trust) to a better world." There were some other

doctors—Dr Tomms, Dr. Diehl, of whom I can only mention their names.

I should not conclude my list of medical practitioners without referring to Mrs. Bennett, the town midwife, whose services were required by very many of the matrons of the town.

Prevalent Diseases.

Of the ordinary diseases of which, of course, Toronto had its share, diarrhœas and dysenteries were much more prevalent, owing, no doubt, to the universal use of cesspools, and defective sanitary arrangements. Influenzas abounded as at present, and were known more than 30 years ago under the name of grippe. Scarlet fever was either of a more virulent type, or else modern methods of treatment are more efficacious, for it produced sad havoc, whole families to my knowledge, being carried off by it.

Of course nothing was known in those days of the germ theory of disease, although, as has been recently shown in this journal, Watson came very near the truth in his lectures delivered in 1830, and as far back as the fifties I was convinced that scarlet fever was due to what I considered to be an animal poison, and adopted a stimulant treatment accordingly.

Erysipelas was deemed an inflammation, and treated antiphlogistically. When headache and coma or mania supervened, it was thought that erysipelatous inflammation had attacked the membrane of the brain, and the depressing treatment was more vigorously pursued. I had an experience in my own case in 1846, when I was attacked by erysipelas of the head, and was treated by Dr., afterwards Sir William, Gull. Purging with mercurials—fever mixtures—shaving the head, etc., etc., with low diet, reduced me so much that I did not recover my strength for months. After my return home in 1847 I actually saw a woman bled for erysipelas. I cannot recall the exact time when my views as to the nature and treatment of erysipelas changed, but I find in my case book, record of the case of a boy aged 9 years, who had erysipelas of the head. "Eyes nearly closed by œdema—redness extending over the scalp which was tender—was very heavy, was roused with difficulty, pulse 58."

The following entry is significant: "I was somewhat alarmed at his state, but determined to treat the erysipelas on my usual plan and to disregard the head symptoms. In taking this course I was guided by the opinion that the disease arose from some depravation of the blood, and that the stupor, headache, vomiting and slow pulse was only

symptons of the disease so arising. I concluded to try and restore the condition of the blood and leave the head symptoms alone," and "ordered

Quino-Disulph. - - - - - - - - -	gr. ii
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To be taken every 4th hour

"next day was better, all alarming symptons had disappeared." "I saw him but once more; he was then hungry and desirous of getting up. Erysipelas disappearing."

Small pox occasionally occurred, and as we had no isolation hospital, all such patients had to be treated in their homes. Rigid isolation, and free vaccination were effectual in preventing the spread of the disease, and I cannot recall a single instance in which it was communicated to the attendants, or to the members of the family. Until comparatively quite recent years vaccination from arm to arm was universally practised, and I am decidedly of the opinion that the results were more satisfactory than I have seen since it was abolished.

Of course most scrupulous care was exercised. No virus was used except from healthy children of healthy parents, and from vesicles which had run a perfectly typical course; and there was exceedingly little chance of error where the family physician knew the antecedents and the course of the vaccination.

My usual plan was to take the scab and to envelope it in pure white wax, where it would keep active for a long time—but sometimes capillary tubes were used. It is an error to suppose that these are a recent invention. I have in my possession tubes which I used over 40 years ago.

Typhoid fever, or, as it was then called, Gastro-Enterite, was of occasional occurrence. The most serious outbreak of this disease occurred in the sixties. It broke out in the middle one of three rough cast houses, still standing, on the south side of Ann Street west of Church, and spread to the east of Church Street on Carleton and westward a considerable distance on Ann-Street. Some thirty persons were attacked, and many died. Drs. Aikens and Augusta and myself had charge of the greater number.

Examination, after some time, revealed that the drain running from the three houses was full of filth and had never been connected with a sewer, but ended in a cul de sac within a few feet of a well from which the neighbours, for some distance around, had been accustomed to draw their drinking water.

Malarial diseases in Toronto are now of rare occurrence, but in those early days they existed in great numbers, especially in the neighborhood of the Don. Agues of various types abounded, but the most serious of all was what was generally termed "Lake fever," because it was worst about the marshy mouths of the several streams emptying into the lake. It was sometimes called Bilious Remittent, from the hepatic congestions which so often accompanied it, but the congestion often attacked other organs, the spleen most frequently, the lungs occasionally. It was a most dreaded disease. These malarial diseases prevailed on account of the extensive marshes in the bay, in the Don, in Ashbridge's Bay, about the mouth of the Humber, and in the lagoons on the Island.

The gradual filling up of marshy ground in the neighborhood of the city, and the straightening of the Don, have almost obliterated the sources of malaria, but, in my judgment, the most important of all was the break through the Island. Originally the Island was continuous with the sandy beach of Ashbridge's Bay, and Privat's Hotel stood near where the eastern entrance now is. In 1854, during a violent eastern gale, a breach was made right through the Island at that place and has remained ever since, although efforts were made between 1854 and 1857 to cause it to fill up. Since then there has been a constant current between the Bay and the Lake, which must have had the effect of purifying the water and eradicating the malarial poison.

In 1847, owing to the exodus from Ireland of its starving, fever stricken people, Toronto, in common with eastern cities, had a terrible experience with typhus fever. Temporary hospitals were erected on the General Hospital grounds, and during the months of July, August and September were crowded with the unfortunate emigrants. The greatest number at any one time was during the week ending August 25th, when 794 were inmates, of whom 84 died.

Two of our most eminent physicians, Drs. Hamilton and Grassett, laid down their lives in their attention to the poor emigrants.

The Asiatic cholera reappeared in 1849 and twice afterwards, carrying off many victims. Every means were employed by the doctors, but without any definite result. Some recovered, contrary to all expectation, while others treated in the same way received no benefit whatever. One fact was clearly established. Several small rivulets ran diagonally from the northwest to empty into the bay, one crossing the College avenue, about opposite Edward street, ran down behind Osgoode Hall crossing Centre, Elizabeth, Teraulay, Louisa and Yonge. Another ran from about the junction of Wellesley and Church, through where the Normal School

now stands, thence across Church street at Gould, and it was noticed that the cholera committed its greatest ravages along the course of these rivulets, especially the first-named. They were nearly dried up, and mostly boarded over, and had in fact become merely open drains, and utilized by the adjoining houses as receptacles of all manner of filth. They have, as the ground became filled up and a system of sewers established, disappeared entirely, and are no longer sources of danger.

During these several epidemics of cholera, the medical profession was indefatigable in their efforts, and employed all kinds of treatment, but in vain. Some recovered, even after all hope had been abandoned, but I do not think any one of us was able to fix upon any treatment as contributing to their recovery, for the same means used in these cases failed entirely in others. Among my notes taken at the time I find one which is very curious, which I may here record.

"Mrs. Nokes, Beverley street, married, middle age, remarkably healthy, 4 or 5 children—

Was attacked while living in an uninfected neighborhood. I noticed however that her next door neighbor was a washerwoman, and that the yard was covered by dirty suds which made the atmosphere very bad at times. She lay for nearly three days in a collapsed state and pulse almost imperceptible, skin cold, even over the cardiac region. She purged in bed, and vomited incessantly, and had the usual cramps.

I ordered 10 grains of quinine immediately, and 2 grs. quinine every half-hour, along with mustard plasters, etc.

She recovered, *and five months afterward was confined of a healthy child.*"

The notes do not say how long the quinine was continued, but as no other treatment is recorded I would infer that it was the only medicine used and was continued at least for some time.

As to the general treatment of disease, when I commenced my practice diseases were classed as sthenic and asthenic. The former required the Antiphlogistic treatment. Bleeding, from 4 or 6 ounces up to syncope, according to the severity of the case. Leeches, cupping, blisters, antimonials, purgatives, diuretics, diaphoretics, and mercurials, even to profuse salivation, were profusely employed, along with "antiphlogistic" diet. Bleeding has been almost entirely discarded for many years, but I venture to say that, in my judgment, a little "bloodletting" might be resorted to in many cases with benefit, and free bloodletting has, in my experience, saved many lives in puerperal eclampsia, and in albuminuria following scarlet fever.

That the value of human life has been steadily increasing, during the past half century, can be demonstrated by the actuaries. That

medical and surgical treatment is unmeasurably in advance of that of the first half of the century is indisputable.

The gradually acquired, but assured conviction that diseases almost invariably arise from defective, and not redecadent vitality, that inflammation, instead of being the cause of disease, is one of nature's means of combatting it. That a vast number, if not the great majority of diseases are due to germs; the daily recognition of substances which exert principal action in restoring defective or deranged function in the various organs; the vast importance of antiseptics and the use of anæsthetics and the various antitoxins, the substitution of the trained nurses for the ignorant, rude and inefficient old-fashioned ones and the advancement in hygiene, have completely revolutionized the practice of medicine and surgery.

While we are not justified in hoping that the day will come when all disease will be eradicated, let us cherish the optimism that as man advances intellectually, morally and socially, he will also advance physically, until disease itself will be shorn of the greater part of its terror.

A CASE OF PLACENTA PRAEVEA.

BY K. C. McILWRAITH, M B. Tor F.O.S. Ed.

MRS. S——. Aet. 37, III Para. 8½ months advanced in pregnancy. Admitted to St. Michael's Hospital.

Patient had noticed nothing unusual about her pregnancy until the previous day, when she had been "moving" and had exerted herself more than usually. Then a severe haemorrhage resulted. When first seen at the hospital she was not much blanched, pulse 88.

On examination the vagina was found full of clots, which were removed, and the os not quite as large as a silver dollar. The edge of the placenta was easily felt coming down to the internal os at the left side, but not crossing it. Labor pains were present, at first slight, but soon increasing in severity. The pulse rate increased to 120 per minute. I now prepared for operative interference by sterilizing my hands and arms with potassium permanganate and sulphurous acid. No blood was appearing externally but there was again a large collection of clots in the vagina. Two courses suggested themselves to me.

(1) To rupture the membranes and trust that the uterine contractions would drive the head down and check the haemorrhage.

(2) To do a Braxton Hicks' version and bring down a leg.

The patient was placed under the influence of aether, and the house-surgeon, Dr. Wainwright, endeavored to press the head down through the brim while I made a vaginal examination. As the head did not come down well I decided that the latter was the safer course. This was easily accomplished. Some haemorrhage took place during the operation, but none afterwards. The patient was allowed to come out of the anaesthetic and the rest of the delivery was accomplished by the natural forces in about an hour's time, the house-surgeon making gentle traction on the leg in the intervals of the pains, in order to control haemorrhage. The child's heart beat for some time after birth, but spontaneous respiration could not be excited. The mother made an uneventful recovery and left the Hospital on the fourteenth day of the puerperium.

One or two points may be noted in this case.

(1) The history was the ordinary history of *accidental* haemorrhage, though the case was one in which haemorrhage was unavoidable. The haemorrhage from a placenta praevia is sometimes brought on in this way.

(2) Special antiseptic precautions: These are necessary in every case of placenta praevia. The patient is usually exsanquinated and absorption is therefore more than usually active, and resistance enfeebled The placental site is closer to the vulvar orifice and therefore more easily infected.

(3) Treatment: Rupture of the membranes sometimes suffices, but we should have some reason for thinking that it will suffice—e.g. strong pains and head coming down well. The plan adopted in this case is usually the safest for the mother Immediate delivery should not be proceeded with on account of the great danger in tearing the cervix and causing serious and even fatal haemorrhage from the unusually enlarged vessels and sinuses in the cervix and lower segment. I have used Champetier de Ribes' bag and found that mechanically it answers perfectly. It controls the haemorrhage, brings on labor, and dilates the cervix without tearing it. It is, however, difficult to keep in order and hard to sterilize.

ALBUMINURIC RETINITIS IN PREGNANCY.

BY W. GORDON M. BYERS, M.D.

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THE albuminuric retinitis of pregnancy though ophthalmoscopically indistinguishable from that which occurs in other forms of kidney disease, is marked by certain special features which stamp it as a distinct

clinical entity; and while the condition is one of comparative rarity its occurrence raises always questions of the gravest moment in the treatment of any case of pregnancy in which it occurs as a complication.

The pathological changes present in the retina in these cases unite to form a picture so characteristic that even one moderately proficient in the use of the ophthalmoscope should have no difficulty in recognising the condition. Oedema, which is constantly present, manifests itself in the retina by a characteristic opaqueness of this structure, normally transparent, and in the optic nerve, which is commonly also involved, by slight swelling of the fibres of the papilla with blurring of its outlines. Fatty degeneration and varicose hypertrophy of the nerve fibres are visible as dots or patches of a glistening white color which frequently exhibit a tendency to arrange themselves in lines radiating from the fovea centralis like the spokes of a wheel. Further, there results from the vascular changes dilatation and increased tortuosity of the veins and greater sinuosity of the arteries, accompanied by a marked exaggeration of the central light reflex. Finally, the picture is usually filled in by splashed and flame-shaped hæmorrhages, and always the changes are more marked in the posterior than in the anterior half of the fundus.

My attention was first specially directed to this subject by a case seen years ago in consultation with Dr. Ridley Mackenzie. The patient came from the country in the 8th month of her first pregnancy, complaining of dimness of vision and intense headaches.

Examination of the urine showed a high percentage of albumin with hyaline, granular and blood casts. Ophthalmoscopically, there was present an intense double-sided albuminuric retinitis with numerous hæmorrhages, and the vision on both sides was reduced to the counting of fingers. Interference was advised but refused from religious scruples. The patient was treated by rest in bed and appropriate diet but the condition grew rapidly worse, hæmaturia with almost total blindness and intense headache supervening. Labor came on at the normal time accompanied by eclamptic seizures. Chloroform was administered and a dead child removed with great difficulty by forceps, but the patient died in convulsions within an hour of delivery.

The second case to come under my notice was referred to me by Dr. Garrow, and is of greater interest because of the opportunities for thorough examination, both before and after labor, and for the result obtained.

The patient was a primipara, aet. 26, who early in the 8th month of her pregnancy (about Jan. 1, 1901) had begun to experience dimness of vision and bad headaches, especially severe in the early morning and

accompanied by nausea and vomiting. Flatulence was also present, and, according to the patient, slight œdema of the legs and eyelids, though this was not present at the time of my examination. Shortly after the onset of these symptoms the urine was carefully examined for albumin by Dr. Garrow, but with entirely negative results. The ophthalmoscope showed, at the time of the patient's first visit to me on January 23rd, 1901, a double-sided, blotchy, albuminuric neuro-retinitis, marked by numerous haemorrhages and showing the usual vascular phenomena. The changes in the right fundus were more extensive than those in the left but not so closely confined to the macular area, hence it was easy to account for the great difference in visual acuity, which with correction equalled two-thirds on the right but less than one-tenth of the normal degree on the left side.

Further examination of the urine by Dr. Garrow showed now signs of active nephritis, but interference was rendered unnecessary by spontaneous premature labor occurring on Jan. 27th, the patient being delivered of a dead child by Dr. D. J. Evans.

Five weeks after parturition the patient came back for further examination, looking in good health but complaining still of seeing somewhat poorly. The ophthalmoscopic appearance on the right side was now that of a classical albuminuric retinitis, the ray like appearance being well marked, while on the left side the changes had also subsided greatly, though the muscular area was still the site of numerous glistening opacities. Vision on both sides now equalled nearly two-thirds of the normal. During the following months I was able to observe a gradual clearing up of the ophthalmoscopic changes with a concomitant improvement in the visual acuity.

On November 22nd, 1901, the date of my last note, there existed only slight pallor of the papillæ, moderate sclerosis of the arteries and a few indistinct changes in the macular areas as reminders of the gross lesions previously present, and the vision had risen practically to the normal standard on both sides.

The third case of which I have notes was referred for ophthalmoscopic examination from Dr. Stewart's department at the Royal Victoria Hospital.

In the eighth month of her fourth pregnancy the woman had suffered from very severe uræmic symptoms and dimness of vision. After the birth of her child the sight of her left eye recovered but that of the right remained greatly diminished. Eighteen months later, in the fifth month of her fifth pregnancy, violent uræmic symptoms again appeared and the vision was so reduced that the patient "could barely disting-

uish objects." Premature labor came on at six and a-half months, the sight of the left eye gradually returned but that of the right remained poor as before.

Ophthalmoscopic examination showed marked pallor of the optic discs, central chorio-retinal atrophy and sclerosis of the retinal arteries, much more marked on the right side, where vision equalled only hand movements, than on the left side where it reached nearly two-thirds of the normal.

Albuminuric retinitis in pregnancy, according to recent statistics, occurs about once in every 3,000 cases. The percentage, however, may be still higher than this, for no doubt in a certain number of instances the symptoms are so slight that the attention of the patient and physician is not especially directed to the eyes.

It occurs most frequently in association with those well known local and constitutional conditions which are the outcome of nephritic disturbances brought about by the pregnant state, hence the designation, Retinitis Albuminurica Gravidarum. It may, however, be the result of an acute nephritis occurring independently of the pregnancy which it complicates, or of a chronic renal inflammation unfavorably influenced by child-bearing.

