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## EDITORIAL

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SILAS WEIR MITCHELL.

In the passing of this distinguished member of the medical profession, science and letters have lost a noted disciple. He occupied a position somewhat similar to that of Oliver W. Holmes. Both made their mark, a lasting one, in the history of medicine and in the world of letters. Dr. Mitchell attained the goodly age of 84, and he used his many years to advantage.

When Dr. Mitchell was a fairly young man he showed a collection of his verses to Dr. Holmes, who told him to keep them by him for forty years, and after that time to publish them if he thought they were worthy of seeing the light. Dr. Mitchell did publish them, many of them after mature years of thought. Dr. Holmes also advised Dr. Mitchell to adhere closely to medicine and not to give much of his time to the writing of articles and books on general literature.

His grandfather was Dr. Alexander Mitchell, of Virginia, and his father was Dr. Kearsley Mitchell, of Philadelphia. When Dr. Weir Mitchell graduated from Jefferson Medical College he settled in Philadelphia and devoted himself to his work with marked energy. He did some original work on snake venom that remains as a standard authority to this day. In 1862 he began his work on the rest cure, and wrote on "Fat and Blood, and How to Make Them." This led him to study nervous disease, upon which he became a world-wide authority.

About 1880 he began to publish works on fiction, and from that time onward gave to the public a number of very attractive stories, such as "Hugh Wynne," "The Autobiography of a Quack," "The Adventures of Francois," "Dr. North and His Friends," "When All the Woods are Green," etc. But Dr. Mitchell was also the author of some really good poetry, and perhaps none of his pieces is finer than the one on the death of Dr. W. H. Drummond, the poet of the French Habitant.

Dr. Weir Mitchell was the bearer of many honorary degrees, among

them being one conferred by the University of Toronto in 1906. Italy, Germany, France and Britain recognized his eminence as a neurologist, and essays of his upon this subject have been translated into several languages. He was a trustee of the University of Philadelphia, and of the Carnegie Institution of Washington, and in the life of Philadelphia held some such position as the late Goldwin Smith occupied in Toronto.

So when a great man dies,  
For years beyond our ken,  
The light he leaves behind him lies  
Along the paths of men.

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#### WHAT THE BLIND MAY DO.

That the blind may accomplish much we have some memorable examples. All are familiar with the story of John Milton. Then there is that of John Kitto, the eminent Biblical scholar. At the present moment, we have the story and achievements of Jacob Bolotin, the blind doctor.

Dr. Bolotin is the attending physician to the tuberculosis sanitarium at Dunning, Ill. He graduated, at the age of 14, from the College for the Blind, at Jacksonville, Ill. For some years he acted as a travelling agent for some typewriter. Then he took a course of medical studies at Chicago College of Medicine and Surgery, paying his way by selling typewriters.

His sense of touch became so developed that he could name nearly every one of the 600 students at college by shaking hands with them. He passed his examinations by dictating his answers to a stenographer. At present he gives lectures on diseases of the heart and lungs to the students in two colleges.

He is a constant reader of the books prepared for the blind. During recent months he has examined nearly four thousand persons for the detection of tuberculosis, and very few discovered that he is blind.

It is within the memory of many to be able to recall the career of Olé Bull, the blind Swedish violinist, and how he travelled the world, and held his audiences spellbound. He was a marvel.

But one of the greatest achievements of industry in overcoming difficulties is that of Helen Keller, who is both blind and deaf. Under the teaching of Mrs. Macey, she gradually acquired knowledge, and finally secured her degree of B.A., from the University of Harvard. By slow and laborious efforts she was taught a few words, and then the combination of these into simple phrases. After twenty years of toil and study she can now stand upon a public platform and address an

audience. She said, a few days ago, I cannot see nor hear your voices, but all comes to me through my hands. In her imagination, the stars shine; and she said: "Blindness has its wonders, too, in the imagination."

Her favorite poets, she said, were Shelley, Keats and Whitman. She became a Socialist through reading Morris, Bernard Shaw and H. G. Wells. She thought men could not do without women in politics. She can understand questions by reading the words through the lips of the speaker, her sense of touch has become so delicate and educated.

All this shows what a marvellous thing the human mind is. Shakespeare had a great conception of this when he made Hamlet say:—"There are more things in heaven and earth than are dreamed of in your philosophy, Horatio." And, again, in Hamlet: "In apprehension how like a god."

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#### MILITARY SURGERY.

A short time ago, the Toronto Academy of Medicine devoted an evening to the important subject of military surgery, and the army surgeon. Col. G. Carleton Jones, director-general of the medical service of Canada, spoke on the report of Sir Ian Hamilton, and pointed out the need for an increase in the number of medical men in the medical service of the Country. He emphasized the view of Sir Ian Hamilton that the medical service should be kept well ahead of all other services in the army and militia of every country. He pointed out that in time of war every citizen might be called upon to take part in the defence of the country. Hamilton had said that the militia should be "the expression for purposes of war of every form of national activity." In times of peace the present service was fairly adequate, but would not meet the conditions of war. Col. Jones said: "There is no humanity in war, and that the army must be kept fit, if it is not to go to the scrap heap."

He also pointed out that under the Militia Act medical men were not exempt from service. There would always be a sufficient number of doctors, but not trained ones for the service. Members of the medical profession should be trained for this special work. He then took up the subject of military hospitals and the need of these in times of war. The hospitals should be located away from the large cities. Our present hospitals would be filled with ordinary cases, and consequently there must be provision made for the sick and wounded soldier."

Dr. Fotheringham spoke of the important duties of the army doctor in times of peace, as well as in times of war. He mentioned the many important duties performed by the British army doctor in the colonies, such as the West Indies, in various parts of Africa, etc.

Dr. G. Sterling Ryerson expressed the opinion that Canada would be called upon some day in the future to face war, and that such might occur within the next generation. "We should, therefore, be prepared" was his advice.

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### POLLUTION OF PUBLIC WATERS.

Those appointed by the International Waterways Commission to consider the question of the pollution of lakes and rivers have reported. The report is the work of Dr. Allan J. McLaughlin, Surgeon-General of the United States Public Health Service; Dr. J. W. S. McCullough, Chief Medical Health Officer for Ontario; Dr. John A. Amyot, Bacteriologist for Ontario, and Mr. F. A. Dallyn, Sanitary Engineer for Ontario.

The point brought home by these experts is that every municipality along the Great Lakes and their connecting streams that uses untreated water for domestic purposes is maintaining a menacé to public health. In many cases the method of purification and sanitation is unsatisfactory and constitutes a grave problem. In Toronto, so far as the water is concerned, that part of the difficulty has been more or less overcome, but the sewage question is still imminent.

In going over the detailed reports it is observed that the water at the lower end of Lake Huron would be practically pure were it not for pollution due to steamboat traffic, while the concentration of boat traffic in the River St. Clair gave a decided increase in the bacteria count. Around the St. Clair River at Algonac there is gross pollution. At Walkerville and Windsor the intake pipes are in dangerous locations due to the pollution of the Detroit River water. In these towns, in spite of the efforts of chlorination, the typhoid rates remain too high. At the western end of Lake Erie there is gross pollution. The pollution at Port Stanley was found to be local. Towards Buffalo the main contamination is from steamboat traffic. In the Niagara River there is pollution along both shores, due to the immense volume of water passing down the main channel.

In Lake Ontario at Niagara the pollution may drift north, east or west. It continues without apparent diminution to almost the international boundary in the lake. In the early part of the season Lake Ontario is practically sterile, but as the season advances the pollution becomes serious.

The effect of all this pollution is that those who draw their water supply from points below the source of contamination is that they are in imminent danger. It is made clear that even large bodies of water

may have more sewage thrown into them than they can digest. It may be necessary for the large cities to install plants for the sterilization of their sewage. One thing is certain—*Salus populi suprema lex est.*

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### THE TORONTO GENERAL HOSPITAL.