The symptomatology, as outlined by Groenouw, is as follows:— Like the nephritis, this form of retinitis is most commonly met with in primiperæ, and in the last six months of pregnancy, though occasionally it develops only after parturition. The one and only symptom of its presence is dimness of vision. This gradually supervenes through weeks, or even months, and is unaccompanied by any changes in the colour sense or restriction of the field of vision. Total blindness occurs only as the result of uræmic amaurosis, commonly associated with eclamptic seizures, or consecutive to a detachment of the retina, which occasionally develops as a complication of the retinitis. Relapses are prone to occur, as in Case III, as the result of later conceptions, and to bring with them still further reductions in the visual ocuity. Oedema and general manifestations of uræmia are commonly present, but may in exceptional cases be wanting,

The recognition and proper treatment of cases of albuminuric retinitis in pregnancy are matters of the greatest importance. The wise practitioner will treat seriously every complaint of a pregnant woman regarding her sight, and will in every instance make a careful examination of the urine with the usual precautions for the presence of albumen and casts; test the sight of each eye separately with the customary types, and where at all possible ascertain the condition of the patient's eye-grounds.

Once the diagnosis of albuminuric retinitis has been made, the treatment will vary somewhat, according to the character of the kidney trouble with which it is associated. In every case one has to consider the advisability of producing abortion or premature labour in the interests of the sight of the mother. It is well known that in the cases of albuminuric retinitis, secondary to the nephritis proper of pregnancy, vision is restored once the causative factor—the child—has been removed. The outlook, however, is not so bright perhaps as was generally supposed previous to the work of Silex. This observer followed a series of cases during a period of seven years in order to ascertain the final degree of visual acuity in each patient Of the 26 cases thus observed three only obtained normal vision, and in all of these labour had been prematurely induced. In two more two-thirds vision resulted after allowing pregnancy to go on to full term through a period of four weeks. Of 21 remaining cases in which the retinitis developed in the seventh or the beginning of the eighth month and pregnancy was allowed to go on to full term or only interrupted at a later date:

6	obtained	$\frac{1}{2}$	the	normal	visual	ocuity
2	"	$\frac{1}{3}$	"	"	"	"
2	"	$\frac{1}{4}$	"	"	"	"
1	"	1-5	"	"	"	"
1	"	1-6	"	"	"	"
2	"	1-12	"	"	"	"
2	"	1-18	"	"	"	"
5	"	1-100	"	"	"	"

From these data one sees how severely the vision is damaged in cases of this kind. The physician must early and clearly explain to the patient her serious condition and have a timely decision as to whether the mother prefers to bring a child into the world at the cost of her sight, or sacrifice the child for herself and those dependent on her. The physician can for the most part only place the facts before his patients, but what influence he can bring to bear, should, I think, in the case of poor people, be in favor of interference, as a wife deprived of useful vision is too serious a handicap upon a man in the struggle for existence.

In the cases complicating a chronic nephritis the question is somewhat different. If the retinitis occurs early, abortion is indicated since the chances of the child are slight, and the danger to the sight and life of the mother imminent; but if the retinal inflammation supervenes later on it is justifiable to wait, if a child is earnestly desired, since it is

well-known that in cases of chronic nephritis complicated by albuminuric retinitis the lease of life is not greater than two years.

As was previously pointed out, each new pregnancy is liable to bring about a further diminution in the visible acuity. It is questionable, however, if it is absolutely necessary to advise the mother for all time against fresh conception. Forewarned, the physician could probably with extraordinary care, bring the mother successfully through pregnancy without further damage to the eyes, and indeed cases of the kind have been reported by Alt, Randolph, Axenfeld, and others.

The courses of the retinal detachment in these cases forms an exception to the general rule, recovery not infrequently occurring with the subsidence of the retinitis.

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THE USES AND LIMITATIONS OF THE X-RAYS IN THE TREATMENT OF DISEASES.*

By JOHN McMASTER, M.D., Toronto.

MR. CHAIRMAN AND GENTLEMEN,—I did not, I am sure, expect to see such a congress of medical men at this meeting and I feel indebted to Drs. Carveth and Ferguson for giving me an invitation to be present. I came, however, more to observe your methods and to ascertain what you are doing than to take part in the proceedings. I feel somewhat taken by surprise because I have made no preparation whatever to speak to you in reference to the subject of x-rays. However, I am pleased indeed to have an opportunity to say anything that may aid in extending a knowledge of this wonderful discovery, and whatever I may say must of course be very disconnected owing to the want of preparation.

The greatest use probably of the x-rays is in diagnosing both medical and surgical cases. In surgical cases its advantages cannot be over estimated. Fractures, dislocations, bones and sequestra, the existence of foreign bodies in the tissues, the presence of calculi in the kidney, bladder, etc., deformities of all kinds, aneurisms, effusions in the thoracic cavity,

* An address before the medical staff of the Toronto Western Hospital.

as well as consolidations and displacements of the enclosed viscera are all accurately and concisely exhibited. A great deal of stress has heretofore been laid upon fluoroscopic examinations for the discovery of fractures and dislocations. I must however throw out a word of advice in this respect. Probably too much stress has been laid upon this form of diagnosis. The fl uroscope, while useful in some cases, cannot be depended upon in very many. It is not accurate enough to be relied upon. The proper and the only reliable method in cases of this character, or in diagnosing the presence of foreign bodies in the tissues is the radiograph. This method can emphatically be relied upon. I need not, however, dwell upon this part of the subject because you are all more or less conversant with its workings and its effects.

During the past few years, there has been given a great deal of attention to the therapeutic side of the x-ray subject. There is no doubt a very large field of usefulness for it in this direction. It is, as you are aware, being largely employed in the treatment of malignant neoplasms of all classes and kinds, as well as tubercular lesions affecting the human body. First, let me say something in respect to the latter. It has been abundantly proved that where tubercular trouble affects the surface of the body, the x-radiance produces upon it a marvellous effect. Lupus, which is quite prevalent in our land, is very amenable to its radiance. My experience with this disease has been most satisfactory. With one exception, I believe all cases that I have handled have been restored to perfect health and the result has been most pleasing and satisfactory to the patient. The scars resulting are almost indiscernible and the cicatrices that result are soft and pliable and resemble normal tissue very closely. Other tubercular lesions, such as fistulae, bone necrosis, tubercle in the viscera are favourably influenced by the treatment. Large numbers of fistulae have been reported cured in a very brief space of time. Caries, especially in the lower end of the femar and upper end of the tibia and in the segments of the vertebra, are rapidly improved by exposures to this radiance. The infiltration of the lungs or other viscera by tubrecle are also benefited materially and rapidly by x-radiance. This is certaiinly information that we are very pleased indeed to know, because of the terrible inroads that this disease is making in our land.

The modus-opperandi of the action of the x-rays upon tubercular foci is not yet definitely settled. This much however is known, that it curtails the development of the tubercle, lessening their multipication and aiding in the recuperative processes necessary for the elimination of the active agent. It is not destructive of the tubercle bacilli themselves, that is, it is not a germicide in the ordinary sense of the word, but that

it has the above influences upon these organisms is proven beyond question.

Now permit me to say something in reference to tubercular bone lesions. It has been found that, when the invasion extends to the synovial cavities, or begins in the same, and that the synovial membranes of the joints are affected, the treatment does not produce nearly as favourable results as in those cases where it is confined entirely to the bone, the old form of treatment with emulsions of iodoform and formaline benefit the synovial lesions more markedly than does the x-radiance. The question may be asked: Does x radiance cure phsis and other tubercular processes in the viscera? No definite answer to this can be given at present. All that we can probably venture to state at the present is that these cases are markedly benefited by the treatment and many of them symptomatically cured. This in itself is a step and a long step in advance.

You may expect me, probably, so say something in reference to the treatment of malignant growths, especially cancer and sarcona. I have had, during the past three or four years, experience with a considerable number of these terrible maladies. That the x-rays does influence them, some more and some less, for good has been definitely settled. With rodent cancer the results are almost all favourable. I have had but one case that has not responded to the treatment rapidly and effectively. This particular case was complicated with specific trouble, and it has been the experience of others as well as myself that with this complication results are not nearly so favourable. In reference to epithelioma and carcinoma the the results are not nearly so gratifying. While a large percentage of both these conditions respond more or less favourably to the treatment, many of them are unaffected thereby. A superficial epithelioma of very recent occurrence will respond very rapidly in nearly all cases to the radiance, but those that have been treated with plasters or other methods and have extended over a long period of time appear to have required a resistance to the rays that is very difficult to overcome. Carcinomatous conditions of the deep seated structures of the body are helped in nearly all cases, but I fear very much that no permanent cures have been made. In nearly all cases the patient's general condition is improved. They increase in weight and bodily vigour for a time, but afterwards lose ground again. Opiates can be laid aside very soon after beginning x-ray treatment. Where the malignant processes are very extensive and the radiance has to be applied over an extensive area there are dangers attached to the free use of the x-rays. Toxemia of a kind seems to develop in these cases

and may lead rapidly to a fatal termination unless great care be taken to keep the eliminative functions of the body in very active operation. The question may be asked as to the advisability of using the x-rays or advising an operation in cases of malignant condition. My answer to that is, that if the case is operable at all, the proper procedure is, to my mind, to ray them actively for three to five weeks, then operate, and begin raying again after the operation as quickly as possible and continue it until all fear of a return of the disease is past even should this be several months. Operable cases, to my mind, should be urged to take that course.

Not one of the cases that I have treated in this way—and I have treated several of both classes—has up to the present time relapsed. This is the plan pursued by many of the leading operators on the other side. That there is a decided advantage in x-raying before operation is shewn by results. This theory is founded upon what many conceive to be a fact—that dissemination takes place at the time of operation. It is well known that cancers spread by continuity of tissue or along the lymphatics. Just where the cancer cells have reached at the time of operation cannot be ascertained. These cells if not removed by the operation are liable to be disseminated by stimulation during or immediately after the operation and so get beyond the reach of any treatment. Energetic raying before any disturbance of the parts would lessen this risk or remove it altogether. Besides the direct action of the rays upon the growth, the blood supply is lessened through contraction of the capillaries and obliteration of other small vessels.

Again, it may be asked what is the active agent in producing the effects? Is it x-rays or is it the electrical accompaniments of the treatment? Beyond all doubt it is the x-rays and the rays alone that produce the changes. These changes in malignant growths are, I believe, in part as follows, and I have verified them myself in several cases. First, a fatty degeneration is produced in the neoplasm, followed rapidly by the production of an abundance of connective tissue formation. The epithelial cells appear to be transformed into fatty material and a new formation of this connective tissue springs up owing to the stimulation of the x-rays. This is the result we would expect and this is, we are glad to know, what takes place. In this way it is that the cells of the new formation, cancer or tubercle, are gradually destroyed. They are devitalized before the normal cells, as they possess less resistance to the action of the x-rays. When these cells are destroyed, connective tissue takes their place, as they are undergoing absorption.

WHEN IS COLPOCOELIOTOMY ADVISABLE?*

By T. SHAW WEBSTER, M.B.
Gynechologist, Toronto Western Hospital.

MR. President and Gentlemen:—Speaking generally, twenty years ago if a woman had pus-tubes, cystic ovaries, or ectopic gestation, she was said to have pelvic inflammation, cellutitis, or abscess, and the usual treatment was douches, poultices and opium. If intra-peritonial rupture or haemorrhage, supervened, the diagnosis was peritonitis and the same treatment was used, omitting the douches. Sometimes a hap-hazard attempt was made to puncture through the vagina, if a mass presented there, and fluctuation could be detected.

The advent of the antiseptic methods of Lister, and the aseptic technique of Lawson Tait, who accomplished more than any of his contemporaries by simple washing with soap and water and plain water solutions, were followed by the first great advance of modern operative surgery, abdominal section. It gave opportunities for the study of differential diagnosis and saved many lives, although not without considerable mortality.

The next great advance—vaginal section—bids fair to reduce the rate of fatal endings to a very small percentage, and in cases which are not entirely unsuitable, gives results—immediate and remote—which can not be surpassed in any other line of surgical work. About 85 per cent. of all cases of pelvic disease can be relieved by calpocoeliotomy, and, with ordinary care, it is fraught with no danger to life and with no subsequent discomfort to the patient. Dr. Brooks H. Wells says, "the first vaginal sections for disease of the appendages were made by the late Wm. F. Byford, of Chicago, in the late eighties. But one is seldom a prophet in his own country, and the operation was overlooked and forgotten. Later, it came back with the glamor of a foreign fame, and many surgeons said they would never cut through the abdominal wall for conditions which could be reached through the vagina. When they came to their senses, they found that, while all the conditions *could* be treated by vaginal section, yet the ultimate results were not so satisfactory in all cases as those obtained by the abdominal route." My personal experience affords no example that tends to substantiate his statement regarding "ultimate results." The rest I heartily endorse.

In 1901, Dr. W. R. Pryor published a record of 181 cases, without a death. This year Dr. Martin gave an account of 780 cases, with a mortality of less than 3 per cent. Among these were seventy ovario-

* Read before the Toronto Medical Society, 7th May.

tomies with no deaths, and twenty-eight operations for ectopic gestation, with one death from an accidental cause. There were seventy cases of myomectomy, in some of which the tumor exceeded the size of the foetal head at full term.

The reader of this paper began in 1895, and has performed 47 colpocoeliotomies, without an unfavorable result. All the patients are still living, except one who died of tuberculosis, nine months after operation. At first, the operations were done without the knowledge of the work of others in the same line; but, during the last two years, the author of this paper has been greatly encouraged by the success of Drs. Pryor and Goffe, and by a short term at their clinics last year.

The general term Vaginal Section may be used to include three operations:

I. Posterior colpocoeliotomy—opening the abdomen through the posterior vaginal vault into the pouch of Douglas.

II. Anterior colpocoeilotomy—opening the abdomen through the anterior vaginal vault, between the bladder and the uterus.

III. Lateral colpotomy—a procedure consisting of an extra-peritoneal dissection upward between the folds of the broad-ligament to the under surface of the fallopian tube opening, and draining the same. This is very successful in suitable cases of tubal pregnancy and pyosalpinx, etc. This operation was described in a paper read before the Ontario Medical Association in June, 1901, and published in the *Canadian Journal of Medicine and Surgery* in May, 1902. I am not aware that it has been practiced or described by any other surgeon.

In the case of suspected, or evident, disease in the pelvis, which seems to require operative interference, how can we make, or rectify, the diagnosis best, discover the most vulnerable point of attack, overcome and remove the cause of discomfort with the minimum of suffering, despoliation and death rate, and the least likelihood of subsequent trouble.

The following routine solves this problem:

1. Prepare for aseptic work, bathe the abdomen and vagina.

2. Anaesthetize, examine carefully and, if possible, determine the point of vantage. Determine whether it is better to begin by posterior, lateral, or anterior vaginal incision; or by lateral, or median, abdominal section. The various incisions have been named in the order of choice, if the case permits of a choice of method.

The posterior vaginal section is vastly preferable to any of the others for diagnosis before operation, and for drainage afterwards. Diseased adnexa gravitate into the cul-de-sac, become adherent, and frequently nature, unaided, effects relief by vaginal opening and dis-

charge. Having obeyed the laws of gravity, to the limit of their attachments, the diseased organs are nearer to the vulva than to the anterior abdominal wall; and it is easier to view and handle them from below than from above. There is ample scope for conservative, or radical work, unless the vagina is very small, when it should be dilated.

The time-honored incision in the lima alba is followed by hernia oftener than any other, and for that reason alone ought to be least acceptable.

If examination under anaesthesia does not satisfactorily settle the question of where to begin, open the cul-de-sac, palpate carefully and inspect, using retractors and a good light.

This procedure, harmless to the patient and helpful to the surgeon, requires only a few minutes, and leaves no visible trace of the surgeon's knife. It gives the greatest certainty in diagnosis, without serious operative work. It is less dangerous than passing the uterine sound in diseased conditions, and through it nearly all cases can be successfully treated. But, if it appears impossible to relieve through this opening, another, either vaginal or abdominal, can be made, or the two methods can be combined.

Upon the surgeon is imposed the necessity of thinking for himself He should choose the method he is best able to carry out. It is, to some extent, a personal matter to be decided by the experience, preference and physical qualification of the operator. No surgeon who has very large hands can do vaginal operations well, and the nice discrimation of educated fingers has much to do with correct diagnosis, and the avoidance of traumatism to important structures. Most of all, success depends upon the persistence that does not come off and on a concentration of mind upon a matter that is difficult to acquire.

The most strenuous opponents of vaginal section, as a routine practice, admit that it gives the best results in selected cases; but, to one who becomes expert by practice, it is the operation of election in a very high percentage of pelvic disorders. As a rule, neoplasms that reach above the true pelvis should be cases for abdominal section, but large fibroids and very large cysts can be safely handled from below. At least there can be no serious blunder in beginning that way.

Septic adnexitis, small cystomata, tubal pregnancies, and small fibroids, intramural or pedunculated, should be removed by vaginal incision; and it affords a safer and easy exit for ascitic fluid.

Every case that can be treated from the vagina should be operated upon that way, for the following reasons:

I. Only partial anaesthesia is required;

II. There is less danger of shock;

III. There is no danger from sepsis;

IV. The convalescence is short and smooth, from 7 to 12 days, usually; and

V. There is no external scar, or possibility of ventral hernia, no danger from anaesthesia and shock. A section of the vaginal mucous membrane and the pelvic peritoneum does not make the same impression upon the sympathetic nervous system, as does a severance of the sensitive structures of the anterior abdominal wall. The vagina and pelvis are intended for great awakenings, and do not mind manipulation, thence the economy of chloroform and the absence of shock.

Sepsis.

The pelvic peritoneum stands sepsis well and walls off pus with little danger of general infection. The vaginal mucous membrane does not absorb sepsis to any appreciable extent. If there is a purulent discharge, after vaginal section, it runs down and out without affecting the patient in the least. No sutures are required, and a stitch abscess cannot follow. Therefore, there is little danger of sepsis and no danger from it if it does occur. But if we lift septic organs on the hands that have touched them, through the abdomen and pass them through an incision with margins that do not readily resist sepsis—and the subcutaneous fat is perhaps the most poorly organized, and, therefore, the most easily infected structure in the body—the wonder is that most patients do not die of sepsis in a day or two. The only safe way is to keep the sepsis down where it is innocuous until it is undermined and extirpated.

Convalescence and After Effects.

The light anaesthesia, followed by little or no nausea or vomiting, the absence of shock, the freedom from sepsis, and the knowledge that no horrible life-long scar is left, make the convalescence to the invalid a pleasant incident of short duration. She feels that she is liberated from the thraldom of disease, and is not to be let go on suspended sentence, fearing that the diligent pursuit of her household affairs, or much desired maternity, may be sufficient cause for her reluctant return with a neutral hernia for operation, after which she will be again released under the same conditions as before. She has no ticket-of-leave nor abdominal cicatrix.

As an example of a large ovarian cyst, removed through a very small vagina, the following case is cited:

Mrs. F., age 19 years, weighs 91 1-2 lbs., had been ailing for about a year; at first she noticed pain in right side. Three months later she

detected a tumor in the right inguinal region, which increased until it presented the size and contour of a full time pregnancy. It had been diagnosed uterine febroid, and treated with electricity for eight minutes daily. Slight fluctuation could be felt, and operation was advised by vaginal section if possible. The patient was admitted into the Toronto Western Hospital, and on Oct. 8th, 1902, posterior colpocœliotomy was performed with the assistance of Dr. W T. Wilson and Dr. Carveth, vagina was dilated and the cul-de-sac was opened. The cyst was punctured and evacuated. The adhesions were separated as the cyst was drawn down. Owing to the vagina being filled by the cyst-sac, a section of it was cut off to allow more room. The pedicle was ligated and severed, and the long retractors inserted. An artery, which had passed through an adhesion, was seen to bleed freely, but no difficulty was experienced in tying it with silk. The opening was filled with Mikulicz dressing, which was removed on the 5th day, when it was again packed loosely. This remained for three days more, after which a plain douche was given every day. The cyst contained about four quarts of serous fluid, chocolate-colored and some old blood clots. The specimen is shown with the detached part sewn on.

The patient left the hospital in 19 days; and, three months later weighed 125 lbs., a gain of 33 1-2 lbs.

It is not necessary that every patient with an ovarian cyst should have a loparotomy first, and an ovariotomy afterwards. One operation, ovariotomy, suffices in most cases.

The following case shows that complete anæsthesia is not required for colpocœliotomy, that the abdominal wall need not be relaxed, and also the ease and rapidity of the surgical work in favorable cases.

Mrs. T., age 22 years, married two years, has had one child. During pregnancy had pain in left side of pelvis. She said the pain continued after delivery, and physical exertion increased its severity.

I was called to see the patient on March 17, 1902, and found a cyst on the left side of the pelvis as large as an orange. Operated on March 21, 1902, in the Toronto Western Hospital with the assistance of Dr. Clouse. Dr. W. J. Fletcher administered the anæsthetic.

Dr. Fletcher reported that the patient had marked evidence of disease of the aortic and mitral valves. After careful examination by all concerned, and with the concurrence of the Medical Superintendent of the Western Hospital, Dr. McCullough, it was decided to try vaginal section, posterior opening.

This, I was sure, could be done quickly, but, should an emergency require us to stop, we could close at any stage of the operation without

disastrous results. The patient received the final cleansing without narcosis. Chloroform was then cautiously administered for five minutes. She was then very pale and her pulse weak, but she still resisted. Ether was then given and, after two minutes, the operation was begun and completed in eight minutes. The whole time of administration of anesthetics was 15 minutes. The narcosis was so light that she was quite conscious in two or three minutes afterwards, and observed my examination of the specimen, so that she was able to describe its shape and size to me the next day. There was no nausea or other unpleasant symptoms. She remained in the hospital 12 days after the operation, and has required no medical attention since. This patient could not have borne an abdominal section.

The following case illustrates the absence of even slight shock, which is explained by the small amount of traumatism as compared with cutting through the anterior abdominal wall. Mrs. R., age 21 years, mother of one child, and was again pregnant. During first pregnancy, had pain in right side, just below McBurney's point. On examination, it was discovered that the pain was due to a thickened right tube, with adhesions; but, as she was not much affected by it, it was considered better to wait until after pregnancy and lactation were completed before operating. The baby had not been weaned, when she suspected herself pregnant again. She said she had the same pain as before when she was pregnant, but more severe. Examination showed the uterus to be as large as at the third month. The tube was larger and more sensitive than when examined before. Her condition was so much worse than in the first pregnancy that vaginal section was proposed.

The fœtus might be destroyed, but a pyosalpinx might rupture during pregnancy or labor, and the women's life be lost, or perhaps both lives sacrificed if nothing were done to relieve the condition immediately. She consented, and walked home 12 days after its removal by vaginal section. She now enjoys remarkable health and is in the seventh month of gestation. At no time was she threatened with post-operative abortion.

Fibromata, interstitial or pedunculated, may be removed "per vaginam." The large ones may be sliced and removed in sections. The pedunculated ones are quite easily managed. The following case of intramural fibroid is offered for consideration: Mrs. McG., age 30 years, has two children, and had one pregnancy removed in the third month, as it was considered (by consulting surgeons) dangerous to allow it to go on to viability, and doubtful if it would continue to that period of gestation. She suffered greatly during this short pregnancy. The removal

of the fibroid by laparotomy had been advised, but was declined absolutely. On Oct. 22nd, 1901. she presented herself for examination, and would consent to vaginal section, if it seemed feasable. Two days later the cul-de-sac was opened, the uterus rotated backwards on its transverse axis, and the fundus drawn down into the vagina. An interstitial fibroid, which had undergone calcareous degeneration, and which extended from the mucosa to the peritoneum, and as large as a full-sized walnut, was excised from the posterior wall of the uterus, the margins of the incision being drawn together by deep silk sectures. There was a good deal of venus oozing, which the sutures did not control. As soon, however, as the uterus was returned to its normal position, and the veins in the broad ligament untwisted, it ceased immediately. The hæmorrhage did not alarm us, for we knew that should it continue for a time it would escape by the vagina and do no harm. If the loss were considerable, we should have positive evidence of it. The next day the patient said she suffered much less than after a trachelorrhaphy, on a former occasion. She was up on the seventh day, left the hospital on the tenth day, and went about shopping, as one who had not been ill. On the night of the twelfth day I saw her standing in a crowded car on the way home from the theatre, when she stated that the jolting did not affect her now as much as before the operation. Her health has been excellent since.

Septic adnexitis, with extensive adhesions of the pelvic organs to each other, and surmounted by a diaphragm of inter-intestinal adhesions, can be relieved from below more easily and safely than from above. Laparotomy requires a most tedious dissection of adhesions in such a case, before the organs to be removed can be reached. Vaginal section brings one in contact with the diseased organs immediately, and the separation of adhesions begins on the under side, where they are easy to divide. When the septic organs, over which the intestines were matted together to shut off the general abdominal cavity from infection, have been removed, the adhesions are soon absorbed. In three or four months, or less, all trace of them disappears. If separated at the time of operation, as they must be in laparotomy, they usually reform, and are more widely spread than before.

The following case, operated on in Dr. Carveth's private Hospital, supports the foregoing statement:

Mrs. P., aged 23 years, married at 21 years of age, and became pregnant in a short time. Miscarriage occurred in the fifth month, followed by a sickness, called by attendants typhoid fever. The chief symptoms were pain in the pelvis, and a purulent discharge from the vagina.

She was confined to bed for six weeks, and was very pale and poorly afterward. Three months after her miscarriage, examination of the blood for Widal reaction, gave a negative result. She was then completely broken down in health. On examination, all her organs were found normal, except those in the pelvis. The true pelvis was filled with an irregular mass, very tender, especially on the sides below. A cordlike tube could be felt extending from McBurney's point to the middle of the mass. This was found at the time of operation to be the adherent appendix.

The usual posterior opening was made and both tubes and ovaries were so extensively diseased as to require removal. The appendix, when separated, appeared normal and was not amputated. Multilocular cysts, made the right ovary as large as an orange. This ovary and the right tube were taken away separately, and were mutilated, so as not to be readily recognized; but one works for the patient, rather than for the pathologist. When both tubes and ovaries are gone, the uterus is of no value to the patient. It is easier to bisect the uterus and remove one-half with its adnexa— and then do the same on the other side, than to leave the uterus "in situ," working around it. But I was asked to remove only what was urgently indicated. The first incision was followed by considerable oozing of blood, which continued till the operation was completed. It was due to inflammatory hyperaemia of the parts divided. Its presence scarcely hindered the operative work at all, as it ran away, only occasionally requiring sponging. Twelve days after operation she spent part of the day in an easy chair, leaving the hospital in three weeks from the date of admission. It is now four months since, and she looks well, declaring that her general health never was better.

The shock and time required to do a laprotomy would have been fatal to one so debilitated. The lifting of the septic organs upward through an abdominal incision would probably have produced general infection. The shock and sepsis together would have undoubtedly caused a fatal issue if done by laparotomy.

The arguments that may be advanced against this method of operating in pelvic diseases, namely, the danger of haemorrhage, the lack of room, the inability to see the field of operation, and the risk of wounding important organs, have already been fully met. These dangers are imaginary rather than real: and, with experience, must continually disappear. As the advantages of the vaginal route becomes more recognized, the number of operations by it will steadily increase, whereas those by the abdominal incision must as surely decrease. The work of Pryor, Goffe, Martin and myself along this line abundantly justifies this statement.

CURRENT MEDICAL LITERATURE.

Conducted by A. J. MACKENZIE, B.A., M.B.

CHRONIC ACETANILD POISONING.

The University of Pennsylvania *Medical Bulletin* for February reports a case of chronic acetanild poisoning, in which the patient had taken the drug for some time for the relief of neuralgia. The symptoms on which the diagnosis was made were marked cyanosis with conspicuously little dyspnœa and no coldness of the extremities, suggesting cyanosis due to disorganization of the blood. There was a disfiguring acneous eruption, dilatation of the heart with murmurs, the liver and spleen were enlarged and the patient much debilitated. Examination of the blood revealed marked alterations in the red cells, including such forms as shadow corpuscles, fragmented cells, poikilocytes, polychromatophilic cells, and particularly nucleated corpuscles. The latter were normoblasts and later megaloblasts; there was at first a leucocytosis, and the number of blood placques was increased.

The patient admitted having taken the drug for four or five years in quantities as high at times as thirty grains to a dram.

FIXATION OF STRYCHNINE IN ANIMAL TISSUES.

When only a toxic dose of strychnine is injected into an animal the subsequent characteristic tetanic convulsions cease after a shorter or longer period without leaving any sequelae. Why the spasms should not continue indefinitely has always been a subject of various speculations. One of the earliest was that the strychnine became oxidized, but it has been shown that it can be recovered unchanged in the urine, appearing within a few minutes, and completely in 48 hours. The fact of the fixation of toxins by the animal tissues gave rise to a surmise that alkaloidal poisons could similarly be fixed in an inert form, and the fact that the strychnine seemed to be less active after mixing with animal tissues, *e.g.*, pulp of brain, kidneys, &c., gave support to the theory, but it was discredited by the fact that a similar result was observed when latcum or charcoal was used, showing that the effect was a mechanical interference with absorption.

A further experiment was adduced by Czyhlary and Donath in which an injection was made into the tightly-ligatured leg of a guinea-

pig, and after a time the ligature was removed, when the effect was found to be reduced. The objections to this conclusion are: (*a*) A part of the strychnine has been already absorbed during the period of constriction, and has been partly eliminated; (*b*) the strychnine is absorbed slowly from the ligated extremity on account of the injury to the tissues; (*c*) and because it is there suspended in a colloidal, not a crystalloid solution. These reasons seem sufficient without having recourse to the theory that it is combined.

Carrarra went further, and experimented with nephrectomized animals, on the ground that by rephrectomy the chief avenue of elimination is cut off, and therefore we get a cumulative effect from the poison, and the argument of slowness of absorption cannot be used. This rests on the assumption that nephrectomy leads to a cumulative effect in the absorption of strychnine, a theory disproved by the experiments of Meltzer and Salant reported elsewhere. Further experiments by the investigators confirm the conclusion that strychnine is not necessarily combined in the animal tissues in such a manner as to be rendered inert.

POISONING DURING CHLOROFORM ANAESTHESIA IN THE PRESENCE OF A NAKED GAS-FLAME.

The *Medical Sentinel*, Portland, Ore., January, has an article by Dr. Winslow reporting a case in which during the administration of chloroform for an obstetrical operation, in a small room, where there were three burning gas-jets, the operator and assistants became conscious of a choking, stinging, irritating sensation in the throat and chest, resulting in incessant coughing and gasping for breath, which forced them to desist and open the windows. The operation was concluded under ether.

Although not generally known, the production of irritative effects by chloroform vapor in such conditions, has been frequently pointed out in medical literature. The decomposition which takes place in the presence of the flame has been explained in various ways, but the products, chlorine and hydrochloric acid, are doubtless the noxious agents produced; the chemical change may be represented thus:—

$2\,C\,H\,Cl_3 = C_2 + 2\,Cl_2 + 2\,H\,Cl$ and tests in the form of a filter paper moistened with a solution of potassium iodide and starch showing the iodine reaction, proves the presence of the free chlorine. Any naked flame may give the result. Death has followed in some cases, and severe broncho-pneumonia quite frequently; so that the possibility should be constantly kept in mind where anaesthesia has to be induced in small, badly ventilated rooms.

A CASE OF OSTEOPSATHYROSIS.

In the University of Pennsylvania *Medical Bulletin*, vol. xv., Biggs reports a case which sustained twenty-two fractures in ten years. The patient was a white, family and personal history negative. The disease made its appearance at the age of 20, and peculiarly after an existence of ten years, ceased entirely; at least for the five years that it has been under observation. With the exception of one rib all the fractures occured in the humeri and femora. They were in general the result of causes which would not ordinarily suffice to cause serious injury, and the accompanying pain was very slight and crepitus either absent or very soft. Repair was slow, with a good deal of resulting deformity.

Osteopsathyrosis is a condition of microscopic or macroscopic osteoporosis producing a fragility of osseous structures, resulting in multiple fractures, this fragility being due to brittleness, not pliability. Two distinct forms are described—symptomatic, resulting from general or local pathological conditions: idiopathic, in which a uniform widespread fragility constitutes the primary and sole demonstrable lesion While there is no unity of opinion among authors as to the etiology, there seems to be an increasing tendency to consider this peculiar affection as primarily of nervous origin, so that, for the present, at least, it is very properly classed as one of the neuropathic affections of bone.

The disease is most frequently seen in early childhood, in which cases there is a tendency to spontaneous resolution, but in the adult it is ordinarily terminated only by death. There is some evidence to determine heredity as a causal factor, and cases have been seen apparently traceable to mal-nutrition. The site of predilection for fracture is the femur, and excepting abnormal mobility and interference with function, the classical signs of fracture are absent. As a rule union occurs rapidly and no permanent callus is seen at the site of fracture. There is no curative treatment, other than attending to nutrition, assisting union and avoiding anything that may cause fracture.

THE INFLUENCE OF NEPHRECTOMY UPON ABSORPTION.

The February number of the *Journal for Medical Research* contains the report of an investigation by Meltzer and Salant, conducted at the Rockefeller Institute for Medical Research, to determine the effect of nephrectomy upon absorption.

Edema is generally regarded as being dependent merely on increased transudation of fluid, but one must remember that diminished absorption may be either an additional or determining cause. The study

of absorption in these cases was made by injecting fluid into the peritoneal cavity of rabbits. For each experiment two animals were used, a normal control rabbit and a nephrectomized one, the conditions in each case being as nearly similar as could be achieved. The facts brought out by the experiments were as follows:—

(1) In nephrectomized rabbits the rate of absorption from the peritoneal cavity was found to be more active than under normal conditions.

(2) This increase in absorption was most marked in experiments with solutions of sodium chloride of $\frac{1}{2}$ per cent., which is decidedly hypertonic for normal animals.

(3) In experiments with solutions of 1.5 per cent., or of less concentration, not a single case in nephrectomized rabbits occurred in which there was an increase of the fluid injected into the peritoneal cavity, while in normal rabbits such an occurrence is not infrequent, especially when hypertonic solutions are employed, be they even as slight as one per cent. of sodium chloride.

(4) The increase of absorption in the nephrectomized rabbits continues to be manifest even when the solutions are introduced into the peritoneal cavity about 24 hours after nephrectomy. We have reason, however, to surmise that at about a period of 40 hours or more after the nephrectomy the factor favoring absorption commences to diminish.

(5) When a solution remains in the abdominal cavity five hours or longer the rates of further absorption of this solution seem to become the same for nephrectomized as for normal animals.

(6) In none of the nephrectomized animals was any lymph found on opening the abdomen.