This institution marked a new phase in its progress when, a few weeks ago, it opened for the service of the public its splendid building for private patients. This building is a credit to all who have had any share in its erection—donors, trustees and architect.

In Britain and other European countries there is very little use made of pay wards in connection with the large hospitals. The plan of wards at various prices to suit the conditions of all classes is an innovation of this continent. In Britain the sick person goes to a public hospital on the charity basis, or to a private hospital, or stays at home. He cannot go to the Royal Infirmary in Edinburgh, or to Guy's Hospital in London, and engage a private ward and be attended by the doctor or surgeon of his own choice.

In the new General Hospital there is a range of prices from \$1 a day in the public ward, upwards to the dearest private ward. This is as it should be. Most of the Canadian hospitals are on this plan. It took many years to evolve this system in its present state of perfection; but we have it now, and the public should be thankful. Our hospitals should be ranked among our greatest industries—for they restore mankind to usefulness where such is possible. They are among our greatest national assets in times of peace, and in times of war would render inestimable services. For many years to come the private ward building will be a boon to humanity.

Towards the funds required for the new General Hospital the city has given \$610,000; the trustees have raised from donors \$1,287,000; the Ontario Government and the University of Toronto gave \$600,000, and various corporations paid in \$135,000.

Toronto is now well supplied with hospital accommodation. St. Michael's has added largely to its room in a modern and scientific style; and the Western, with beds for 300 patients, is new, fireproof and up-to-date in every way.

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### RADIUM.

The day has gone past for any one to set aside the claims of radium with a wave of his hand. Scientific and conscientious workers in

many places have reported cases that have been cured. Not long ago Dr. Abram Jacobi, of New York, stated that it had cured him of cancer on the cheek. Dr. Jacobi is too well known to require anything further than the mere mention of his name.

There are cases of cancer that radium cannot be expected to cure. When the disease is seated in some internal organ and advanced in time, there is no known treatment that holds out hope. But even in large cancerous growths this agent has been the means of affording some relief in many instances, both by effecting a reduction in the size of the growth, and the lessening of the accompanying pain. There is no other agent that can even do this much.

In the case of superficial cancers, the results are very gratifying. These cases yield readily to this form of treatment. We know what severe condition it is to be afflicted with a malignant ulcer eating steadily away one's nose. Any drug which can cure such a case is a therapeutic agent of the utmost value. Because the knife has failed many a time in the hands of the ablest of surgeons is no reason why it should be discarded. Given a fair chance, as a surgeon would expect to give his scalpel, radium is one of our most valuable new entrants into the armamentarium of the medical profession.

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#### MILK AND TUBERCULOSIS.

From time to time some one comes forward in a sort of cocksure style and tells us that the milk of tuberculosis cows will not convey the disease to the human being. Some years ago the late Robert Koch, in London, made the statement that man was immune to the bovine form of tuberculosis. His views were taken to task, and in time the British Government appointed a Royal Commission of the ablest men in the Kingdom to study the question and report.

This commission reported fully and finally a little more than a year ago. It came to the conclusion, after years of investigation, that man can be infected by the bovine form of the bacillus. The evidence submitted by the Royal Commission seemed to be so strong that it will be well not to disregard it, until the whole subject has been again reviewed by very competent observers.

Mr. Robert L. Mond, who has an experimental farm at Seven Oaks, near London, and who founded the Infants' Home, said the other day that tuberculosis was not conveyed by milk from cattle to human beings. But this opinion must not be allowed to pass unchallenged. Mr. Mond may not be an authority on such an intricate matter. Certainly

his dictum is not sufficient to over-ride the report of the Royal Commission made by such men as Professor Sims Woodhead.

The Chicago Milk Commission, consisting of Drs. Van Derslice, A. C. Cotton, Julia D. Merrill, C. W. Leigh, R. A. Black, and Frederick Rice, contend that pasteurization does not destroy the bacillus of tuberculosis, and sterilization destroys the food value of the milk. Dr. Cotton said: "The possibility of tubercular infection from cow's milk is doubtful. It is true that we have always considered it so, but it is safe to say that the danger has been vastly overestimated." Dr. Van Derslice remarked: "To my mind the only precaution necessary is the proper inspection of cattle. The Milk Commission of the Chicago Medical Society inspects not only the cows themselves, but also the milkers, and the method of distribution."

In these opinions from the Chicago Milk Commission there is no denial of the possibility of infection through milk. These commissioners only go the length of saying that the danger is not very great; but they insist on a careful examination of all dairy cows. We must still assume, then, that there is a danger, and that the bovine bacillus can and does infect man.

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#### LEPROSY CURED BY SURGERY.

Dr. William Goodhue, of the Leper Colony, on the Island of Molokai, Hawaii, is achieving much success in the treatment of this disease by surgical methods. The operation consists in a thorough dissection out of the tissues involved. In due time the patient was brought before the official examining board, and found to be without blemish, and discharged. The most careful bacteriological tests were negative. He remains well and is leading a useful life. This patient was declared a leper in 1906.

Dr. Goodhue is a Canadian, and was born in the county of Athabaskaville, Quebec. In youth he went with his parents to California. He was induced to study medicine by his brother, and took his course in Rush Medical College, Chicago. He gave much study to bacteriology. In 1902 he was appointed to the Leper Colony by the United States Government. This was the beginning of his noted career.

He has done much valuable work on the application of the X-ray treatment to the disease. In 1905 he discovered the bacillus of leprosy in the body of the mosquito, marking one of the most noted of scientific advances. Dr. Goodhue is now in his 44th year. He has lifted the feeling of despair from the shoulders of the lepers; for they have now seen some of their number cured.

## A CANADIAN COLLEGE OF SURGEONS.

We have already expressed our view freely on the good the American College of Surgeons, recently established, may do for the surgical division of the healing art. It has been suggested that there should be a Canadian college of a similar character. This may, and no doubt will come, but it must be borne in mind that the number who follow surgery exclusively in this country, up to the present, has not been great. While we feel that this country should proclaim its individuality as often as it can, we feel, with our contemporary, the *Canadian Practitioner and Review*, that the best results will come from the present arrangement for some years.

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## FULL TIME PROFESSORS OF MEDICINE.

To Johns Hopkins Medical College belongs the honor of introducing this plan. The Education Board has secured the sum of \$1,500,000 as an endowment fund for certain chairs in medicine. The chiefs of various services will be required to devote their entire time to their hospital patients, their research work, and their teaching. This will compel them to give up private practice in any form. Drs. Halstead, Barker and Gowland are affected by this change, and are thoroughly in sympathy with it. We feel that this is a great step onward, and one that will soon be followed by other great universities.

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## ALBERTA MEDICAL AFFAIRS.

The Medical Council of Alberta and the University of that Province have agreed upon a plan whereby the university names the subjects and conducts the examinations for a license to practise. Any person holding a qualification from another Province is given an interim certificate, and if he fails he is given another opportunity to pass his examination. The university this year is giving the first-year course, and will establish a five years' course of study. Appointments will be made to the various departments, and laboratories put in operation and equipped at the earliest moment so as to be ready for next year's work. This will be one more medical college in Canada and we wish it every success.

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## ORIGINAL CONTRIBUTIONS

## A FEW REFLECTIONS—EVEN A SOLILOQUY.

BY JAMES S. SPRAGUE, M.D.,

Belleville, Ont.

I PRESENT a few selections and some that are familiar to older men in our ranks, but by association with the views of many men, newer virtues will thus be apparent; and the contrast in their merits will add fresh coloring to convey the emphasis to the truths in the selections. This article may be termed a soliloquy, not only for my leisure moments, but for you who have the love of our profession as a vocation. Then, too, when a brother-in-arms is called away on his last call, it may be to you, as it has often been to me during forty-five years' consoling, even cheering, to recall the following encouraging, soothing, even inspiring lines and even arousing us to renewed action while our day shall last, for art is long and life short.

In 1910 I stood at the graves of three fellow workers in the Humboldt county, Iowa, cemetery, with whom for five or more years of my earliest practice I was daily associated. At the bedside of one I was present in his last moments. All three were army surgeons. To me these men—Welsh, Herighting, Van Velsor (a Canadian) are, and were, as gods—and my memories of them are imperishably aureoled even hallowed. It is worth all my life to have been associated with them and to learn and to see verified—*Medicus in omne aevo nobilis*, (Horace). In 1911 I, too, recalled these lines when I stood at the grave of Dr. Muirhead, Carleton Place, a type, Canadian-Scottish, of Ian MacLaren's Doctor MacClure. No greater honor can be given any of us than: "He was a Doctor MacClure."

Why should this worthless tegument endure,  
 If its undying guest be lost for ever?  
 Oh, let us keep the soul embalmed and pure  
 In living virtue, that, when both must sever,  
 Although corruption may our frame consume,  
 The immortal spirit in the skies may bloom.

THE COUNTRY DOCTOR. *By Will Carleton.*

(*Vale, vale, nos te ordine quo natura permittet sequamur.*)  
 There's a gathering in the village, that has never been outdone,  
 Since the soldiers took their muskets to the war of sixty-one;

And a lot of lumber wagons near the church upon the hill,  
 And a crowd of country people, Sunday-dressed and very still.  
 Now each window is pre-empted by a dozen heads or more,  
 Now the spacious pews are crowded from the pulpit to the door;  
 For with coverlet of blackness on his portly figure spread,  
 Lies the grim old country doctor, in a massive oaken bed.  
 Lies the fierce old country doctor,  
 Lies the kind old country doctor.  
 Whom the populace considered with a mingled love and dread.

Maybe half the congregation now of great or little worth,  
 Found this watcher waiting for them, when they came upon the earth,  
 This undecorated soldier of a hard unequal strife  
 Fought in many stubborn battles with the foes that sought their life.  
 In the night-time or the day-time he would rally brave and well,  
 Though the summer lark was piping, or the frozen lances fell;  
 Knowing if he won the battle, they would praise their Maker's name,  
 Knowing if he lost the battle, then the doctor was to blame.  
 'Twas the brave old virtuous doctor,  
 'Twas the good old faulty doctor,  
 'Twas the faithful country doctor fighting stoutly all the same.

When so many pined in sickness he had stood so strongly by,  
 Half the people felt a notion that the doctor couldn't die;  
 They must slowly learn the lesson how to live from day to day,  
 And have somehow lost their bearings—now this landmark is away.  
 But perhaps it still is better that his busy life is done;  
 He has seen old views and patients disappearing one by one;  
 He has learned that Death is master both of science and of art;  
 He has done his duty fairly and has acted out his part.  
 And the strong old country doctor,  
 And the weak old country doctor,  
 Is entitled to a furlough for his brain and for his heart.

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“So Drumsheugh knelt and prayed with many pauses:

“Almighty God . . . dinna be hard on Weelum MacLure, for  
 he's no been hard wi' onybody in Drumtochty. . . . Be kind tae  
 him as he's been tae us a' for forty year. . . . We're a' sinners  
 afore Thee. . . . Forgive him what he's dune wrang, an' dinna  
 cuist it up tae him. . . . Mind the fouk he's helpit . . . the  
 weemen an' bairnies . . . an' gie him a welcome hame, for he's  
 sair needin't after a' his wark. Amen.”—“*Beside the Bonnie Briar  
 Bush.*”

Aye, dear Maclure! him maist o' a'  
 We lo'e, an' thro' the drifts o' sna'  
 Unmindfu' o' the north wind raw,  
     We tearfu' come;  
 Wi' a' the mournin' glen we draw  
     Near haun his tomb.

An' barin' there oor heids, we pray  
 That we may so live lika day  
 That when we come tae pass away  
     Frae a' things here,  
 Truth may the tribute tae us pay  
     O love-wrung tear!

—*Bengough.*

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“Warm summer sun,  
 Shine kindly here,  
 Warm southern wind,  
 Blow softly here.  
 Green sod above  
 Lie light, lie light.  
 Good night, dear heart;  
 Good night, good night!”

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“Now the laborer's task is o'er;  
 Now the battle day is past;  
 Now upon the farther shore  
 Lands the voyager at last,  
 Father, in Thy gracious keeping  
 Leave we now Thy servant sleeping.”

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“He rests from his labors and his works do follow him.”

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“Since we deserved the name of friends,  
 And thine effect so lives in me,” I hope,  
 “A part of mine may live in thee  
 And move thee on to noble ends.”—*In Memoriam.*

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“Each one of us is the daily beneficiary of a fund of blessings coming to us from other men and other days, and to which we have in no measure contributed. We are thus laid under a heavy obligation of debt which is growing day by day, and which demands some measure of discharge on our part. We cannot repay those of other days who have

sacrificed for us; we can seldom repay even the living to whom we are in debt. There is only one way in which we can discharge the obligation, and that is to render unto others even as it has been rendered unto us. 'Freely ye have received, freely give.' Nor should we leave till a future time a debt that can be paid to-day. We must pay as we go, or the end may overtake us with our obligations unfulfilled."

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"When I have quited the world, it will matter nothing to me what people say of me, up to the moment of death we should strive to leave something which can either comfort, amuse, instruct, or benefit the living."—*Sir Henry M. Stanley.*

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The situation that has not its duty, its ideal, was never yet occupied by man. Yes, here, in this poor, miserable, hampered, despicable Actual, wherein thou even now standest, here or nowhere is thy Ideal; work it out therefrom; and working, believe, live, be free. Fool! the Ideal is in thyself, the impediment, too, is in thyself: thy condition is but the stuff thou art to shape that same Ideal out of: what matters whether such stuff be of this sort or that, so the form thou givest it be heroic, be poetic. O thou that pinest in the imprisonment of the Actual, and criest bitterly to the gods for a kingdom wherein to rule and create, know this of a truth: the thing thou seekest is already with thee, "here or nowhere," couldst thou only see!—*Carlyle (1795-1881).*

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"Serene I fold my hands and wait,  
For lo! my own shall come to me.  
For, here I read for certain that  
My ships are safely come to road,  
Rest after toil, port after stormy seas."

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"He has achieved success who has lived well, laughed often, and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task; who has left the world better than he found it, whether by an improved poppy, a perfect poem, or a rescued soul; who has never lacked appreciation of earth's beauty, or failed to express it; who has always looked for the best in others, and given the best he had; whose life was an inspiration; whose memory a benediction."

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"We are here not to get all we can of life for ourselves, but to try to make the lives of others happier," and to fully believe that lofty idealism of Sydenham, one of our most illustrious fathers, who said: "As long as Almighty God shall give me life, I shall press forward to

my avowed end of doing all the good I can in my calling"; and in the words of Sir T. Clifford Allbutt, K.C.B., M.D., LL.D., D.Sc., F.R.S., Regius Professor of Medicine in the University of Cambridge, who, in three lines, tells us what we, with ordinary prescience, see in the aisles of the future, when, as Gladstone has said: "That M.D.'s shall become the rulers of the nations, and the demand is for Sydenhams and Listers."

"Never was there a time when the study of medicine offered such visions of reward—social, scientific, and beneficent—as at present," to her disciples—*auctores maximae sapientiae*—for "They shall bring the glory and honor of the nations into it," even now, and in "The teeming future, glorious with visions of a full success."

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"Is the goal so far away?" Couldst thou only see!  
Far, how far no tongue can say,  
Let us dream our dream to-day."

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Having presented "some things that posterity should not willingly let die"; and a few vaporings "out of the mouths of babes and sucklings." (—Ye Anciente Prophesie) I may be pardonable in this publication of a midsummers night's dream, however, I will await decisions, consoling myself with this: *Finis honorat opus; stant omnia rite peracta* (the end atones: all's well when all is done).