To explain these results the investigators conclude that with the removal of the kidneys the osmotic pressure of the blood becomes increased and to such a degree as to more than counterbalance the effect of the simultaneously increased blood volume which might be the cause of an increase of the power of filtration from the blood into the tissues. Therefore, experiments with nephrectomy do not explain why œdema takes place, though the way may be clearer for further study.

METABOLISM ALBUMINURIA.

The Johns Hopkins Hospital Reports contain the report of an investigation on this subject, from which the following conclusions are drawn:

(1) The percentage of albumen is the best index for the course of a case of albuminuria.

(2) In many chronic cases of albuminuria there is an acute process in progress, and it is this latter which governs the course of the disease. Variations in the course of this acute process are shown by: (a) increase in albumen per cent., (b) slight rises in temperature.

(3) The effect of various diets, therapeutic measures, muscular work, etc., on the albuminuria is often produced by their effect on this acute process.

(4) In governing the diet in nephritis, slight rises in temperature should be taken as evidence that the diet is unsuited to the case.

(5) While the acute process is active, milk is the best diet, not too much and properly diluted. After the acute process has subsided, the patient may even benefit from additions of bread and butter, rice, fruit, or even later, of meat.

(6) If the day and night urines be studied separately, it was found that:

(a) The line of water excretion for the day is practically parallel to that for the night;

(b) The albumen per cent. of day urine is practically always above that of the night.

(c) In the night urine the albumen and nitrogen lines are practically parallel, showing some definite relation between the excretion of these, while the percentage of each varies inversely as the amount of urine to a certain degree.

PRESCRIPTION FOR RHEUMATISM.

In the *Post Graduate*, February, suggests the following prescription for Rheumatism, on the grounds that the the freshly-combined Sodæ Salecylas is more active than the formed salt:

℞ Ac. Salecylas..... ℥iii
Sodæ Bicarb..... ℥ii
Pot. Iodidi..... ℥i-iii
Elixir Gaultheriae..... ℥i
Glycerini..... ℥i
Aq. ad..... ℥iv

Sig.
℥ii q. h. ii

DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Conducted by PERRY G. GOLDSMITH, M.D., Belleville, Fellow of the British Laryngological, Rhinological and Otological Society.

TOBACCO NERVE DEAFNESS.

Opthalmologists have long known that the excessive use of tobacco produces various degrees of amblyopia through its toxic effects on the optic nerve, but aurists have not apparently noticed the frequency in which this same toxic effect may be found in the auditory nerve. Wyatt Wingrave, in his presidential address to the British Laryngological, Rhinological and Otological Association, January, 1903, (Journal Laryngology, April, 1903) discusses from a clinical standpoint this subject. He was induced to observe the effect of tobacco on his aural patients who complained of deafness, because he had observed the frequent occurrence of deafness in those who suffered from tobacco amblyopia. Deafness, due to tobacco smoking, is divided into three groups according to their etiology: 1, Mechanical or pneumatic; 2, Irritation or catarrhal; 3, Toxic or nerve deafness. The mechanical is due to the negative pressure caused by smoking a tightly packed pipe, especially in those suffering from nasal obstruction.

Irritative or catarrhal, familiar in the early morning cough and expectoration of habitual smokers, is caused by the chemical and mechanical irritation of the smoke on the mucous membrane extending along the eustachian tube and inducing hypertrophic changes in that canal and its connections.

Toxic or nerve deafness is due to the gradual accumulation of certain toxines of tobacco in the system. This poison, whether it be picrotoxine, nicotine or any other, is found in largest amounts in the darkest, strongest and cheap tobaccos. The poison is undoubtedly cumulative, since complete abstinence, not merely reduction in amount, is necessary to improvement. Since he finds marked deficiency in hearing for low tones in 50 per cent. of the cases recorded, he thinks there is some selective degeneration at work in the auditory nerve, as there is in the optic nerve when the papillo-macular fibres are found degenerated, constituting the scotomata. Seventeen cases are recorded, associated with tinnitus vertigo and marked impairment of color sense. Treatment consisted in complete abstinence from tobacco in every form with the administration of strychnia, quinine and bromides. Quinine and bromides separately or combined, afforded us appreciable effect, but

strychnia pushed to full doses proved more successful. Three severe cases were completely cured in eight, nine and twelve months respectively, nine showed marked improvement, two slightly, and two refused treatment. Several cases relapsed on resuming the habit, though strychnia was continued while the improvement again followed on abstaining from tobacco.

TOXIC RHINITIS.

Grayson in (Trans. Am. Laryn, Rhinol. and Otol. Soc.) writes a very interesting article on this topic. He refers to the common cold in the head, which he believes to be due to a faulty blood state induced by indiscrete eating. He says the influence of the weather has little to do with the disease, and he believes changes of temperature do no more than hasten what would, in all probability, occur but a little later without their assistance. Treatment is first correction of diet, with vigorous exercise. The seductive little "Rhinitis" and "Coryza" tablets have accomplished, he thinks, more harm than good, as the rhinorrhea is only a symptom of the underlying disease. Speaking of drugs, he says: "If we except those that may be used to empty and cleanse the gastro-intestinal tract, there are none that compare in remedial value to vigorous exercise. A half hour with the foils or gloves, a ten mile ride on a hard trotting horse, followed by a cold shower and a hard rub, will do more to arrest and subdue an auto-toxic rhinitis than the cleverest combination of diaphoretics or anti-lithics. The energizing effect of such work upon the general circulation, the vaso-motor apparatus, and the whole mechanism of exertion will afford prompt relief, while remaining indoors and being coddled will only retard the elimination of the offending toxines."

THE TREATMENT OF NON-PARALYTIC STRABISMUS INCLUDING A NEW OPERATIVE PROCEDURE.

J. H. Woodward (*New York Medical Journal*, January 24, 1903), has a very practical paper on this topic. The object of any treatment in squint is three-fold, namely: (1) To remove deformity; (2) to establish normal association of movement between the eyes; and (3) to reclaim the deviating eyes from amblyopia. Woodward believes failures in operative measures are especially due to the free division of the over acting muscle so universally practiced. His experience leads him to believe that stretching the over acting muscle, weakening or paralyzing it temporarily, previous to advancing the antagonistic, materially aids

one's endeavors to eliminate tenotomy from the treatment of strabismus. He thinks treatment of squint should begin immediately upon its first manifestation, and operative measures undertaken only as soon as it is clear that other means of cure have failed. Stereoscopic, prismatic and reading exercises and careful supervision of the refraction should be continued until the cure is completely established. Efforts to revive vision in an amblyopic eye should be persisted in for several years, notwithstanding the seeming hopelessness of the task.

RECURRING TONSILLITIS.

Donovan in *The Detroit Medical Journal*, January, 1903, writes on this very common disease. He draws attention to the fact that it is not necessary for the gland to be enlarged to be diseased. The symptoms indicative of diseased tonsils are usually :—cough, especially on retiring, (this may often be produced by pushing the probe point into the diseased crypt), uncomfortable deglutition, impared hearing, smell and taste, subjective sensations in the throat, pains, glandular enlargement, voice changes and easily exhausted, otitis, neuralgia, etc. Various constitutional diseases due to infective organism, Donovan believes, have for the organism's port of entry, the faucial tonsil. The treatment is medicinal, before suppuration has occurred, and surgical when pus is present. Calomel and soda phosphate for their eliminating effects are first given, while benzoate of soda, salicylates, guaiacol, etc. have their indications. Locally, silver nitrate 40 per cent. or 50 per cent. guaiacol solution will occasionally abort the attack. When suppuration has taken place no delay should occur before opening into the *supra-tonsillar space*. In some cases where the tonsil only projects beyond the pillars during an acute attack, one is justified in removing it then and taking as much away as possible. The case very rapidly gets better on evacuation of the pus, but recurrence is very liable to take place if there be any diseased tonsillar tissue remaining, therefore complete dissection of the gland is indicated. Pynchon strongly insists that the cautery is by far the best means. Donovan as a rule in adults favors complete removal, and quotes J. H. Coulter as justifying such procedure. Coulter says of tonsillectomy : (1) It gives a cosmetically perfect throat, free from liability to absorb toxines, etc. (2) Liberates and gives perfect action. (3) Removes mechanical obstruction to sound waves. (4) Relieves reflex disturbances. (5) Leaves perfectly smooth surfaces. (6) If pillars are previously hypertrophied they become normal.

HEADACHE OF NASAL ORIGIN.

Morean Brown, in the *Medical Brief*, Nov., 1902, draws attention to the frequency with which headaches are due to nasal lesions. Septal deflections, which are so common, not infrequently produce headache owing to the accompanying nasal stenosis and catarrh. Ethmoidal suppuration causes pain over the bridge of the nose and about the angle of the orbit. Sphenoidal disease is usually accompanied by occipital pain, while frontal sinusitis causes pain on the forehead. Adenoids, hypertrophy of the epi-turbinates and polypi may all be a cause of headache. In fact, the morning headaches of children are nearly always due to nasal or naso-pharyagral catarrh. It has become almost a fashion now-a-days for patients to prescribe for themselves or have ordered for them acetanelid or antipyrine combinations for all cephalgias whether the headaches are of renal, digestive, circulatory or ocular origin. A more careful study of each individual case would lead to more rational therapeutics.

THE TREATMENT OF ACUTE SUPPURATION OF THE MIDDLE EAR.

W. P. Phillips (*Medical News*, January 17, 1903), arrives at the following conclusions in dealing with cases of acute suppurative middle-ear disease. (1) Early and free drainage is essential; (2) rest in bed should be prescribed until acute symptoms have passed off; (3) purgatives (calomel) should be given; (4) pus should be microscopically examined; local treatment in the main consists in cleanliness and free drainage; (6) any prolonged attempts to abort suppuration within the mastoid cells is to be condemned; (7) early operative interference in mastoid suppuration prevents more serious complications, and tends to preserve the hearing power; (8) uncomplicated cases usually recover in from two days to three weeks.

RETINAL HÆMORRHAGES IN FRACTURE OF THE SKULL.

Dr. R. A. Fleming, writing in the April number of the *Edinburgh Medical Journal*, states that he found, on examining the eyes of persons who had died of fracture of the base of the skull, where there had been a great amount of sub-arachnoid hæmorrhage, that retinal hæmorrhages were common—in fact, might be said to be the rule. It was noted that where the sub-arachnoid hæmorrhage was unilateral, the retinal hæmorrhages were generally limited to the same side. The hæmorrhages in the retina were usually massive, irregular, and situated at some distance from the optic disc.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Montreal.

The campaign against tuberculosis is being carried on vigorously in Montreal, the most recent move being in conjunction with the Ministerial Association of the city. The clergy of the Protestant churches of Montreal, acting largely through this body, in co-operation with the League for the Prevention of Tuberculosis, have set apart the evening of Sunday, May 17th, for short lectures upon tuberculosis, its frequency in the community, the possibility of lessening its spread and so of improving the general health, and the duty of each individual in reducing the ravages of the disease. Dr. Adami, the convenor of the committee, has received a splendid response from the various churches and medical men of the city, and everything points to a large number of successful gatherings.

The Montreal Medical Society took up the same subject at the May meetings for discussion among the members, and a record attendance greeted Dr. Kinghorn, of Saranac Lake, who had been invited to speak on some of the more recent methods for the diagnosis of tuberculosis. Dr. Kinghorn's paper was excellent, and much appreciated by those present. The subject matter was admirably chosen and each heading received attention in proportion to its importance. He spoke in detail of the early signs of tuberculosis, physical examination, sputum, the x-rays, the agglutination test, and tuberculin. In the first place Dr. Kinghorn insisted that an accurate history should be obtained, and special attention should be paid to certain symptoms, for although the modes of onset were many and various, yet of particular moment were, cough for more than six weeks, temperature rising every day above 99½°, pain in the chest, hæmoptysis, dyspepsia, and loss of weight. Physical examination was without doubt the important diagnostic method; nothing could replace it, and nothing should replace it. Too much stress could not be laid upon complete, careful, systematic, physical examination in every case that was in the least degree suggestive of tuberculosis. The various methods of sputum examination were gone into at length, and the importance of frequent and thorough examination insisted upon. X-ray examination had proved of little value in his experience, and it was not until physical signs could be detected that anything approaching definite results could be obtained. The agglutin-

ation test had been given a moderate trial, but as a means of detecting early cases it was unsatisfactory. The tuberculin test was of great value in cases where every other test was negative. It was seldom necessary to apply it, but it was harmless when properly and carefully administered. The dose varied from 1-10 to 10 mgms, and if a reaction could not be obtained with the latter, tuberculosis could with great confidence be excluded.

Dr. Kinghorn sat down, amid great applause, and Dr. Lafleur opened the discussion. He was glad that Dr. Kinghorn had so insisted upon proper physical examination. In almost all of the cases referred to him, there was little difficulty in demonstrating the lesion, and it was simply carelessness upon the part of the medical man that the condition was overlooked. Imperfect stripping of the patient and hurried examination were in his experience responsible for the majority of mistakes. In regard to the x-rays, he had had but a moderate experience, but when any lesion was evident by this method, he had been able to demonstrate it by physical examination. Dr. Girdwood rose to say a few words on the x-rays. He thought that the reason so little was seen by the majority was because their eyes were not educated to see properly in the dark. A person should stay for ten or twenty minutes in the dark room before attempting to get results with a fluoriscope. The diminution of the excursion of the diaphragm was certainly the most important sign. Dr. Blackadder asked for help in the diagnosis of early tuberculosis of children. Often the peribronchial glands were involved long before the lungs, whether this was owing to the increased gland activity in young people, or not, he was unable to say. Dr. Nichol's remarks were particularly to the point in regard to the agglutination test. He had carried on experiments in agglutination, and found results corresponding to those of the original French observers. He found also that in the staining of the bacillus that Gabbett's method was utterly unreliable, and he invariably used the acid and alcohol method when doing anything but the merest routine work. Dr. Richer spoke on tuberculin, and strongly advised its use. He had used it a comparatively large number of times, and never had an ill result. He never had any hesitation in testing his patients with it when there was a question as to the diagnosis, and he had used it upon himself six times. Dr. Shepherd said that in surgical conditions the tuberculin test was of great value, but that he had found it useless in tubercular peritonitis, and all the cases of gonorrhœal rheumatism, in which he had tried it, reacted in a typical manner. Dr. Shepherd then moved a vote of thanks to Dr. Kinghorn, and said that it would repay any of the members who had not visited Saranac to do so, in order that they might appreciate the

scientific way in which the work was conducted, from the sanatorium proper to the laboratories connected with it. Dr. Kinghorn replied, answering questions which had been put to him during the discussion, and giving a cordial invitation to the members who might wish to visit Saranac.

Dr. J. Alex. Hutchison presented a living case of aneurism of the brachial artery treated by digital compression. The history of the case was rather curious, inasmuch as there was no evidence of alcoholism or syphilis, and trauma appeared to be out of the question. The swelling was rapid in its onset and presented all the typical signs of aneurism. The expansile nature of the tumor was easily demonstrated and the pulse of the radial and ulnar arteries was felt with difficulty. There was some numbness of the forearm and the power of flexion of the fingers was considerably diminished. The aneurism was situated at, or close to the division of the brachial artery, just below the elbow joint. Digital compression was carried on by relays of students for 30 hours, for the patient would not hear of operation. At the end of 18 hours the mass had lost its expansile character and only a slight pulsation was left, probably due to some large anastomotic branch. However, to make sure, compression was continued to the end of thirty hours, when, as the slight pulsation was still present, an old-fashioned turniquet was placed over the tumor and left on for 30 hours longer. The recovery was uneventful, although the pulsation above referred to had not disappeared.

Dr. Hutchinson also showed a case of compound fracture of the femur, followed by embolism of both tibial arteries and gangrene of the leg. The patient, who had been employed in a machine shop, had been carried on the back of a fellow-workman for fully a quarter of a mile before he was allowed to rest, and undoubtedly to this was due in great part the injury of the artery. The gangrene which followed was most typical, in onset, course and result, while the appearance was so classical that it might well have adorned the pages of a text-book on surgery. Amputation was successful. The main lesson to be learned from this case was, that all large establishments in which accidents of a similar nature might occur should have at least a stretcher, to be used in such an emergency, and if no provision of this kind had been made, the employees should be given instructions to move the patient as little as possible until ambulance aid arrived.

The third case presented was that of epithelioma of the lower lip, with plastic operation. Here, practically, the whole of the lip was removed and a V-shaped incision made, extending far down the neck. The simplest procedure possible was followed, namely, to loosen the subcutaneous tissues well back and then approximate the edges. The result was particularly good.

MARITIME TOPICS AND NEWS.

Conducted by W. D. Forrest, M.D., C.M., B.Sc., L.R.C.P., Lond., M. R. C. S. Eng., Halifax.

HALIFAX BRANCH, BRITISH MEDICAL ASSOCIATION.

Meetings of this branch were held every fortnight during the past winter. The last meeting of the season took place on April 16th. Since writing we have had papers by Drs. C. Dickie Murray and J. G. MacDougall and by the late Dr. Halliday.

There was also a Pathological meeting at the medical college and a clinical meeting at the hospital. Dr. Murray's paper on "The State and Tubercular Disease" appeared in the last copy of THE CANADA LANCET.

Dr. MacDougall's paper was on Cardiac Disease with special reference to diagnosis and treatment. The paper was carefully prepared and was listened to with close attention by all present.

Dr. Halliday's paper was on Sanitoria. Owing to his absence through ill health Dr. G. M. Campbell read it for him. Dr. Halliday referred more particularly to the Sanitorium at Gravenhurst where he had spent several months. He gave a bird's eye view of the country in which the sanitorium is placed and compared it with the neighborhood about Kentville—the proposed site of our provincial sanitorium. Dr. Halliday then described the buildings in detail—photographs of these being handed around. The shacks were minutely described. Dr. Halliday stated that the patients lived in these all the year and indeed preferred them to the houses.

The hospital management received due consideration.

Treatment was dealt with under two heads, medicinal and non-medicinal, the former playing the less important part.

The importance of institutional treatment in cases of pulmonary tuberculosis, and the benefit derived from the courses of lectures, discipline, etc., in such places was strongly emphasized.

The paper finished with statistics with reference to cures at this institution.

Dr. John Stewart followed with some remarks in reference to the proposed Kentville Sanitorium. He also spoke of Hopewell, in Picton county, and the hills surrounding the Wentworth Valley, as ideal situations for sanatoria.

Dr. Hattie dealt with tuberculosis among the insane, and spoke of the difficulty of proper disposal of the sputum in these cases.

He referred to the experiment lately undertaken in the Manhatten State Hospital, and showed that wonderful improvement had been made in dealing with the tubercular insane, even under somewhat adverse circumstances.

At the pathological meeting, held on February 4th, Dr. G. M. Campbell reported a case of pyemia in a boy of eight. The kidneys, spleen, and liver, which were exhibited, showed multiple abscesses throughout. The mitral valves showed signs of ulceratire endocardites. Attached to one cusp was a septic clot—the cause of the condition. Two areas of degeneration were seen in the brain, the one on the left side being in the region of the posteri or cerebral artery, and the one on the right was more anterior, and in the region of the middle cerebral.

The patient during his illness complained only of headache.

The next case referred to by Dr. Campbell was one of a rapidly recurring ascites. The patient had been tapped some fifteen times but filled up again always in a day or two. The patient was finally operated upon and the omentum attached to the parietal peritoneum. A stitch abscess followed.

The operation was done on October 25th and on November 25th it was found necessary to tap her again. The trochar wound became septic. She died some days after this from septic peritonitis and the p. m. revealed the following condition.

Omentum found attached to parietal peritoneum Intestines were all matted together by adhesions, which were becoming fibrous, liver friable, adherent above to diaphgram and below attached by adhesions to intestines. Pockets of pus were found between intestines. The general cavity was found filled with ascitic fluid. Spleen weighed 1¾ pounds, liver small, capsule thickened. The vena cava was widened and baggy, particularly at the entrance of the renal veins. Both pleural cavities and pericardium were filled with ascitic fluid. The left lung was collapsed; the right emphysematous.

Dr. Campbell followed with remarks on the conditions serositis and multiple serositis, and referred to an article on the subject lately published in the *American Journal of the Medical Sciences.*

Dr. L. M. Murray then referred to two recent cases in the V. G. H. These were men suffering from enlarged prostate.

Dr. Murray discussed fully the anatomy of the prostate—the varieties of enlargement—the time of its occurrence and its causation. He then dealt with obstruction of the lower urinary tract, due to the enlargement, and entered fully in the train of events leading to the pathological

condition known as surgical kidney. Dr. Murray showed a number of sections under the microscope.

At the meeting of March 18th Dr. John Stewart read a paper on Hospital Notes With regard to post graduate work Dr. Stewart thought that his alma mater Edinburgh presented the most attractions —one of the chief advantages being that all the hospitals are together. He then spoke of the teachers and the under graduate course when he was a student. He thought that the ordinary mind of man would soon be unable to undertake all the subjects which are coming up in medical education.

He then spoke of London, its advantages as a medical centre, and gave a detailed account of an afternoon's work with Prof. Cheyne, which included the following operations—wiring a patella—operation for genu valgum—tubercular bursitis—sinus of thigh—fistula in ano. Outside of London Dr. Stewart thought the Leeds Hospital at Bradford gave the best out-patient work. The children's hospital at Bradford has many advantages.

Speaking of continental hospitals, Dr. Stewart referred to Hamburg and the specially good advantages offered there to post graduates. Berne offered special attractions to surgeons, owing to the presence of Kocher there. The expenses for three months at Edinburgh, including passage money, would be about $300.

Dr. Hawkins asked if any instruction on the continent was given in English.

Dr. Stewart, in reply, said that there was none, but that the operations and black-board demonstrations were quite enough for an Englishman. Hotel and railway porters all understood English. House surgeons are kind to visitors, and are anxious to learn English.

At a meeting held on January 12th Dr. H. M. Hare brought to the notice of the meeting the fact that some druggists in Halifax habitually prescribe for patients over the counter, and instanced a case where a patient suffering from chancroid had been cauterized by a druggist. Dr. Ross referred to a case where substitution had been detected.

Drs. Hare, Ross and L. M. Murray were appointed a committee to draw up a resolution with reference to counter prescribing and irregularities in filling prescriptions—the same to be forwarded to the Nova Scotia Pharmaceutical Association.

VICTORIA GENERAL HOSPITAL, HALIFAX, N. S.

At the recent competitive examination, the following gentlemen were appointed members of the house staff for the ensuing year : Kenneth A. Mackenzie, M.D. (Dal.), George W. Whitman, M.D. (Dal.), Jacob L. Potter, M.D. (Dal.), and Frederick Lessel, M.D. (Dal.)

James R. Corston, B.A., M.D., who was on the staff during the past year, has been appointed Senior House Surgeon. These gentlemen enter upon their duties June 1st. The other members of last year's staff are Drs Borden and Watson, who go to Britain for post graduate work; Dr. Millar, who will practice in Amherst, and Dr. Campbell, who will practice in Halifax.

HALIFAX MEDICAL COLLEGE.

The annual meeting took place Tuesday, May 12th. Dr. M. A. Curry was re elected president of the college, and Dr. N. F. Cunningham, vice-president. Matters affecting the welfare of the college were discussed and the following appointments to the teaching staff were made : To be lecturer in Medical Jurisprudence, E. V. Hogan, M.D ; to be lecturer in applied Anatomy, T. J. F. Murphy, M.D.; to be demonstrator in Histology, D. G. J. Campbell, M.D.; to be demonstrator in Anatomy, W D. Forrest, M.D.; to be class instructor in Pathology and Bacteriology Dr. L. M. Murray.

DALHOUSIE COLLEGE AND UNIVERSITY.

At the annual convocation of Dalhousie University, held on April 28th, the following ladies and gentlemen received the degree of M.D., C.M : Miss Minna May Austen, M. A., (Dal.) Halifax ; Lester Brehaut, Murray Harbour, P.E.I.; Mellville Coffin, Savage Harbour, P.E.I.; D. M. Crawford, Wood's Island, P.E.I.; R. W. L. Earle, Hampton, N. B. ; T. R. Ford, Milton, N.S ; H. D. Hawbolt, Chester, N.S. ; W. A. Lawson, Wallace, N. S. ; F. Lessel, Halifax ; K. McCuish, St. Peters, C.B. ; J. A. McIver, Victoria, C. B.; K. A. McKenzie, Springhill, N. S.; A C. McLeod, Milton, N. S. ; J. C. Morrison, Englishtown, C. B. ; D. Murray, Meadowville, Picton : E. M. Norwood, Chester, N.S.; J. L. Potter, Canning, N.S.; Miss G. E. B. Rice, B.A., (Dal.) Weymouth, N.S.; G. W. Whitman, Guysboro, N.S. ; F. V. Woodbury, Halifax.

The Medical Faculty Gold Medal for highest standing in all subjects of the third and fourth years was awarded to Mr. K. A. MacKenzie, of Springhill.

The medal awarded by Dr. A. W. H. Lindsay for the student standing highest in the primary subjects was captured by Mr. V. N. MacKay, of Earltown, N. S.

Mr. John Rankine, B. A., was awarded the Simpson prize for the student doing best in chemistry and Materia Medica.

MEDICAL COUNCIL OF NOVA SCOTIA.

Previous to this year gentlemen, who had studied medicine for four years and had received a diploma from a recognized College or University, could, upon payment of the necessary fee, have their names placed on the medical register of the province. Several winters ago an act was passed by the Provincial Parliament, making it compulsory for any one wishing to practice in Nova Scotia to appear before an examining board of the Medical Council and pass an examination before being registered The act came into force for the first time this year. The examinations are to be held twice a year, spring and autumn.

The first examination under the new act took place the beginning of May. Fifteen gentlemen and two young ladies were successful in passing the examinations and are entitled to certificates enabling them to practice in Nova Scotia and Cape Breton.

LETTER OF CONDOLENCE TO MRS. HALLIDAY.

At the last meeting of the Nova Scotia Branch of the British Medical Association, held in Halifax, it was unanimously resolved that we should communicate to you the expression of our deep sympathy in your great sorrow.

The sad bereavement which has deprived you of your life's companion has also taken from us one of our most active and useful members.

In the many interesting contributions which Dr. Halliday made to our Association, and which were almost always the result of original investigation, we felt the influence of an earnest and scientific mind, and we shall certainly miss the stimulus of his presence and help in our discussions. We consider that the work he accomplished as Director of the Government Laboratory of Hygiene has been of the greatest value. And those who knew him best feel that his early death is a loss to the profession and to the country.

Please accept for yourself and for your little son the assurance of our heartfelt sympathy.

C. Dickie Murray, M.B., (Edin.) has been appointed medical advisor to the United States Treasury department at Halifax.

Dr. L. M. Murray has been appointed Provincial Bacteriologist to fill the position made vacant by the death of Dr. Halliday.

MEDICAL SOCIETIES AND GATHERINGS.

TORONTO MEDICAL SOCIETY.

Regular Meeting, April 16th, the President, Dr. Hay, in the chair :—

Dr. Hay reported a case in practise. Mrs. C., aged 30, married 13 years, with 4 children, last pregnancy 3 and a half years ago. For the last 8 years she has felt poorly, and complained of something preventing her having a movement of the bowels. Water injected high remained or else dribbled slowly away. Walking and kneading of the bowels might cause an evacuation. The enema gave great discomfort. Was operated on a year ago for this, and a uterine suspension done, but no relief followed. With her finger in the rectum she said she could feel the fæces, but there was something between and they could not get away. He had operated and found that the meso-colon had stretched and the descending colon formed an S trap. He had Dr. Cullen, of Baltimore do the operating, and had the bowel stitched to the abdominal wall, by mattress sutures. Dr. Cullen said that one could not promise much positive results in such a case, but there was likely to be much improvement.

Dr. Cullen gave a short talk on sarcomatous change in uterine myomata. He said that with increased knowledge the wisest course was to operate. In 11 years they had records of 1,000 cases, and had found coincident sarcoma in the uterus which had not been suspected. He showed the Society a large collection of cuts and photogravures of myomatous uteri, showing transformation into sarcoma, some direct from muscle fibres, small tumors, nodules that on section were found to be smooth, homogeneous tissue. He showed altogether 50.

Mr. Silverthorne said that these illustrations were a treat in the microscopic line. The one with hyaline degeneration in the myoma is especially beautiful. He would like to move a hearty vote of thanks to Dr. Cullen. Dr. Bryans seconded this.

Dr. Hay reported a case, a young lady, 19, who had a simple cyst of the ovary, removed in the country by a doctor, and a fistula had remained. Then she came to Toronto and had that operated upon with the result that it remained and there was added a faecal fistula. He had operated with Dr. Cullen and they had found a bi-cornuate uterus, and 4 points of opening in the bowel which they stitched, Dr. Cullen said that they had removed the fistulous tract. He advised making the incision to one side and coming down on the fistula from within. He related

a case of uterine suspension done by a colored doctor, where a fistulous tract had remained, and he had had the mortification of removing a gauze pad before the doctor's eyes. Dr. Doolittle said that he had seen a good deal of the methods and hospital appointment in England. He gave an interesting description of both.

Dr. Bryans opened the discussion on pneumonia by relating the histories of 11 cases with 4 deaths. 1st death—Young man, healthy up to attack, on Saturday night, Dec. 23, he felt cold going home, on Monday he was at work again, till 4 p.m., when he went home to bed. His temp. 102, pulse poor and small, no very sharp pain, intellect dull, was given small doses of phenacitine, digitalis and strychnia, poultice to the chest with plenty ventilation. Wednesday he was still very ill, pulse worse, respiration 36. He was sinking fast. His pulse rose to 160 before he died. The sputum was typical. He had not tried anti-pneumococcic serum nor saline injection. 2nd death:—A man, aet 40, poor health, had a pain in the right side, temp. 104.5, pulse 120, sputum prune juice, severe pain in the chest, for which he gave morphia hypodermically, gr. 1 64, and bandaged the chest. Cyanosis developed, digitalis and strychnia were given as required, and a mild expectorant. The bowels were kept open and the chest was poulticed. He took nourishment well. For the high temperature he tried cold baths at 50 F., rubbing well. This brought down the temperature and the patient became conscious. He died on the eighth day. 3rd death:—Boy 7 years, seen the second day of the disease, was very ill from the start, empyæma developed, and the pus was drained for six weeks when he died.

Dr. McPhedran said that the treatment was symptomatic at best. It is an infective disease with local expression. The condition of lung is not an indication of the condition of the patient. Those with low temperature have usually a bad prognosis, the toxemia being more marked. Anti-pneumococcic serum has given fair results, but more than nursing is not required in most cases. The naso pharynx should be kept clean, the jacket was not much use, moderate cold to the chest did good at times, it stimulated the respiration in most cases, and the heart and circulation. He had not used the cold bath. Venesection was useful where indicated, with the right heart dilated and cyanosis present. Strychnia in his hands had given no results, while digitalis had given some good results, and had been of no benefit in others. Quinine sulphate, grains vi. in water, given subcutaneously, had given him excellent results, he had never given more than three injections. Dr. Ferguson said that Sir William Gull's warm bed, good nurse, light diet axiom was still in full force. He concurred in what Dr. McPhedran had

said about venesection. Pneumonia was a general disease with local manifestations, usually in the lung. He gave morphia for the pain. Oxygen had been used in some cases with much benefit. Dr. Wilson was opposed to bleeding. Cases must be classified. Those over 45 years, and in the habit of taking liquor, were bad subjects, and could not be treated on the expectant plan. Dr. Hooper asked if it was possible to dilate the peripheral circulation and thereby alter the lung condition? Dr. Webster said that no mention had been made of aconite, which had always given good results in his hands. Those cases which had been placed in the open air got well faster than those left inside. Dr. Galloway said that he had seen the good effect of the cold bath in his own family. With respiration 90 to 120 and a temperature just under 106, the bath at 70 F., with cold added, till the temperature of the patient fell to 100, had worked exceeding well in his own house. Dr. A. Fletcher said that the use of creasotal had been tried by him in 11 cases with one death—that of a child of 8 days at death. In all the other cases there had been no crisis, but the temperature had begun to go down, inside of ten hours, after the treatment had been begun and had ended by lysis.

Regular meeting, May 7th, 1903. The President Dr. Hay was in the chair.

Dr. T. S Webster read a paper entitled "When is Colpocoeliotomy advisable?" Dr. W. McKeown opened the discussion. He said that the method of operation was good in selected cases, but that the bleeding, which might be severe, was very hard to control, the operator was at work in the dark and it was necessary to see as well as to feel what one was doing. Dr. Wilson said that Dr. Webster had so educated his fingers that he could feel what many another would not recognize. Dr. McDonald said that he had tried vaginal section years ago, and had given it up because better work could be done through the abdomen. Still, in a few carefully selected cases, he would open through the cul-de-sac.

Dr. McIlwraith read the notes of some cases of antepartum haemorrhage. In the first, accidental, in the seventh month, the cause was a hemorrhoidal condition of the veins of the vulva. In the second, also accidental, there was a varicose condition of the veins of the vulva and vagina, and the haemorrhage was found to be from a dilated vein of the cervix. In the third case, in the fifth month, the haemorrhage was severe and continuous. The cervix was found to be congested, the os eroded, there was free bleeding from the wounds of the vulsellum. The condition was either malignant, or endocervicitis, astringents were

used. She aborted and then the cervis got better. The fourth case was one of placenta praevia, the placenta being on the left side. The fifth case was accidental. There was no haemorrhage at the time he had seen her, but there were marked evidences of it. In this case a verson was done by the Braxton-Hicks method. The sixth case was at the 7th month, with haemorrhage at times. In the interval there was a greenish discharge. The patient was convalescing from appendicitis and pneumonia. The child was alive but she miscarried. The seventh case was at the same time, 7th month, the discharge was slight and was treated on the expectant plan. Eighth case. The diagnosis in this case lay between ruptured ectopic, or accidental haemorrhage, which latter it proved to be.