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"Mi satis ampla  
Merces, et mihi grande decus, sim ignotus in ævum  
Tum licet, externo penitusque inglorius orbi."

Although the parting is fu' tender,  
Therefore, our everlasting farewell take:  
Forever, and forever, farewell! Vive, valeque!  
If we do meet again, why, we shall smile;  
If not, why then, this parting was well made.  
Brother, favored and enlightened,  
Fore thee well, and if forever,  
Then forever, fare thee well.

"Frater, ave atque vale!"

*Satis verborum et finis coronat opus.*

## NOTES FROM CHINA.

BY ERNEST A. HALL, M.D., CN.,  
Vancouver, B.C.

If ever there develops a doubt in one's mind with regard to the value of missionary effort in the East, a visit to the medical missionary hospitals of Canton would be sufficient to dispel the thought. In Canton we are given a glimpse of the real old China, malodorous, dirty, congested and presenting objects of pity on every side. It is not unusual to pass from ten to twenty blind, many of them beggars, in half an hour's walk, occasionally one of these wretches can be seen in the centre of a main highway, which it is fortunate if it measures six feet across from shop to shop—down on all fours striking his head against the stone pavement uttering wails too weird for description, and the smells—even on the river boat approaching the city we had all desire for breakfast removed, and one of our party was so much affected by the combination of odours that his stomach rebelled, and he refused to go ashore. Where are our theories of sanitation, bacteria and toxins, in the presence of the conglomeration of abominations found here in this city of nearly two millions. Either Chinese bacteria are better behaved than our own, or these people are dosed to the saturation point with anti-toxins. However, the fact remains that the Chinese live and flourish amid surroundings that would drive a Canadian sanitary officer insane.

There are three medical teaching attempts being made in Canton. One the University under the direction of the Medical School of the Christian College, and supported by the Y.M.C.A. of the University of Pennsylvania. One for women, and the third managed by Dr. Todd formerly of the American Presbyterian Board. This school has a registration of two hundred students, several of whom are women. The sexes associate in the clinics, without any apparent sense of immodesty, the women of course always crowded to the rear. When we reflect that Dr. Todd is a busy man with a hospital of fifty beds and a large surgical practice, with little European help and but a few native assistants, without adequate chemical or physiological apparatus, few charts, no practical anatomy, scarcely ever a *post mortem* privilege, an idea may be formed of the superficial training that these students are getting. Yet even this is a vast advantage upon the native status, and better than the superstition and abominations characteristic of Chinese practice. An effort is made to cover this deficiency by laying special emphasis upon practical surgery, and as much regional anatomy as possible is taught in the operating room, the students frequently assisting in the operations. A most welcome gift to this institution would be a set

of preserved anatomical dissections, or a first-class detachable man-nakin. If this article reaches the eye of anyone disposed towards efficient missionary enterprise, let him make a donation to Dr. Todd as herein suggested. As an indication of the medical enterprise in Canton, the first medical journal to be published wholly in Chinese has made its obeisance to the profession. I regret that my native modesty prevents me from expressing my opinion as to the merits of the articles, but in the table of contents which is given in our own language I read "Diagnosis and Treatment of Gastro-intestinal Diseases in Children"—by Dr. Ip Li Lang, "A Study of the Root *Sterculia Plantanifolia*" by Mr. Ko Im Sam, "The Need of More Knowledge About Vaccination" by Dr. Ip Li Hang, etc. The editor is Dr. Cadbury of the University of Pennsylvania, is one of the best qualified, brilliant and most devoted of the Younger Men whom I have met.

The hospital wards are less elaborately furnished than ours; only the beds for the more wealthy private patients have mattresses; the others rejoice in hard boards covered with a layer of thin matting. Sheets are a luxury, and pillows are blocks of wood or porcelain. Yet the quality of work done is surprising. In some of the hospitals I found the bacteriological work up to a standard that would do credit to Canada. The surgical work, with a few exceptions, was also excellent. I witnessed a Caesarian section by Dr. McCracken—a brilliant exhibition of modern work—saving both mother and child.

Dr. Mary Fulton has also a large clinic among the Chinese women, has her own hospital, and does a large surgical practice. Drs. Swan and Thompson, of the Canton Hospital, and Dr. Cadbury, of the University Medical School, are also devoted and busy men.

As one looks over the field he is faced with the conviction that, with all the noble men and women that Europe and America are pouring into China, the great mass of human suffering must remain untouched without the training of the natives. The work of the present must be done by us; the work of the future in China must be done by themselves. The hope of this people is in education of their own people, not only in medicine, but in other departments—literary, scientific and industrial. China calls for the best we can give her. No man nor woman is too well qualified to work here. It may be out of place to institute comparisons, but when thrown in with a batch of "holiness" and "alliance" missionaries as we were crossing the Pacific, listening to their wide-mouthed declarations upon things theological, and their squabbles among themselves re "free will, fixed fate, foreknowledge absolute," and the facility with which they regulate nine-tenths of those who have not heard their twaddle, to a post mortem location where sulphur obtains, one cannot but feel sorry for the inoffensive Chinese to

whom these ignorant, conceited enthusiasts are going. Most of them would be useless at home, if not dangerous abroad. It is a wonder that China has not murdered more of them. Contrast this class with the highly-educated physicians, teachers, preachers, Oxford and Leipzig men, who are assembled in Canton, and can you wonder that from this southern province comes the reforms and the evolutionary political processes that are destined ultimately to obtain throughout this country. The missionary must first be a man, educated, disciplined, consecrated, but a man first; not an embryonic product of a wave of religious emotion, and saturated with the belief that hell will be over-crowded unless he gets busy.

This is the moment of opportunity for us to give to China what she has so long suffered the lack of. She stretches her palsied arms to us for assistance. Her portals are open. The cry of the twentieth century is not from Macedonia, but from China, "Come over and help us" to develop their natural resources, their industries, to help this coming world-power upwards towards the development of a more rational self-government, and fundamental to all of this is education. No greater favor could we confer upon this limitless country than the establishing, in all of the great centres of population, of thoroughly equipped medical schools. The physician has preference, and universal entry into China. The country is ready for his reception, the field is unlimited, both in immediate work and in investigation. Here the practical physician will find unbounded usefulness, and the bacteriologist revel in unexplored fields.

"But what of the privations?" you ask. This is what I asked, and was assured by a physician who had spent not a few years in China that the lot of the average medical missionary was equal, if not superior, to that of the average practitioner in America. There is no servant problem, no collection of bills, plenty of hard work, much gratitude, but best of all the satisfaction that a contribution is being made to world-building, that one is a factor in human evolution, a pillar in the "house not made with hands eternal in the heavens." There are other rewards—recognition of merit, positions of trust and honor must necessarily fall to pioneers in this country. What more enticing field can open up before the young graduate—man or woman—who desires to invest life to the greatest advantage? To such I commend the consideration of what China has to offer—unlimitations in all fields of scientific endeavor and medical activities. What an outlet for an over-crowded profession in America! What an opportunity for service!

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## PROSTATIC HYPERTROPHY: ITS TREATMENT.

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THE sufferer from chronic prostatic hypertrophy has in the past been able to look forward to but one future, and that an exceedingly dismal one—catheter life. This is indeed one of the most deplorable conditions to which man is heir, and one which, when relieved, occasions more genuine satisfaction than that produced by almost any other surgical procedure of to-day. When one or both lobes of the prostate attain such a size as to preclude the possibility of voiding all the urine in the natural manner, life becomes miserable indeed, as the daily introduction of the catheter to evacuate the bladder of the residual urine soon begins to sow the seeds of that inevitable misery, the direct result of cystitis, ascending pyelitis, etc.

Until within the last decade the treatment has been entirely medical, and this, of course, could, even at the best, afford but temporary relief. Irrigations of the bladder, along with the various medicinal agents employed, could for a time assuage the distress of the accompanying cystitis, and in every case the patient must ultimately bow to the inevitable. Surgery, however, has to-day come to the relief of this condition, and where formerly no hope of recovery could be entertained, the sufferer may now look forward with the utmost confidence to a complete and permanent cure.

The real advancement in the treatment of prostatic disease has taken place during the past ten years. In the decade prior to this, much experimentation had taken place, but little practical knowledge had been actually accumulated. Surgical interference had been advised by various illustrious surgeons, only to be accompanied by such an enormous death-rate as to cause its complete abandonment. Various routes and modes of attack had been exploited by their various advocates; but no matter what route or what method was employed, the result was inevitably the same—a mortality so high as to make its employment almost suicidal.

To illustrate the status of prostatic surgery, even twenty-five years ago, I might quote from a lecture delivered to his students in the latter part of 1888, by Sir Henry Thompson, at that time the most illustrious genito-urinary surgeon in England. After describing in detail the then most approved plan of treating the enlarged prostate, he says in part: "I now proceed to say a few words relative to a question which I think must have already arisen in the mind of some of you, although I have not hitherto made any allusion to it. The inquiry is naturally sug-

gested: Does not the enlarged prostate offer to the enterprising surgeon an opportunity for the skilful exercise of his art, for the purpose of removing some salient outgrowth, or of dividing some obstructing portion, and, by this means, of affording to the patient an improved or even an unobstructed outlet for the urine? I need hardly tell you that this very obvious suggestion has occurred to the minds of many surgeons; and that, too, in times long preceding our own. The obstructing portion of an enlarged prostate has been sometimes simply divided from above downwards, when, forming an eminence or barrier at the internal meatus—like a bank as it were, defining the boundary line between the urethra and the bladder—and it is by no means difficult to do this by using a blade which can be unsheathed when it arrives at the spot required. Such simple division was soon discovered to be useless; adhesions took place, and no benefit accrued from the operation, but often much distress to the patient. Then it became a natural and easy matter to carry down an instrument something like a lithotrite, and by means of a double blade to cut a V-shaped piece entirely out of the ridge. This was declared to be useful in a few instances; but a careful investigation of the cases, made several years ago by myself and others, has disproved the value of the proceeding, despite the occasional endeavors by some later advocates, who, not being fully informed of the history of the past, have endeavored to revive or make fresh claims for the practice. But I observe that quite recently Guyon, of Paris, has given an authoritative decision relating to the proceeding. He is on the spot, has examined patients thus operated on by Mercier and others, and states without hesitation that the results give no encouragement to repeat this mode of treatment. More lately, too, the same sections of the prostate have been made by means of the electric cautery—a safer way, no doubt, of effecting the object than by the knife, if such operations are to be done at all.

“Then there is another proceeding which one hears of, which takes a less definite form than those just alluded to. Now and then it is reported that during a lateral operation for stone, when the prostate or growth therefrom has been found in the way, the operator has dealt with it, either by chance or by design, removing perhaps a portion as large as a filbert or more. I have heard it stated, somewhat vaguely perhaps, that the patient, who has been frequently much troubled with retained urine, has, on recovery from the operation, regained a natural, or nearly natural, control over his bladder. I once, at least, saw the late Sir William Fergusson thus remove a rather large mass. What is more to the point, I have on four occasions myself removed considerable portions of the prostate (twice without intention—when a large outgrowth has been evidently caught with the stone between the blades of the forceps,

and so detached in the act of removing it). But I have had the good fortune to operate for stone by the lateral operation on two patients who had been accustomed to pass for a year or more all urine by catheter, on account of advanced prostatic obstruction, and have in each case been able to remove, with the express intention of improving or restoring the function if possible, a considerable portion of prostate—in one of them a complete median portion salient at the neck. These cases were to me occasions of extreme interest, as I keenly watched the results in the sanguine hope that I might find substantial improvement from what I had done. Three of the four cases lived afterward to test the value of the experiment, and it was not without disappointment that I found no difference whatever in their condition in regard of retaining power as compared with what it had previously been. My experience, then, does not support the theory. It has not been so fortunate as that which I have heard occasionally alleged, in general terms it is true, by some persons. General terms, however, mostly denote inaccurate observation or looseness of statement, and I think I am entitled to require that if it does happen, or has happened, to any surgeon to divide or remove any part of an enlarged prostate for a patient who had previously been compelled to pass all his urine by catheter, say for a period of twelve months, and that after the division in question he was enabled to dispense with the instrument, or at any rate to pass, say only half his urine by natural effort, the case ought to be seen and examined by others. I desire extremely to see such a result from any of the proceedings alluded to. I have long wished to see this sight, and have travelled considerable distances abroad and elsewhere expressly seeking it, but at present without success. Such is my report concerning the matter.

“And I am bound further to add that the restoration of the function by such means can scarcely be expected to occur; and for this reason: when it has been necessary to practise habitual catheterization for retention from enlarged prostate during a period of one or two years, the coats of the bladder lose their power and are incapable, I believe, of regaining it in almost any case after that lapse of time, and would fail to expel their contents, even supposing the obstruction to be entirely removed. There is good ground for concluding that no operation would restore a *status quo* on account of our inability to restore the expelling function to a bladder which has long ceased to exercise it.

“It has been recently proposed to open the bladder above the pubes for the purpose of removing salient portions of the prostate in some cases; and what I have just said in reference to advanced cases holds good equally in relation to this proceeding. No benefit can result to such. In an early stage some relief may perhaps be afforded by care-

fully removing an obstructing portion; but I suppose few persons, whether surgeon or patient, would be strongly disposed to sanction a suprapubic operation at the commencement of prostatic troubles on the chance of removing a small growth there—especially as there would be no guarantee that the process of enlargement might not, at that stage, continue its activity for some time. Still, if any operative aid is to be given of this kind, it will probably be more effective by way of the suprapubic route than by operation on the prostate through the urethra, or by perineal incision.”

How marvelous has been the change wrought by the few intervening years since Sir Henry Thompson expressed the foregoing opinion.

In a lecture delivered some two or three months subsequently to the one from which the above extract is taken, Sir Henry describes his own method for the surgical treatment of the prostate. After commenting on the futility of simply removing some isolated outgrowths of prostatic tissue which may be projecting into the bladder, he says that in his opinion the only efficient method of securing comfort to the patient is the establishment of a permanent urinary fistula above the pubes. This he accomplished by making a suprapubic incision through which he introduced a silk gum tube, surrounded by a silver plate, which was fastened tightly to the abdominal wall. This tube could be daily removed, cleansed and easily reinserted. Immediately on its arrival in the bladder, all the urine is drained through this tube into a rubber receptacle conveniently placed. So well pleased was the profession in general with the results obtained by this method of treatment, that it was for a time extensively practised, and the surgeons of the continent looked forward, with more hope than at any former period in their professional experience, to the effectual relieving of a class of cases by no means uncommon, but hitherto producing more suffering at a later period in their history than any other—cases of malignant disease alone excepted.

Although from time immemorial the symptoms of prostatic enlargement have been known, yet it is only within the space of the last decade that the operative surgery of the gland has acquired a place at all worthy of its magnitude and importance. The wonder is that an organ, so liable to such important pathological changes, and so prone to produce such suffering and misery in the afternoon and evening of life, should have received so little attention for so many decades, and yet such is the fact.

From the commencement of the sixteenth century—the time when the gland was first discovered—nearly four centuries elapsed before any surgical procedure worthy the name was accepted by the profession at large. It was only at the commencement of this present century

that the surgical relief for prostatic hypertrophy was described and carried out in such a manner as to leave no possibility of a doubt but that the time had arrived when the gland could be safely removed. By a singular coincidence, two papers (both epoch-making articles) appeared almost simultaneously in the year 1901; Freyer, of London, describing the suprapubic route for total enucleation, and Proust, of Paris, the perineal. These are two operations which, with few modifications, are to-day the accepted methods of relief from the evils following in the wake of enlargement of the prostate.