Dr. Ashton Fletcher opened the discussion. He said the cases reported by Dr. McIlwraith were very interesting and some of the causes were very rare. He could quite understand the reader of the paper being unable to find any reference to such causes in the literature of the subject as he had not been able to find any. He then divided the subject into two great classes: 1st, Accidental; 2nd, unavoidable. The accidental was open or concealed. The symptoms of the latter were those of sudden haemorrhage without flow. Placenta Praevia was divided according to the emplantation of the placenta into marginal and central. It occurred in the proportion of 1 to 6 in primipara to multipara. Among the causes assigned were the pregnancies following quickly upon abortion, and rapidity of child-bearing. It occurred usually from 7th month on, though the haemorrhage might be seen before that time. In diagnosis, he drew attention to the possibility of feeling the edge of the placenta, as a resisting band, low down on the uterus, the ease with which the foetal parts could be felt through the abdomen in the absence of the afterbirth, and the inability to feel them through the vagina. He described the Braxton-Hicks method of turning before the rupture of the membranes. He mentioned use of the mechanical means now at hand for plugging the os uteri, the application of a tight abdominal binder, and the utero-vaginal tampon for transportation of the patient to the hospital. He quoted the statistics of Hoffmeier and Behm of Berlin, 37 with 10 deaths, using the Braxton-Hicks method, for Hoffmeier; and 36, with no deaths, for Behm. Lormer reported 101 cases with 7 deaths, his own cases being 16 with 1 death. The advantages of the method are: 1st. It does away with the tampon and infection; 2nd. It allows early operation; 3rd. It arrests the haemorrhage; 4th. It gives time for the patient to rally and the cervix to dilate.

SIR JAMES GRANT, M.D, K.C.M.G., HONORED.

Honored by his Sovereign, honored by the leading societies of his profession, at home and abroad, honored time and again by his fellow citizen, Sir James Grant, M.D., K.C.M.G., was honored once again, this time by his fellow-practitioners of Ottawa and district. At a banquet held in the Russell House 22nd April, the Grand Old Man of the medical profession of Ottawa was made the recipient of a beautiful loving cup, chaste in design, and an engrossed address. The latter was expressive of the kindly feeling entertained by his fellow M.D.'s towards Sir James.

A double significance attached itself to the pleasant function. It marked the golden jubilee of the guest of the evening in his chosen profession. Sir James has been a resident of Ottawa and a practising physician within its gates for 49 of the 50 years which have passed since he secured his diploma.

It was a notable gathering, one that did honor to the distinguished guest. About seventy-five persons sat down to the banquet, at which Sheriff Sweetland, M.D., a former fellow-practitioner of Sir James Grant, presided. At his right sat the guest of the evening, and at his left Sir Frederick Borden, M.D., K.C.M.G.

After honoring the health of the King and the Governor-General, the chairman proposed the health of Sir James. Cheers and applause voiced the sentiments entertained. At this juncture, Dr. Cousens stepped forward and read the address. In part it ran as follows:

By the earnestness of devotion and skill which you have displayed in the performance of your professional duties, and by the geniality of disposition and the kindly regard you have shown your confreres in your professional intercourse with them you have acquired a most enviable reputation and have justly won their respect and esteem, and consequently we are proud to hail you as dean of the medical fraternity of the Capital of Canada."

The closing sentences contained a courteous reference to Lady Grant and wishes were expressed for the future health and happiness of Sir James and Lady Grant. The loving cup which was afterwards filled and drained with no fear of microbes, was suitably inscribed. It bore the crest of the Grant clan of Corrimony, of which Sir James is chieftain.

The recipient in rising to reply was greeted with renewed cheers. He spoke as follows:—

The progress and general advancement of medical and surgical science in the past half century is very remarkable. Over 100 years ago, Jenner announced the discovery of the prophylactic influence of vaccine, as the only sure and certain means of abolishing smallpox. For

years prior to this, the subject of practical anatomy was at a standstill for the want of proper material. Physiology was then purely experimental, while histology, justly interesting, and pathology were undefined. Practical medicine was very considerably in advance, owing to the clinical foresight of Lænnec of France, who, by auscultation and percussion, defined much previous obscurity in lung diseases. Peritonitis at that time was common and generally fatal. A major operation was then looked upon as equivalent to a death warrant. In the domain of surgery, Syme and Chopart accomplished much to advance this department of science, and the great Trousseau followed in the path of medicine, clearing up difficult problems, and advancing, all along the line, the subject of practical medicine.

Bright and Addison, co-workers in Grey's Hospital, London, added great light to our knowledge of albuminuria, "Bright's disease," and abnormal conditions of the supra-renal capsules, resulting in bronzing of the skin. What might justly be termed the great scientific advances of the past half century are the introduction of antitoxine for the cure of disease. The germ theory of disease, as announced by Pasteur, and subsequently followed up by Lister, constituting the very basis of antiseptic surgery, and the saving of millions of lives. What a glorious outcome for science. Following in quick succession, came the following discoveries: That malarial fever is no longer considered to result from marshy ground and decayed vegetable matter, but comes directly from the elaborated Laverans plasmodium, and communicated by the mosquito; also that tetanus is the result of certain germs in the soil added to the wounding nail, and thus producing the entire difficulty. Again, typhoid fever is no longer considered to be the result of ulceration of certain gland patches in the alimentary canal, as defined Sir Wm. Jenner. This entire subject has been carefully investigated by a Canadian graduate, Dr. Wm Osler, of Johns Hopkins University, and demonstrated, beyond doubt, to be the result of widely diversified systemic conditions. As a diagnostic indication, Widal's test and the late Dr. Johnson's are of great moment as to the blood condition during typhoid fever. Lastly, the discovery of x-rays and their practical application, in both surgery and medicine are of the greatest possible moment. Few eras in science can count greater magnates than those in our profession in the past 50 years.

In this period, every great centre of the world has been well and ably represented, and the names of the illustrious dead and living mark the paths alike in the great walks of medical and surgical science. In conclusion, gentlemen, let me again thank you for all your kindness and thoughtful consideration, and my earnest wish is that you may all be

spared many years of practical usefulness in the discharge of the honorable duties of our noble profession.

The toast "The Parliament of Canada" was proposed by Dr. R. W. Powell, in a patriotic vein. It was responded to by Sir Frederick Borden, Minister of Militia. Sir Frederick speaking for the medical profession of Canada, extended warm congratulations to Sir James Grant, Dr. McDonald, M.P., of Huron, also replied to the toast.

The other toasts were honored by the following speakers: "The Profession" proposed by Dr. M. O. Klotz, and responded to by Dr. Montizambert, Director of Public Health, and by Senator Sullivan, Kingston.

"The Hospitals," proposed by Dr. Cooke, and responded to by Drs. Chabot, Kidd, Hanna and Law.

"The Ladies," proposed by Dr. Coulter, Deputy Postmaster-General, and responded to by Drs. Royce and O'Brien.

"The Press," proposed by Dr. Aubry, of Hull, acknowledged by the representatives of the local papers.

The gathering broke up with the singing of the National Anthem.

The members of the dinner committee to whom credit is due for the success of the pleasant affair were: Drs. Cousens, Minnes, Troy, Kidd, Hanna, Kennedy, Klotz, Gibson, Aubry, Law, Brown and Chabot.

Amongst those present were Hon. Dr. M. Sullivan, Sir Wm. Hingston, M.D., Montreal; Dr. Montizambert, Director of Public Health; Dr. Rutherford, Sir F. W. Borden, M.D., Sheriff Sweetland, M.D., Dr. Coulter, Dr. V. H. Moore, Brockville; Drs. Johnston, P. McDonald, Argue, Baptie Basken, Bell, Brown, Chabot, Courtenay, Cousens, Chevrier, Cornu, Dowling, Bradley, Henderson, Gorrell, Prevost, A. T. Shillington, Cooke, Craig, Dewar, Echlin, Foxton, Gardner, Foster, Gibson, Grant, jr., Hanna, Horsey, Jamieson, Kennedy, Kidd, Kirby, M. O. Klotz, J. E. Klotz, O. Klotz, Lambert, Leggett, Law, McArthur, McElroy, McKinnon, Maybury, Minnes, O'Brien, McLaren, F. H. Powell, R. W. Powell, Robillard, Royce, Seager, J. W. Shillington, Small, Smith, Troy, Valade, Webster, Robertson, Robinson, Freeland and Vaux, of Archambault, Fontaine, Aubry and Lyster, of Hull; Boyle, of Casselman; Derby, of Plantagenet; Groves, of Carp; Mann, of Renfrew; McIntosh, of Apple Hill; Preston, of Carleton Place; Secard, of Buckingham.

Sir James Grant is of Scottish descent and was born in Inverness-shire, Scotland, in 1831. At an early age he was brought to Canada by his father, the late Dr. James Grant. He received his early education at Martintown, Glengarry county, proceeding afterwards to Queen's University, Kingston, where he took first honors in classics and mathe-

matics. He graduated M.D. at McGill University in 1854, having in the previous year been made a member of the College of Physicians and Surgeons of Lower Canada. After a year's practice in Glengarry, he took up residence in Ottawa and has remained in the Capital ever since. Since 1865 he has held the position of physician to the successive occupants of the vice-royal residence. Sir James has held several high offices in his profession, and has received high recognition of his services. Amongst other offices he has held are those of president of the Canadian Medical Association, president of the Ontario Medical Association and vice-president of the Medical Council of the World. He is a corresponding member of the Association de Benemerite Italiani of Palermo, and was awarded a gold medal by that body in recognition of his standing in medical science. He was created a K. C. M. G. by Queen Victoria in 1887. He has represented Ottawa city and Russell county in the House of Commons Sir James was one of the founders of St. Luke's hospital.

THE ONTARIO MEDICAL ASSOCIATION.

The meeting of the Ontario Medical Association this year promises to be one of great interest and importance. It would be a matter of much regret if the attendance, for any reason, should be small. The executive is putting forth every effort to furnish a high class and enjoyable meeting for the members of the Association. There will be the presidential address by Dr. Mitchell. Dr. Musser, of Philadelphia, will give an address on Medicine, and Dr. Cullen, of Baltimore, will give an address on the Treatment of Uterine Myomota. There will be a full discussion of the important subject of Arterio-sclerosis. Dr. H. B. Anderson, of Toronto, is to take up the Pathology; Dr. T. W. G. McKay, of Oshawa, the Cardiac Aspects; Dr. Hugh McCallum, of London, the Cerebral Aspects; Dr. John Caven, of Toronto, the Renal Aspects; and Dr. John L. Davison, of Toronto, the Therapeutics of Arterio-sclerosis. Dr. J. F. W. Ross, Toronto, will give a paper on Septic Peritonitis; Mr. W. R. Riddell, K.C., Toronto, will give an address on the Medical Witness under Cross-Examination; Dr. Adam Wright, Toronto, will give a paper on some obstetric subject; Dr. John Amyot, Toronto, one on the Diagnostic Value of Albumen in the Urine; Dr. A. Primrose, Toronto, is to take up the Treatment of Chronic Empyæma; Dr. G. A. Bingham, Toronto, is to give a paper on the Operative Treatment of Goitre; Dr. C. D. Pacfitt, Gravenhurst, will take up the Sanatorium Treatment of Tuberculosis; Dr. McConnell, Las Vegas, New

Mexico, is down for a paper on the Out-door Life Treatment; Dr. W. B. Thistle will report some cases; Dr. Rudolf, Toronto, will discuss the subject of the Lung Reflex; Dr. Goldsmith, Belleville, is to give a paper on Abscess of the Antrum; Dr. A. McPhedran, Toronto, is to give a paper on Exercise in the Treatment of Chronic Disease, and Dr. W. Oldright, will report some cases. There will be a smoker on the first evening, and a luncheon on the second day. With the promise of such an excellent meeting as the above will furnish it is to be hoped that this year's gathering will be the largest and most successful in the history of the Association. Let every one make a special effort to be present to participate in the enjoyments of the occasion and to lend pleasure to others by his own presence. Please remember the date, 16th, 17th and 18th June.

THE VALUE OF MEDICAL SOCIETIES.

Prof. Osler, in his address at the centennial celebration of the New Haven Medical Association, *Boston Medical and Surgical Journal*, March 12, among many of the good things, said:—

"The well-conducted medical society should represent a clearing house, in which every physician of the district would receive his intellectual rating, and in which he could put his professional assets and liabilities. We doctors do not 'take stock' often enough, and are very apt to carry on our shelves stale, out-of-date goods. The society helps to keep a man up to the times, and enables him to furnish his mental shop with the latest wares. Rightly used, it may be a touch-stone to which he can bring his experience to the test and save him from falling into the rut of a few sequences. It keeps the mind open and receptive, and counteracts that tendency to premature senility which is apt to overtake a man who lives in a routine way."

THE CANADIAN MEDICAL ASSOCIATION.

This association meets this year in London, on the 25th, 26th and 27th of August. Arrangements are progressing satisfactorily. The indications are that the meeting this year will be very successful.

UNIVERSITIES AND COLLEGES.

TRINITY MEDICAL COLLEGE EXAMINATIONS.

FINAL EXAMINATIONS:—Gold medal, H. E. Eaglesham; first silver medal, W. J. Perkins; second silver medal, B. F. Consler.

CERTIFICATES OF HONORS:—H. E. Eaglesham, W. J. Perkins, B. F. Consler, B. R. O'Reilly, W. T. Gemmell, E. C. Beer, C. H. Hair. A. G. Thompson, J. M. Baldwin, C. B. Stone, B. H. Hamilton, E. V. Smith, R A. M. Cook, C. E. Duggan. G. P. Campbell, W. E. Mason. D. Munro, J. A. Anderson, G. F. R. Richardson, W. W. Milburn, E. T. Curran, J. P. Cade, R. E. Loucks.

THIRD YEAR:—A. W. Caulfield, F. R. Fursey, J. McLellan, H. W. Coulter, R. A. Fraser, J. H. Kidd, R. S. Conboy, B. D. Munro, L. S. Pritchard, C. E. Dixon, J. W. Rowntree, A. C. C. Johnston, W. A. Lawrence, H. F. W. Vernon, A. H. Cook, J. M. Waters, N. G. Allin, W. A. Atkinson, J. F. Adamson, G. H. Boyce, H. A. Bray, J. A. Brown, A. V. Brown, D. G. Cameron, W. L. Chapman, L. Clarke, J. J. Cameron, G. M. Campbell, G. A. Durnan, J. Feltes, A. J. Fraleigh, (B.A.), E. R. Frankish, E. A. Hammond, S. J. Hillis, F. N. Hughes. H. E. Knoke, G. R. Luton, I. W. Lynn, D. Livingstone, S. N. Lyons, B. M. Lancaster, R. A. McLurg, W. E. McLean, W. E. McLaughlin, R. J. Manion, F. J Rundle, G. H. Richards, F. C. S. Wilson, B. C. Whyte, F. J. Dodd passed in pathology, thus completing the examination. W. J. Barber passed in medicine, surgery and pathology.

G. O'N. Ireland passes in medicine, obsterics, surgery, applied anatomy, medical jurisprudence and sanitary science.

FIRST YEAR.—The following members of the first year's class passed the first year's examination as follows:—W. J. Dobbie, B.A., first year's scholarship, $50, and certificate of honor; W. P. Kaufmann, sec- first year's scholarship, $30, and certificate of honor; V. A. Mason, third first year's scholarship, $20, and certificate of honor; N. J. Heatlie, R. W. Mann and C. W. Slemon, certificates of honor; while the following obtained first year standing:—D. E. Howes, E. J. Madden, J. Brigham, J. Spence, H. Galloway, R. Colevill, R. E. Wodehouse, W. G. McGregor, A. B. McLean, M. A. Kendrick, R. Stipe, F. A. Douglass, W. E. Bryans, J. Courtice, W. B. Cassels, G. G. Malcolm, R. Stobie, E. E. Bryans, F. G. Vernon, E. C. Taylor, E. S. Monkman, S. T. White, G. Hodgson, G. W. Houston, J. Rogers, A. Mitchell.

R. F. Armstrong passed in physiology and histology; D. A. Murray passed in anatomy, physiology and practical anatomy; F. B. Smyth passed in materia medica, anatomy, histology and practical anatomy; C. Langmaid passed in materia medica, anatomy, physiology, chemistry and physics and practical anatomy; A. W. Keane passed in materia medica and histology; W. A. Lewis passed in practical anatomy and was recommended, having been ill during the entire examination, to have it granted to him; A. B. McConnell passed in practical anatomy.

DISTINGUISHED MEDICAL GRADUATES OF THE UNIVERSITY OF TORONTO.

The following medical graduates of the University of Toronto have attained marked recognition in a number of universities and colleges in the United States:—

R. R. Bensley, B. A., M. B., Assistant Professor in Anatomy, University of Chicago, Chicago, Ill. R. A. Cohoe, B. A., M. B., Instructor in Anatomy, Cornell University, Ithaca. B. C. H. Harvey, B. A., M. B., Associate in Anatomy, University of Chicago, Chicago, Ill. V. E. Henderson, B. A., M. A., M. B., Assistant Demonstrator of Physiology, University of Pennsylvania, Pa. A. H. Montgomery, B. A., M. B., Demonstrator in Anatomy, Attending Surgeon, Cornell University Medical College, Cornell Dispensary, Ithaca, N.Y. J. B. MacCallum, B.A., M.D., Assistant Physiology, University of California. W. G. McCallum, B.A., M D., Associate Professor of Pathology, Johns Hopkins University, Baltimore, Md T. McCrae, B.A., M.B., M.R.C.P. (London), Associate in Medicine, Resident Physician, Johns Hopkins University, Johns Hopkins Hospital. L. F. Barker, M.B., Professor and Head of Department of Anatomy, University of Chicago. N. M. Harris, M.B., M.R.C.S., (Eng.), L.R.C.P. (London), Associate in Bacteriology, Johns Hopkins University, Baltimore, Md. T. B. Futcher, M.B., Associate Professor of Medicine, Johns Hopkins University, Baltimore, Md. N. B. Gwyn, M.B., Instructor in Medicine, University of Pennsylvania, Philadelphia, Pa. T. S. Cullen, M.B., Instructor in Gnæcology and Abdominal Surgery, Johns Hopkins University, Baltimore, Md. D. G. Revell, B.A., M.B., Instructor in Anatomy, University of Chicago.