In the London *Lancet*, of February 4th, 1888, McGill first brought prominently before the profession his operation for the removal of any obstruction to the free flow of urine, due to any enlargement of the prostatic gland. This consisted mainly in opening the bladder suprapubically and removing any portion or portions of hypertrophied glandular tissue which may be projecting into the viscus. This article was well received, and, for a time, the operation was practised extensively; but in those early days the mortality was exceedingly high, and this, combined with the only transient relief obtained, soon caused the operation to fall into disrepute, and for a time it became practically obsolete. The cause of these early failures was to be found in the fact that at best only a small portion of the obstructing gland was removed—that projecting into the bladder; whereas, it has now been demonstrated beyond all question, that only after complete and entire enucleation of the enlarged lobe, or lobes, as the case may be, will there be that radical and permanent cure so devoutly to be wished. The failure of McGill's operation to procure the desired relief, caused Van Dittel, in 1890, to suggest and practise an incision through the perineum. By this method he dissected the rectum free from the prostate, and then removed a wedge-shaped portion from each lobe, thus relieving the pressure on the urethra. His procedure also speedily fell into abandonment, owing to the incomplete relief obtained, and the presence of a permanent fistula in nearly all his cases.

Nicoll next conceived the idea of combining these two operations. After making the perineal opening and dissecting the rectum free from the prostate, he performed suprapubic cystotomy with the idea of introducing the fingers into the bladder and pushing the prostate well down into the perineal wound, thus enabling the operator to remove a much larger portion of the offending organ than he otherwise could accomplish.

To Goodfellow, however, belongs the credit of being the first surgeon to advise the passage of a sound, and then make a perineal median incision directly onto it through the prostatic urethra. This incision he carried downward to the neck of the bladder, as in an ordinary per-

ineal cystotomy. He discarded the suprapubic opening altogether. Through the wound just made he inserted his finger and shelled the prostate out of its sheath. This, of course, necessitated the destruction of both the prostatic urethra and ejaculatory ducts.

The first practical and scientific advocacy of the perineal route was described in the October issue of the *Presse Medicale*, in 1901, by Proust, of Paris, and during the four or five succeeding years was extensively practised, especially by American surgeons. In this operation a special retractor is used for the purpose of bringing—or rather pushing—forward the prostate into the wound, thus greatly simplifying the operation. This instrument is L-shaped, with its respective arms about six and two inches in length. At the end of the small arm are two small reversible flanges. After the prostatic urethra has been opened and the staff withdrawn, the short arm of this instrument is introduced through the opening in the urethra, the arms opened and fixed and then by exerting pressure downwards the prostate is brought more fully into view. No attempt whatever is made to save the ejaculatory ducts, though the damage to the urethra may not be so very great.

In Young's modification of this operation, he introduces his retractor, a perfectly straight instrument with folding arms at one end, in the same manner, through the same opening in the urethra, and after opening the arms behind the lobes, pulls the gland directly forward within easy reach. He also makes a definite attempt to save the ejaculatory ducts by making an incision on either side of the median line of the prostate, for the full length of the organ, thus leaving behind a central bridge of glandular tissue containing the ducts. In this manner he claims to leave the ducts and urethra intact. So much for the evolution of the perineal route.

On December 1st, 1900, Freyer, of London, performed his first total enucleation of the enlarged prostate through a suprapubic opening, and on July 20, following, described his method in detail in the *British Medical Journal*, reporting four successful cases. The appearance of Freyer's paper, and the excellent results claimed therein, precipitated a wide-spread discussion on the possibility of such a procedure. Many surgeons, eminent men on both sides of the Atlantic, claimed that this operation was not only surgically, but even anatomically, impossible; and at the same time, as is usually the case under such conditions, several men claiming priority appeared in several parts of the country. As, however, none of their cases had been reported, to Freyer—and to Freyer alone—must belong the credit of devising a procedure of almost unparalleled value to suffering humanity to-day.

In an attempt to prove the anatomical impossibility of the operation advised by Freyer, and that it is nothing more or less than the

enucleation of large adenomatous masses from the substance of the gland, Wallace, one of the severest of his critics, says: "The more rapidly growing areas (of the diseased prostate) increase at the expense of the more slowly growing ones, which are compressed and stretched over the surface of their quickly growing neighbors. By this process a capsule is formed, ill-defined at first, but later becoming more distinct. The elements forming this capsule show in process of time a lamellar disposition. The adenomatous mass can now be easily enucleated, and not only presents a smooth surface, but also leaves behind a smooth cavity."

Wallace's opinion was based mainly on the fact that because in one or two instances he had removed an hypertrophied prostate, post mortem, by the method described by Freyer, and in the remaining capsule had discovered some shreds of prostatic tissue; that, therefore, his conclusions must be correct. On the other hand, the operation has been done on many occasions, post mortem, when it was utterly impossible to discover even the faintest trace of any prostatic tissue in the remaining capsule, which would tend strongly to prove the contention of the originator, that the operation is in reality a complete and total prostatectomy. But when all is said and done, what difference does it really make whether any prostatic shreds are left behind or not, so long as the patient experiences complete relief from the condition from which he has been suffering? The treatment, therefore, of hypertrophy of the prostate divides itself sharply into two distinct classes, the non-surgical for those cases which either refuse operation or for some definite reason are distinctly inoperable; and those where surgical interference offers excellent prospects for ultimate and complete recovery.

*Non-surgical Treatment.* The non-surgical treatment of prostatic hypertrophy is exceptionally important, and mainly from the fact that the large majority of such patients never come to operation. It is usually not until some such complication as acute urinary retention or cystitis develops that the patient will consent to more radical treatment than the ordinary palliative measures to which he has already become accustomed.

Of the various diseases to which man is liable none appears to give greater concern to the physician, and none more genuine suffering and anxiety to the patient, than the sequelæ of prostatic hypertrophy. Whether a given case should be treated medically or surgically is frequently a vexed question, and the not unusual result is palliative temporization until such time as the complications have become so severe as to make operation extremely hazardous. Palliative treatment by means of regular catheterization may succeed for a time. It usually does. It raises the false hopes of the patient, it leads him to believe that at last he has

found a panacea for all his sufferings; but as the growth continues and the obstruction increases, the continued use of the catheter, by introducing fresh dangers, is soon productive of cystitis—usually infective—and the patient passes from bad to worse. If the physician or patient could from the beginning foresee the ultimate result in the continued and systematic use of the catheter, this instrument would not be used beyond the time when it becomes necessary to use it habitually.

Catheter life never proceeds smoothly for any considerable length of time. Early dangers are frequently encountered in the form of rigors, of sepsis, or of acute retention. Even should these early dangers be successfully avoided, serious complications always occur sooner or later, and in many instances may be directly traced to the method of treatment used.

All prostaties require rigid general treatment, and this line of therapeutics is deserving of more consideration than it usually receives. If on many occasions the presence of some acute complication can be directly traced to some form of catheterization, it can also be said with equal sincerity that many times the presence of acute cystitis or acute retention is resultant upon some act of indiscretion or carelessness, which under careful constitutional treatment might have been avoided. The general or constitutional treatment of prostaties may be conveniently divided into three classes—hygiene, diet, and drugs.

*Hygiene.* The hygienic treatment consists largely in avoidance of cold and exposure, by seeking a suitable latitude and by wearing suitable clothing. Not many prostaties are able to afford the luxury of a change of climate, but for those who can, this northern climate should be abandoned for the fall and winter months and residence taken up in a southern zone. During the cold weather flannel should always be worn next the skin to avoid the result of draughts. The habitual bath will sometimes work wonders in the prevention of acute complications. In a well-heated and carefully ventilated bathroom, the patient should regularly enjoy a warm bath. This will cause him to perspire freely, and thus, by the excretory action of the skin, he will get rid of waste products which would otherwise remain in the system.