MEDICAL GRADUATES WESTERN UNIVERSITY, LONDON.

The results of the examinations at the London Medical School were given out May 2nd. The past session has been eminently satisfactory and the number of students was the largest in the history of the college. Those who took the course came from all sections of the Province, and

a few from the United States. In the fourth year class the medals both went to Londoners, J. R. Armstrong being the winner of the gold medal, and S. F. Abbott the winner of the second highest prize in the gift of the college. Both medals are awarded on the marks obtained by students in their second, third and fourth years.

GRADUATES: J. R. Armstrong, London, S. F. Abbott, London; W. F. Babb, F. Campbell, Belmont; H. McLay, Aylmer; J. C. Elliott, London; W. Lenfestey, Strathroy; G. Byers, Nebraska; J. W. Gustin, London; C. Byers, Nebraska; W. Olmsted, London; P. McDonald, R. L. Keith, Kansas City; W. Gray, St. Thomas; C. A. Fisher, London; A. Voaden, St. Thomas; H. Gordon, London; J. Downing, London.

MEDALISTS: Gold Medalist, J. R. Armstrong, London. Silver Medalist, S. F. Abbott, London.

SCHOLARSHIPS: Third year scholarship, A. J. Manard, Belle River. Second year scholarship, L. G. Rowntree, London. First year scholarship, Norman Beal, London.

HONORS: Fourth year—Armstrong, Abbott, Babb, Campbell. Third year—Manard, Spence, Turner, Wright, Anderson. Second year—Rowntree, Watson, Beer, Glen, Shoebotham, Bucke, Hickson. First year — Beal, Trottier, Hamilton, Holmes, Grover, Stewart, Reid, McQuaide.

DOMINION MEDICAL REGISTRATION.

The medical faculty of the University of Toronto, in the following memorandum, desire to call attention to some recent developments in the Dominion medical registration, which may, if allowed to proceed further without opposition, result in prejudicing the course of medical education in this Province.

As is well known, Dr. Roddick, after several years of effort, succeeded in persuading the Dominion Parliament in passing an act providing for the establishment of a Dominion Medical Council, empowered to hold examinations in medicine and to give licenses to practice, which shall be valid in any portion of the Dominion. This council can be constituted only when all the Provinces of Canada have accepted the provisions of the act.

The act was passed in 1902, and since then all the Provinces, with the exception of Quebec, have expressed their acceptance of it, and have taken the steps necessary to give their acceptance effect. In the case of Quebec, a bill providing for the adoption of the act was defeated in the Legislature on the 15th inst, and the explanation advanced for this action is that the medical profession and one of the universities of

that Province are unable to accept the act as it stands, and that this has influenced the attitude of the Legislative Assembly.

It will be recalled that before the act received the sanction of Parliament there were several clauses in it in regard to which considerable discussion obtained on the part of the representatives of the various institutions interested in medical education. One of these was that dealing with the privileges to be accorded to the holders of university degrees. According to sections 3,972 and 3,977 of the revised statutes, rules and regulations of the College of Physicians and Surgeons of the Province of Quebec, graduates in medicine of Laval University, McGill University, and the University of Bishop's College, who have passed four years in the study of medicine are entitled, without further examination as to their knowledge and skill, to the license to practice medicine in the Province of Quebec, and graduates in medicine of the University of Manitoba are given a like standing in that Province, but all who wish to obtain a license to practice medicine in Ontario must undergo the examinations conducted under the authority of the Medical Council of this Province, whether they are graduates of a university or not. In order to prevent unjust discrimination between the universities of Quebec on the one hand and those of Ontario on the other, the representatives of the latter obtained the insertion in the act of clause 3, sub-section 1, section 10, which reads as follows:—

"The possession of a Canadian university degree alone, or of a certificate of Provincial registration founded on such possession obtained subsequent to the date when this act shall become operative, as provided in sub-section 3 of section 6 hereof, shall not entitle the possessor thereof to be registered under this act."

The representatives of the Ontario universities were told when they suggested this clause that it would make it impossible for the Province of Quebec to accept this act, and interest is given to this statement by the fact that it is this clause which has been in a large part the cause of the refusal of that Province to pass the legislation required to make the act operative.

One of the recent developments referred to is the agitation which has arisen in the medical profession in the lower Province for amendments to the act. The question was brought before the Montreal Medical Society several months ago, and on March 31st last the report from the special committee appointed to deal with the subject was laid before the society, and, after some discussion, adopted. A portion of the report was published in the Montreal press of the following day, and it would appear from this that interprovincial registration, without the intervention of a Dominion Medical Council, was favored as the

proper solution, but if such reciprocity between the Provinces in the matter of medical registration could not be brought about Federal legislation embodying amendment to the Roddick Act should be obtained.

"We submit," says the report, "that the bill is neither desirable nor possible in its present form. We submit, however, that the Roddick bill, as here amended, will meet the desired results and safeguard the general and special interests of the Province in matters pertaining to superior and secondary education."

The following are the amendments suggested to the measure:—

"(1) The Province will name a certain number of representatives, selected either amongst the doctors, the members of the College of Physicians, or from the duly recognized universities.

"(2) These members, to the number of forty, more or less, will constitute a Federal board, which will have power to order an examination, and to deliver a Federal license, which will be recognized by each of the Provinces, on payment by the candidate of the Provincial local license.

"(3) Only those will be admitted to pass their examinations who are licensed doctors in one of the Provinces of the Dominion, or a licenciate of a foreign university, duly recognized by the laws of their respective countries.

"(4) The medical students, duly inscribed by virtue of Provincial laws at the moment the law comes into force, cannot be questioned upon other matters than those taught them in the school or universities prior to this law."

All the amendments suggested deal with important sections of the Act on the basis of which the Roddick bill before it became law, was accepted in this Province, and it would appear, therefore, as if the whole question is to be again opened and brought before the various bodies interested. This perhaps is an advantage, because, as the Act at present stands, it is inoperative so long as Quebec objects to it, and a renewal of the discussion may in the end lead to its acceptance in quite its present form on the part of the Province, or prepare the way for bringing it into operation so far as the other Provinces alone are concerned. As pointed out, the great difficulty on the part of Quebec is the desire of its universities, or at least one of them, to extend over the whole Dominion its prerogatives, which at present are confined to that Province. In other words, they would give the holder of a Quebec university degree in medicine the right, without further examination, to practice anywhere in the Dominion. That is the meaning of the proposal regarding inter-

provincial registration without the constitution of a Dominion Medical Council, and to state it in this way is to dispose of it.

It is, however, in regard to the third of the suggested amendments that particular attention is desired. It would provide that a graduate in medicine of any of the three universities of Quebec would, after registration in the College of Physicians and Surgeons of that Province, be entitled to proceed at once to take the examinations of the Dominion Medical Council, while graduates in medicine of the other universities, that of Manitoba excepted, would only be allowed to take the same examinations after they had passed the examinations of a Provincial Medical Council. The reason for this proposal is that furnished in a leading article, apparently inspired, in a Montreal newspaper of April 1st, which states that this suggested amendment aims at preserving to the universities of Quebec the privileges they now enjoy, and of which the Roddick Act would deprive them.

If this amendment should be adopted, it would impose on every medical student in a university of Ontario three series of examinations, one for his degree, one for his Provincial license, and the third for that of the Dominion; while the student of Laval, McGill or Bishop's College would have to undergo two only, the first and the last. This would involve a very serious discrimination in favor of the Quebec universities, and it would result in compelling the student of an Ontario university to spend about two months out of every session of eight months in undergoing medical examinations. To escape the burden and the number of these, all in this Province proposing to study medicine would go to the medical teaching institutions of Quebec. This would not, it is certain, make for an elevation of the medical standard.

It is obvious, therefore, that the suggested amendment cannot be accepted in Ontario. This being so, what can be done to bring the Act into operation?

It is possible that after further agitation the representatives of the profession in Quebec may be led to see that the Act, as it now stands, offers fewer difficulties for all the Provinces than it would with amendments such as those suggested, but, failing that, there are two other solutions, one of which would bring the Roddick Act into operation, but not so far as Quebec is concerned, the universities and profession of that Province, in that case, having no representation in this Council under the Act. The other, and perhaps the more practicable, solution would provide that all students of the universities of Quebec, as demanded by the Montreal Medical Society, should be required to obtain the license to practice medicine in that Province before being allowed to present themselves for the examinations of the Dominion Medical Council, but that

those of the universities of the other Provinces should be permitted to proceed directly to the same examinations, while, further, all students, after passing the required Dominion examination, should be allowed the license to practice medicine in any Province on payment of the Provincial registration fees.

The first solution would have one disadvantage. It would not bring about reciprocity in medical registration with the other parts of the empire, but this would be greatly out-weighed by the advantage of having one licensing body only for all the Provinces except Quebec.

The second solution offered would preserve for the universities of Quebec their privileges in that Province, while it would not work such injury to the universities of Ontario as the alteration of the Roddick Act proposed by the Montreal Medical Society would inflict.

QUEEN'S MEDICAL FACULTY.

Queen's University Board of Trustees intends to place the Medical College affairs on a more regular basis. For years past the medical department has been controlled almost wholly by that faculty, which collected and disbursed its own fees, now amounting to close on $20,000. It is now proposed to transfer all clerical work to the university registrar's office, and the finances to that of the treasurer. The salaries of the medical professional staff will also be re arranged, as it is claimed that some of the doctors are not being paid in proportion to their positions and the work they do. The trustees will make a complete readjustment, and also make some changes in and additions to the staff.

GOVERNMENT GRANTS TO THE UNIVERSITY OF TORONTO.

The Provincial grants for higher education for 1903, as brought down in the estimates this week, with the figures of expenditure last year, are as follows:

	1902.	1903.
University College—Ladies Department	$ 550 00	$ 600 00
Agricultural examination—University Degree B.S.A.	425 00	425 00
Printing University, Historical, Economic and other papers	600 00	600 00
Statutory Grant to University	7,000 00	7,000 00
Grant from the sale of Lands	2,874 87	2,014 76
University of Toronto	40,444 75	36,334 00
University of Toronto, estimated deficit		18,110 48
School of Mining, Kingston (transferred from charges Crown Lands)	23,500 00	23,500 00
	$75,394 62	$88,584 27

BISHOP'S MEDICAL COLLEGE GRADUATES.

The following gentlemen have graduated at Bishop's Medical College and at the convocation received the degrees M.D., C.M.: J. Frankum, W. W. Kelly, F. Richards, W. H. White, D. W. Morrison.

THE CANADA LANCET

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EDITORIAL.

THE MEDICAL COUNCIL MEETING.

In a few days the annual meeting of the Medical Council of Ontario will take place. Among other matters that will be up for discussion the curriculum of studies will no doubt occupy a prominent place. Already THE CANADA LANCET has pointed out the need for very decided reforms in the curriculum. So far it is not known in what direction the council purposes introducing changes.

There should, however, be no relaxation of the standard. The full five years' course should be maintained. THE CANADA LANCET has already expressed the opinion that there should be annual examinations. A definite amount of work should be assigned for each year. At the end of each session the student should be subjected to a thorough examination on the work of the year. If he does not know his work, the sooner he finds it out the better. A failure in his first or second year will either make a good student of him, or, in many cases, drive him to some other calling, much to his own advantage and no loss to the profession.

The curriculum of studies should be so arranged that the student is not repeating the same ground for two or more sessions. This can be accomplished by the system of annual examinations. These examinations ought to be of a most searching character, and be written, oral, practical and clinical. In fact, every means should be exhausted to find out whether the student knows his work or not. This is good for the student, and is fair to the profession and the public. In this matter the Medical Council has a great trust reposed in it, and much is expected of it.

Perhaps the fifth year is the one over which there may be most discussion. At present, the fifth year is not accomplishing all that was expected of it. It was intended that the student should put in his fifth year in practical work in a hospital, at a dispensary, or with a doctor. This was an attempt to introduce the apprenticeship system in a modified form. It was felt that it was hardly the thing to grant the

license to a student, who perhaps had never seen a case of measles or chickenpox.

If the fifth year could be made a truly practical year, it would be an excellent thing. As it is, the fifth year does not yield as good results as was intended by those who advocated it. This is not the fault of a fifth year, but in the way in which it is too often put in by the student. He arranges to attend some hospital, or dispensary, or to put in his time with a doctor. But the actual time spent in practical work and seeing of cases is very nominal. Strict regulations should be enforced on this matter, and the Council should be perfectly satisfied with all the certificates submitted by students for this practical experience. We think the Council ought to insist upon nine months of the fifth year being spent in honest, practical work. To aid in this, a form of certificate might be prepared by the Council, which would be supplied to the students, and on which they would be required to submit their evidences of practical work. The hospital or dispensary officials, or the doctors with whom they studied, would have to fill in the information called for in the blank form of certificate. The Council should reserve the right to enquire into the genuineness of any or all of these certificates.

One thing is certain, the fifth year should not become a year for lectures merely. When the Universities confer their degrees they are through with the students. They have no further legal right to impose lectures upon them. If they wish to give lectures during part of the fifth session, then they ought to withhold their degrees until the end of the fifth year. Once a student receives his M.B., or M.D., he parts company with his University, and is in future wholly in the hands of the Medical Council. We do not object to the Universities imposing a five years' course, but it should not be done through the medium of the Council, by the latter body so amending the curriculum as to enable the Colleges to demand attendance upon lectures after the students have obtained their degrees. In the matter of the fifth year, the Council must act on its own responsibility and for the best interests of the student and the profession; and we believe that this will be best attained by a fifth year wholly devoted to practical and clinical work; but the Council owes it as a duty to itself and its constituents that this is not performed in any half-hearted manner. The Council has the power to insist on a thorough performance of a practical fifth year. If this is done, the fifth year will be the most valuable part of the student's course.

THE DOMINION REGISTRATION BILL.

In another portion of this issue we publish the findings of the Medical Faculty of the University of Toronto on the important matter of Dr. Roddick's bill.

We regret very much that the Province of Quebec has not seen its way clear to the adoption of the Roddick bill. We think it furnishes a very satisfactory solution to the whole question of the establishment of a national profession.

The great difficulty in the way so far has been the unwillingness in some quarters to give a little. There seems no lack of a desire to take; but an absence of that other and necessary spirit, to give a little.

If the Province of Quebec is not willing to accept the Roddick bill the other provinces could, as already suggested in THE CANADA LANCET, seek such amendments to the bill as would enable them to form a common standard, leaving the Province of Quebec out, until it saw its way to come in with the other provinces.

Or the Province of Quebec might retain its present Board of Governors, and require all who sought the right to practice in Quebec to take the Provincial License or a qualification acceptable to the Quebec Council. If any of the graduates of the Universities in the Province of Quebec desired a qualification, covering the wider field of the Dominion, they could present themselves before the examining body, established under the Roddick bill. This would preserve to the Province of Quebec its local medical standard, and still place within the reach of its practitioners the privilege of practicing in the other provinces.

Surely there is some way out of this difficulty! One would think the Universities and Medical Schools of the Province of Quebec would have hastened to support this measure. Indeed, one would have thought that every medical man in the entire Province of Quebec would have taken this course. They have everything to gain, and nothing to lose.

It is quite true that the graduates of McGill, Laval and Bishops Universities can register and practice in Quebec without further examination. But this is far more than off-set by the fact that the graduates of these universities must pass the Provincial examinations of the other provinces before they can practice outside of the Province of Quebec. By passing the examination provided under the Roddick bill they could locate in any province in the Dominion.

We sincerely hope that the Province of Quebec may yet see its way clear to the acceptance of the bill creating a Dominion standard. If this should not be possible, then let Quebec maintain its present provincial system, and let all the other provinces accept the Act, leaving Que-

bec out altogether, having no representatives on the Dominion Council. This would require an amendment to the bill, but we feel confident that the Federal Parliament would grant it.

It seems quite clear that the universities in the Province of Quebec would be greatly the gainers by the Roddick bill becoming law. McGill University and the University of Bishop's College, whose students are English-speaking, would have the entire Dominion opened up to them by passing the examination of the Dominion Council. The students of Laval Medical College, almost wholly French-speaking, would still retain the Province of Quebec as their main field, but would also gain access to other French-speaking settlements in other portions of the Dominion. To do this now, they must pass the Provincial examination of these districts. This is just as difficult as it would be to pass the examination of the Dominion Council, and not so satisfactory in its results.

From the attitude of the Board of Governors of the Quebec Medical Council, and the recent action of the Quebec Legislature, we fear there is little hope of that Province coming into the arrangement with the other Provinces. The solution appears, therefore, to be that the members of the Federal Parliament from all the other Provinces of the Dominion should amend the Act to permit its coming into operation without the co-operation of Quebec; but to permit any student or practitioner of Quebec to avail himself of the privileges of the bill if he so desires. This should be granted, as it takes nothing from Quebec, and concedes a certain privilege.

THE BIRTH, DEATH AND MARRIAGE RATES IN ONTARIO.