The irritability at the neck of the bladder may be frequently relieved by hot hip baths just before getting into bed. The immersion should last but a short time, not more than two or three minutes at the most. Straining at stool favors pelvic congestion, and in order to avoid this, saline purges should be a matter of routine, at least once a fortnight, even when the bowels are moving quite normally. Moderate exercise is exceedingly beneficial in that it is of assistance in maintaining the general health of the patient by keeping the liver and bowels in good order.

The bladder should be regularly emptied every three or four hours during the day, and its complete evacuation should be a routine procedure each night, the last thing before retiring. For he who must urinate once or more during the night, it is safer to use a urinal in bed, as getting out exposes him to cold and draughts.

*Diet.* Kidney complications are a frequent accompaniment of prostatic disease, and consequently the question of food becomes of particular interest. Meat may be eaten in moderation, and vegetables of all kinds are not only permissible, but prove a highly satisfactory diet. Cereals of all kinds may be partaken of liberally. Fluids should be taken in abundance, especially water. Alcoholic beverages should be studiously avoided. Dinner should always be the mid-day meal, and no food should be partaken of late at night or before retiring. Great care should be exercised by the patient to eat only that food which thoroughly agrees with him, and by being observant he may regulate his diet with admirable benefit to himself.

*Drugs.* No drug has as yet been discovered which has the slightest influence in controlling the rate of growth of the enlarging prostate, but some are of undoubted value in maintaining the tone of the bladder walls. When the bladder begins to distend from loss of tone, nuxvomica is probably our most useful agent in maintaining this tone. Other drugs are probably useless. As a good general tonic the tincture of nuxvomica with the fluid extract or the infusion of gentian will prove of great value. For the urine, on the other hand, many drugs will be found extremely useful. The urine may be diluted or concentrated by either increasing or decreasing the amount of fluid taken. Irritability of the bladder, due to excessive acidity of the urine, may thus be controlled by increasing the quantity of fluid taken in the twenty-four hours. This will produce simple dilution. In some instances a few doses of calomel will produce the desired effect. If these fail it may be controlled by the administration of alkalies, such as lithia or citrate of potash. Alkalies, however, should never become a routine in the treatment of bladder irritability, but should only be used when other means fail.

Urinary alkalinity, frequently dependent upon the decomposition of urea in the bladder or the pelvis of the kidney, is usually responsible for the formation of incrustations. Hence the presence of stone is usually co-existent with alkaline urine. Alkalinity as a general rule is dependent upon some disorder of metabolism, and consequently can best be treated by treating the original cause. The drugs best suited for increasing the acidity of the urine are the acid phosphate of soda, benzoate of ammonia in ten-grain capsules three times a day, or boracic acid in doses of from seven to ten grains three times a day. Mineral

acids have no direct effect in decreasing alkalinity. If alkaline urine, on the other hand, is the direct result of ammoniacal decomposition, as occasionally happens, it is best controlled by the administration of urotropin in six to ten-grain doses every four hours. Salol is also in many cases exceedingly efficacious.

In treating congestion of the mucous membrane around the neck of the bladder, copaiba and cubeb will usually give the best results, while sandal wood and eucalyptus oil are sometimes of very great value.

The *local treatment* of the effects of enlargement of the prostate consists mainly in the judicious use of the catheter. Catheterization will in no instance cure a patient, but in many it will make life much more comfortable, and where for some such definite reason as chronic nephritis, operation is contra-indicated, it must become the routine treatment in every instance.

Catheter life, or the systematic use of the catheter, commences very frequently with an attack of complete retention. This will bring forcibly to the mind of the patient the necessity of completely emptying the bladder at stated intervals, and recall to his remembrance the fact that probably for some considerable period of time he has been rising two or three times every night to evacuate the bladder. Where a patient habitually rises more than once every night, and where more than two ounces of urine remain in the bladder after micturition, catheter life should commence at once.

The catheter best adapted to the routine use of the patient is the softest one which can be introduced. The red rubber one will be found the softest and the most easy to keep aseptic. The eye should be moulded in the catheter and not cut afterward, as by so doing it is more liable to be roughened, and the tip beyond the eye should be rounded and full to prevent the collection of dirt. The catheter should be at least fourteen inches in length, and should be equally smooth and polished inside and out—the latter to prevent any friction, and the former to prevent the absorption of any urine by the fabric. Were it not perfectly smooth inside, collections would of necessity accumulate on the roughened surface and be a breeding bed for infection. If the soft rubber instrument cannot be passed, it may become necessary to use a gum elastic one, and if in turn this is impossible, the prostatic metal catheter may have to be relied on. Whatever catheter may be used, it is well to have the calibre as large, or almost as large, as that of the urethra, to prevent it becoming obstructed in any false passage.

The passing of a catheter is always fraught with danger, and consequently every caution must be exercised to prevent trouble. The hands, the prepuce, the glans, and the meatus must be thoroughly washed with soap and water, and finally a solution of one in five thousand bichloride

of mercury should be used. In many cases it is also well to syringe out the urethra with a solution of boracic acid.

The sterilization of the catheter is all-important. Soft rubber ones may be prepared by boiling, provided they are not placed in the water until after it is brought to the boiling point. Repeated boilings of this nature will not injure them; whereas, if they are put in the water before the boiling point is reached, they will rapidly deteriorate. Metal catheters should always be prepared by boiling. Gum elastic instruments, on the other hand, are very unreliable, because of the difficulty in securing complete asepticity. They cannot be boiled without effecting their destruction in a short time, and their immersion in any disinfectant solution of sufficient strength to render them aseptic will, by roughening the surface, very rapidly render them useless. The catheter should always be cleansed and rendered aseptic immediately after its being used, as this will greatly facilitate its sterilization the next time it is required. The habit of putting a catheter away just as it is withdrawn—with blood clot or perhaps some particles of pus on its surface—is very pernicious indeed, and to a very great extent mitigates against its perfect sterilization the next time it is required. When the care of the catheter is left to the patient himself this routine is very difficult to carry out, as it is hard to make him understand the necessity of the two cleanings.

The employment of the catheter, though absolutely necessary, has many disadvantages. Some of these dangers, such as sepsis, inflammation or rigors, are introduced by the instrument; while others, such as the loss of the expulsive power of the bladder, is directly due to the mechanical emptying thus obtained.

The lubricant which I have been in the habit of using is carbolic acid in olive oil, sterilized by boiling. This may be used in the strength of one in twenty, and for all purposes will give the best of satisfaction. I have also found that there is less danger of infection if the lubricant is forced directly into the urethra by a syringe, rather than spreading it over the catheter. Various other lubricants are suggested by various surgeons, but I venture to say none will give such all-round general satisfaction as the one just mentioned.

The passing of the catheter itself is always an important operation. The hands must be scrupulously clean, and the glans penis and the foreskin must also be in like manner sterile. A soft rubber catheter should always be used where possible, and this failing, a gum-elastic one with or without a stylet. All recent cases should be easily overcome with one or other of these instruments, but where the inflammatory action has been long-standing, and a semi-sclerosed condition exists, considerable force may become necessary to pass the obstruction—in which case a metal catheter will be necessary.

It must never be forgotten that whenever a metal catheter is used there is very grave danger of producing a false passage. To do this may require no more force than to pass the obstruction when the urethral canal is strictly followed. The obvious lesson is to use, and to use exclusively, a non-metallic instrument, even if one must persist for a very considerable length of time before he succeeds in passing it. The metallic catheter is justifiable only after conscientious and persistent efforts in the use of all others have failed.

*Prostatic Complications.* The treatment of the many complications following in the wake of enlargement of the prostate gland is most effectually accomplished in their prevention; and in very many instances this is possible for a time at least, by the exercise of ordinary care and judgment. In marked hypertrophy, however, things do not run smoothly for long. One or other of the various complications is inevitable, and may be caused by either the obstruction itself, or by the method of treatment employed.