From the report relating to the registration of births, deaths and marriages in the Province of Ontario we gather some very important facts. The population of the Province is given at 2,184,144. The total number of births registered in 1901 was 46,061; the total number of marriages for the same year was 18,035; and the total number of deaths was 29,608. It is claimed that the returns must be regarded as practically complete.

The birth rate for the Province is given as 21.1 per 1,000 of the population. The marriage rate is stated at 8 2 per 1,000, and the death rate at 13.6 per 1,000. Roughly speaking, taking the entire population of a community of all ages and dividing 1,000 by the average death rate per 1,000, the result is the expectation of life for those born in such a community. If this test be applied to Ontario it will be found that the expectancy of life to those born in the Province is about 73 years. This is altogether too high, and could not be accounted for by the fact that

the country is a young one, and that the movement of the population is affected by immigration and emigration to and from the Province.

The accurate method of finding the expectation of life in any country is to divide the number representing all living older than one year by the number representing those living one year and under. The number born in Ontario is 46,061, of whom 6,543 are stated to have died in their first year. This would leave 39,543 alive in the first year. The total number living in the Province, after deducting the deaths and those one year old would be 2,093,540. This would give an, expectancy of life for the Province of about 52 years. In Great Britain it is about 50; in Germany, 42; in France, 46; in Austria, 33; in Italy, 40; and in the United States about 51. It would, therefore, appear by this test that the death rate for Ontario is set down too low, and the returns cannot be complete.

The following table will go to show that the birth, death and marriage rates of the leading countries of the world lead us to expect much higher rates in these than we find recorded in the Ontario reports. The table is based on each 1000 of the population, and is as follows:—

—	Births.	Deaths.	Marriages.
England and Wales	30.5	19.2	15.2
Ireland	22.9	18.5	9.5
Scotland	30 4	19 0	13.2
Sweden	27.4	16 2	11.4
Norway	30.4	16 3	12.9
Denmark	30.6	17.4	13.8
Finland	31.5	21.6	12.9
Germany	35 9	24.6	15.8
Austria	37.1	27.2	16.7
Hungary	41 6	31.8	18.6
Holland	32.8	19.2	14.5
Belgium	29.2	20.3	15 3
France	22.3	21 6	14 9
Italy	34.3	25.3	14.9
Japan	31.3	20.4	11.0
Portugal	29 5	21.1	7.0
Russia	44.0	29 8	15 0
Spain	35.3	29.6	9.0
Switzerland	29.6	18.2	8.5
United States	26.7	18.3	13.0
Ontario	21.1	13 6	8.2

It should be remarked that the marriage returns for Spain, Portugal, Switzerland, Japan and the United States are very incomplete, and this may account for the apparent low marriage rates in these countries. From the above wide collection of data, it would appear that Ontario strikes too low an average to be correct. It behooves the authorities to put forth renewed efforts to render these statistics more trustworthy. Much has already been done, but there remains a good deal more to do do before the results can be regarded as satisfactory.

A LAYMAN'S OPINION OF VACCINATION.

Flaneur, in a recent issue of the *Mail and Empire* writes as follows on the agitation against vaccination:—

"Lately I have received several letters from different parts of the country written by anti-vaccinationists. These propagandists are few numerically, but active and persistent. The letters are not published in this department, because, in my opinion, it would be waste of space. If the writers like to address their communications to the editor of this paper they may or may not receive different treatment. The letters I have received on this subject, while of course they are not, might all be written by the same individual; the arguments are so old, so similar, and so familiar. On this subject I have no opinion of my own, but accept the views of those whom I think ought to know. That the pick of the medical profession all over the world endorses vaccination is quite enough for me, and I am not so conceitedly silly as to pit my mere opinion against the special knowledge and training of qualified men. A supposed point made by nearly all my correspondents is that the medical profession advise vaccination because it pays them to do so. Literally, this means that medical men in the mass deliberately spread disease and commit murder for gain! This, I brand as a gross and vulgar insult to as honorable a body of painstaking professional men as can be found in any civilized community.

GERMAN DOCTORS TO GO ON STRIKE.

The medical periodicals announce that physicians throughout Germany who are employed by sick fund societies will strike on July 1st. They complain of the insufficiency of their fees, which, under the Invalids' Insurance Law, are only about four cents for each visit. The medical profession is overcrowded, and a great majority of practitioners are obliged so accept contracts from sick fund societies, the revenue of which is provided by compulsory contributions from employers and employes. The doctors at Gera and Mulhausen have already successfully struck, and the managers of the sick funds at those places are compelled to pay the ordinary fees of independent physicians. The National Physicians' League, which supported the strike at these towns, will engineer the general strike. The demands are not yet formulated definitely, but they include the appointment of an impartial committee to fix fees in accordance with the conditions existing in various localities. The physicians also demand that the patients, instead of the sick fund managers, be allowed to choose their physicians. There is a bill now before the Reichstag dealing with the question, but it does not satisfy the physicians.

OBITUARY.

R. B. COTTON, M.D.

Dr. R. B. Cotton, of Regina, died 6th May, of pneumonia. He was 48 years of age, and came to Regina from Mount Forest, Ont., in 1882. He was a brother of Dr. J. M. Cotton of Toronto.

ALLAN JACK, M.D.

Dr. I. Allan Jack, former recorder of St. John, N.B., died April 5th, aged 60. He had been long confined to his house, but until eight years ago was active in his profession. He was a graduate of Kings College, Windsor.

ROBERT ADDINGTON, M.D.

Dr. Robert Addington, died at Brookfield, Colchester County, April 13, aged about eighty years. He practiced medicine in Shubenacadie and Brookfield for many years. He was a widower and leaves three children—Dr. Seaman Addington, at Upper Stewiacke, Miss Addington and Robert Addington, both of Brookfield. The deceased was one of the best known physicians of Nova Scotia.

JAMES G. ATKINSON, M.D.

Dr. James Gordon Atkinson died at his home, Bristol, N.B., on Easter Sunday morning, at the age of 55 years, after an illness of some months. Dr. Atkinson was born at Baie Verte, Westmorland county, and taught school for a number of years, before studying medicine. He then located himself in Charlotte County where he took a prominent part in local politics, and sat at the Council Board for several terms. After the death of his brother, the late Dr. M. C. Atkinson, M.P.P., about seven years ago he moved to Bristol, and soon established a good practice, and for two years represented the Parish of Kent at the municipal council. He leaves a wife, who is an invalid, and one son, R. B. Atkinson, and one daughter, Mrs. Sankey Rogers.

SAMUEL BRIDGLAND, M.D., M.P.P.

Dr. Samuel Bridgland, one of the most popular members of the Ontario Legislature, died 6th May, at his home in Bracebridge of Bright's disease, after an illness of six months. Notwithstanding his failing health he was in attendance at the Legislature this session up to the time of the

adjournment in March. He was far from fit, however. He took alarmingly ill ten days ago, and lay in a critical condition for some days. He was apparently improving, however, and Saturday, 2nd May, was able to go home to Bracebridge. Dr. Bridgland was born in 1847, in Toronto. He later removed to Newmarket, and it was at the Grammar School of the then capital of North York that he was educated. He studied medicine at Jefferson Medical College, Philadelphia, and graduated from Queen's University, Kingston, in 1870. He at once settled in Bracebridge, where, until his death, he continued to practice his profession, and was for many years one of the most widely known and busiest physicians in the north country. A man of broad sympathies and kindly manner he was everywhere beloved and universally popular. Three years after settling at Bracebridge Dr. Bridgland married Miss Emma Fraser, a daughter of Mr. Henry Fraser of Barrie, and leaves besides his widow, three daughters, all of whom are residing at home. Dr. Bridgland was a prominent politician, and at the general election of 1898 was elected to the Legislature, and was again returned by a majority of 88 at the last election The member for Muskoka was extremely popular because of his quiet, genial disposition. Dr. Bridgland was a member of the Church of England, and a prominent Free Mason, Past Master of the Muskoka Lodge. He was known also as a curler, and the Bridgland Cup has for years been an annual prize among the curlers of the north.

EMILY HOWARD JENNINGS STOWE, M.D., M. C. & S O.

In the death of Dr. Emily Howard Jennings Stowe, which took place on 30th April, there has passed away one to whom not only Toronto but the Dominion at large owes much; for it is largely through her efforts that Canadian women enjoy many of the privileges they to-day accept so calmly as their rights. The world has many who see its evils, but few with the courage and perserverance to stand adverse criticism and ignorant prejudice until wrongs are righted. Dr. Stowe was a pioneer in the realm of thought, and it was only after much effort and many discouragements that she obtained in the recognition of the rights of her own sex a reward for her self-denial and her endurance.

Dr. Stowe's advanced ideas and her strong literary and artistic ability were in a measure inherited, her father being Solomon Jennings, of Vermont, and her mother, Hanna Howard, a member of an old Rhode Island family, of noted literary ability. Dr. Stowe's parents came to Canada, settling in Norwich, and here Dr. Stowe was born. She received her early education from her mother, who was herself a talented

woman, and at the early age of 15 was qualified to teach a small school near Norwich. Thence she steadily advanced until she became principal of a school in Brantford, being the first woman to hold the position of principal. This was the first of her many successes as a pioneer worker. From this position Miss Jennings married Mr. John Stowe, an English gentleman. In 1865, after the birth of her three children, Mrs. Stowe decided to study medicine, something unheard of in those days. She applied to the University of Toronto for permission to attend the lectures. She received the reply that, fearing the admission of women would render the enforcement of discipline very difficult, her request would have to be refused. Mrs. Stowe's reply proved to be prophetic: "Your Senate may refuse me entrance, but the time will come when you will be compelled to open your doors to women students." Mrs. Stowe went to New York, where only four years before the University of New York had been opened to women students. She graduated in 1868, and returned to Canada to take up her work. The fees were then pitifully small, and the prejudice very bitter, but with courage undaunted and strength truly marvelous, Dr. Stowe cared for her small family, her husband being much of the time an invalid, and attended to her practice. Dr. Stowe was truly a womanly woman, if the word be taken in its broadest sense, namely, one who is gentle and desirous of helping others; but she was also a mother in the full depth and breadth of this word.

In an endeavor to educate the public mind to somewhat broader ideas along all reform lines, she delivered a series of lectures in Toronto, London, Woodstock and other Canadian towns. In 1877 she organized a society, which, in deference to popular prejudice, was called "the Women's Literary Club," but which in time, as the public mind become educated along the lines of women's rights, appeared under its true title as "The Toronto Women's Enfranchisement Club." In 1882, the ground having been prepared by Dr. Stowe and others, through the instrumentality of this club, the Local Legislature was petitioned that the privileges of the Toronto Universities be extended to women, and in the session of 1884 and 1885 this was finally accomplished, Dr. Stowe having the proud satisfaction of seeing her daughter the first woman to take a degree in medicine in Canada.

As the pioneer woman suffragist, Dr. Stowe bore the brunt of much adverse criticism, but in sanitary arrangements in the stores and factories, seats for the shop girls, municipal suffrage, and an alleviation of the evils of the sweat shop, we to-day are reaping the benefits of reforms this true lover of humanity was chiefly instrumental in bringing about.

In 1893, when she met with an accident, Dr. Stowe had practically given up general practice, which had grown until at that time she had

the gratification of knowing it rivalled those of some of the most prominent physicians of the opposite sex. Most of her time since then had been spent at her island home in Lake St. Joseph, Muskoka, where a practically barren island has been changed under her skilful supervision to a veritable garden, where fruit and flowers are found in abundance. This had of late years been her hobby, and she had just before her last illness made all preparations to spend another summer in the home of her own planning, when almost without warning she was called away.

Not only to a family circle, but to the women of Canada, will the death of Dr. Stowe be felt as an irreparable loss, for she it was who laid the corner-stone, who did the hard, and oftimes seemingly unappreciated pioneer work for the position Canadian women hold to-day. Women who now choose the medical profession in Canada and find every facility provided for their various courses of study can never know how deeply they are indebted to the pioneer who opened the path they so easily follow. Intellectual courage, clear conviction, steady, unswerving purpose, a composed, philosophic mind, were the qualities that won success in a long struggle against the mental inertia and reaction that would deny to women the right to study and practice medicine. She recognized prejudice and reactionary views as natural weakness, obstacles to be expected and to be removed from the path of progress. Her faith in the final triumph of enlightened views regarding woman's position in society was never shaken. The opening of Toronto University to women and the extension of the franchise in Ontario are among the results largely due to her persistent efforts.

BOOK REVIEWS.

SURGICAL ANATOMY

A Treatise on Human Anatomy, in its Application to the Practice of Medicine and Surgery. By John B. Deaver, M. D. Surgen-in-Chief to the German Hospital, Philadelphia. In three Volumes. Illustrated by about 400 plates, nearly all drawn for this work from original dis-sections. Vol. II., Neck ; Mouth ; Pharynx ; Larynx ; Nose ; Orbit ; Eyeball ; Organ of Hearing ; Brain ; Male Perinor, Farnal Perineum. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Toronto : Messrs. Chandler and Massey. Price $7.00 per Vol. in cloth. $8.00 in leather.

WE have already reviewed the first volume of this superb work on surgical and medical anatomy. What was then said of the first volume holds good for the second volume, with the exception that the more one peruses these volumes, the more appreciation of them grows. It would

be difficult indeed to conceive how a more perfect work could have been produced. The whole subject of anatomy is taken up in such an original and unique manner that what is often considered a dry or uninteresting subject becomes a most fascinating study. We again venture the opinion that no one will ever regret the purchase of this work.

REGIONAL MINOR SURGERY.

REGIONAL Minor Surgery. By George Gray Van Schaick, M. D., Attending Surgeon French Hospital, N. Y., etc., etc. Bound in cloth. Heavy book paper, 226 pages. Profusely illustrated. Price $1.50. International Journal of Surgery Co. N. Y.

THIS work occupies a unique position. Although devoted to minor surgical technics, the same amount of care has been bestowed upon the treatment of each individual condition that it is in text-books accorded only to subjects of major surgery. The aim throughout has been to provide the general practitioner with a book that will afford him such practical information as he can utilize in his routine surgical work. No space has been taken up by theoretical discussions, each subject being treated in a clear and concise manner, yet omitting no detail of the least importance. While in many surgical affections a number of methods are applicable, the writer has selected only those which, in an extensive experience of nearly twenty years in hospital and private practice, have proved most satisfactory. The book is profusely illustrated with original sketches.

WOOD'S REFERENCE HAND-BOOK.

A Reference Hand-book of the Medical Sciences Embracing the entire range of Scientific and Practical Medicine and Allied Science by various writers. A new Edition, completely revised and rewritten. Edited by Albert H. Buck, M.D. New York City. Vol. IV. Illustrated by Chromolithographs and eight hundred and fifty-nine half-tone and wood engravings. New York: William Wood & Co. 1902-Price per Volume $7.00.

THE present volume contains 875 pages, and covers subjects from "Ergot" to "Infiltrations" contributed by a staff of about 115 able writers. As already mentioned in the Canada Lancet in reviewing previous volumes, the press work, binding and illustrations are all that could be desired. These volumes make a complete liabrary, covering the entire field of medical and allied sciences. Many of the article have been carefully examined, and invariably found to have been well written and thoroughly up-to-date in their matter. Grea tpraise is due both the Editor and the Publishers for the high standard of this work.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS.

By Roberts Bartholow, M.A., M.D., LL,D., Professor Emeritus of Materia Medica, General Therapeutics and Hygiene, in the Jefferson Medical College of Philadelphia; Formerly Professor of Materia Medica and Therapeutics and of the Practice of Medicine in the Medical College of Ohio, Etc., Etc. Eleventh edition, revised and enlarged. New York and London: D. Appleton & Company. Toronto: G. N. Morang & Company.

The preface to the first edition was dated at Cincinnati, Ohio, June, 1876. The present, eleventh edition, is dated at Philadelphia, Pa., 1903. For twenty-seven years this work has been before the medical profession, and has been read by thousands of students, who have owed to it their initiation into the uses of drugs in the treatment of disease. In the text-book of Professor Bartholow, these students had a sure guide. It is a common experience to meet with those who say that in the practice of medicine and in therapeutics they read "Bartholow," and there need be no apology for making such a statement. To learn with what care the present work has been kept up to date, one needs only look through the first edition of twenty-seven years ago. The first part of the book treats of the "modes in which medicines are introduced into the organism." In this portion of the work there is much excellent advice on the subjects of absorption through the skin, the mucous membranes, by subcutaneous injections, and by the veins. The second part takes up "the actions and uses of remedial agents." This portion of the book is divided into systemic remedies, and topical remedies. The book closes with a very complete clinical index of diseases and the remedies of most use in their treatment The various drugs are described under the headings of preparations, antagonists, and incompatibles, synergists, physiological actions, therapy, local uses when such belong to the drug, and toxicology. The information furnished is full, explicit, and reliable in every instance. The work is, as the author states in the preface, "a store-house of facts relating to materia medica and therapeutics." Dr. Bartholow is an experienced teacher, knowing what is most required; and he has a good choice of expression. The work, therefore, conforms to the definition of a good book by the great philosopher, Kant, that it should be excellent, both in matter and form. This we can cordially say of the present edition; and wish for it, what it deserves, many readers. The publishers have done their part well. The book consists of nearly nine hundred pages. It is well printed on very fine paper and attractively bound. In these respects the publishers have aided very decidedly the distinguished author, and have added greatly to the comfort and pleasure of the reader.