The sequelæ producing the greatest amount of trouble may be enumerated as follows:

- (1) Cystitis
- (2) Urinary retention.
- (3) Vesical atony.
- (4) Irritability of the bladder.
- (5) Calculus.
- (6) Hæmaturia.
- (7) Renal complications.

*Cystitis.* Since in almost every instance cystitis is the direct result of contamination from without being introduced into the bladder through the medium of instrumentation, it can in nearly every instance, by judicious care, be prevented for months or even years. The great importance of thorough asepticity in passing a catheter cannot be too strongly emphasized, and the instrument should be introduced no oftener than is absolutely necessary. Cystitis cannot be prevented, but it can be indefinitely postponed by rigid adherence to these principles. Frequent urinalyses should be made, and alkalinity or over-acidity sedulously guarded against. In this connection the diet and drugs prescribed should be selected to prevent vesical irritability or congestion of the mucous membrane of the bladder.

When cystitis has once developed, be it mild or acute, the surgeon is face to face with the most formidable complication resulting from the presence of an enlarged prostatic gland. This is the one condition producing practically all the suffering of the prostatic life, and in every case treated by catheter it is certain to appear sooner or later. It does not always confine itself to the mucous membrane of the bladder, but in many instances involves the ureters and even the kidneys.

The virulence of an attack and the persistency with which it remains depend to a very great extent upon the character of the infection and the ability of the bladder to throw it off. In the absence of sacculations in the bladder wall, and in the absence of residual urine, there is less likely to be a nidus wherein the infective germs may thrive and thus the attack is likely to be of shorter duration.

Where the urine is acid the bacillus coli is the most common cause of the cystitis, while in the presence of alkaline urine the infecting germ is frequently a staphylococcus. The colon bacillus may also be present, and when so, the combination produces a doubly virulent condition.

Cystitis in the presence of acid urine is a mild condition in comparison to that produced in the presence of alkaline urine. In the former, systematic treatment will very frequently rid the patient of all traces of it, while in the latter the complication is very grave indeed. The very means taken to rid the patient of his intense suffering—bladder irrigations, etc.—appear to add fuel to the fire, and in at least a fair proportion of the cases, septic pyelitis and acute interstitial nephritis follow.

The treatment of cystitis is both local and constitutional. The local consists in the administration of drugs, in bladder irrigations, and, where necessary, in the drainage of the bladder.

*Drugs.* Medication has not proven of great value in cystitis, though occasionally some benefit may be derived. When the urine is acid, urotropin will be of the greatest value; while in the presence of alkaline urine, the acid phosphate of soda with salol has given the best results. These are practically the only drugs which will have any direct effect on the urine. What is even of greater import than the direct treatment of the urine, is the general condition of the patient. Sedatives will be required in every instance, and there is only one drug which can be relied upon in this respect—opium. Sulphonal, trional and veronal will sometimes produce sleep for a time, while the same may be said of chloral and the bromides; but none of these will relieve strangury, nor will they save the patient's strength. In all cases where the kidneys will permit of it, opium in some form or other should be used. It may be given by the mouth or per rectum. In cases where the strangury is severe, morphine should be administered hypodermically.

*Bladder Irrigations.* When medication fails, and when there is much pus or blood present, the bladder should be regularly washed out. It is not necessary in most instances to use any drugs in the fluid with which the bladder is irrigated, normal saline solution acting as well as any; but in some cases where the infection is unusually severe, drugs may be of great benefit. Boracic acid (five grains to the ounce) will often prove valuable, while permanganate of potassium in the strength of 1 in 4000, is also very useful. In no case of acute cystitis should nitrate

of silver be used, but when a case becomes chronic it will frequently clear it up more quickly than anything else. It should be commenced in the strength of one-half grain to the ounce, and gradually increased until five grains to the ounce are being used. When this drug is employed, it is best to thoroughly wash out the bladder with a boric acid solution first, then throw in an ounce or two of the silver nitrate solution, which is left for a few minutes, then allowed to drain away from the catheter. Nitrate of silver in the treatment of chronic cystitis is to-day the sheet anchor.

The principals on which to carry out local irrigations are manifest. As long as the bladder continues to completely empty itself, all septic organisms are carried away and the appearance of cystitis is unlikely. As soon, however, as a post prostatic pouch is formed, and residual urine remains in the bladder, it becomes infected by these organisms, introduced by the catheter or otherwise, and consequently leaves a septic focus which on urination is not entirely cleared away. It is to effectually clear the bladder of this nidus of infection, to prevent the growth of the septic organisms, and to free the mucus membrane of the irritation thus produced, that irrigations are employed.

The solution employed should always be as nearly as possible of the same temperature as that of the body, and the best results will be obtained by having the patient in the supine position. If necessary, as in cases of a very large post prostatic pouch which is very difficult to empty, the pelvis may with advantage be raised several inches.

The most simple and effectual apparatus for carrying out irrigation is a glass funnel, to which is attached a long piece of rubber tubing, which in turn is attached to a catheter. If a catheter with a side branch and stop-cock can be obtained, it will relieve one of the necessity of removing the rubber tubing each time the bladder is full. Hydrostatic pressure should always be used in preference to a syringe in bladder irrigations, and the height to which a funnel should be held above the pubes is only a few inches. This will require more time and greater patience, but it will prevent any force being used, and consequent irritation to an already inflamed mucus membrane.

After withdrawing the residual urine, the bladder is allowed to fill slowly then empty itself through the side branch on the catheter. After several repetitions, the fluid will return free from pus or mucus, when the irrigation should be discontinued. In none but the most offensive cases should this operation be carried out more than once in the twenty-four hours.

In cases of recent or mild cystitis this treatment will often suffice; but where the inflammation is very acute, or where the introduction of a catheter is very painful, or perhaps impossible, more than mere irriga-

tions may be required. Drainage should be established at once. This may be done in three ways—tying a catheter in the urethra, perineal or suprapubic cystotomy.

To retain a catheter in the required position in the bladder is a very difficult undertaking. To ensure the best results the eye of the instrument should lie just inside the vesical cavity and drain the urine away drop by drop as it comes from the ureters. But even where the instrument does remain in perfect position this method of treatment is far from satisfactory. The mere presence of the catheter itself is liable to cause a severe inflammation of the urethral mucus membrane which is prone to spread to the epididymis, or even the veins of the prostatic plexus. This method will fail where from pressure from the enlarged prostate the orifice of the bladder is pushed upward; it will fail when the vesical walls have lost their tone so that they cannot contract evenly.

When once the prostate and the bladder have reached the condition which requires the continued presence of a catheter, a relapse is sure to occur as soon as it is removed, and consequently, for obvious reasons, it is better to do a cystotomy at once.

Two routes are available, the perineal and suprapubic. The perineal, once so popular, has of late fallen into disuse mainly from the fact that its employment does not afford an avenue through which the interior of the bladder can be explored. Through a suprapubic opening digital examination of the viscus is a very easy matter, and, if necessary, visual examination may readily be made. The size of the prostate is easily discernable, and the presence or absence of calculi observed; moreover the drainage is just as perfect as though the opening were made into the more dependent portion through the perineum.

An opening by dissection rather than by trocar and cannula is much to be preferred. In this way all danger of penetrating the peritoneal fold will be obviated, a calculus will not be overlooked, and the intravesical portion of the enlarged prostate can be readily examined. Furthermore, when the time comes for the removal of the gland another opening does not have to be made. (The technic of the cystotomy operation will presently be described fully, as this operation is the preliminary step in the radical cure.) The bladder having been opened and explored, a medium-sized rubber drainage tube is introduced, the cut edges of the bladder wall are drawn up and sutured to the skin around the tube in order to produce a permanent opening. This will also obliterate the pre-vesical space and prevent infection. Some through-and-through sutures of silk worm gut are now used to bring the wound together right up to the tube and the operation is complete. The bladder is now irrigated daily, either through this tube or through a catheter introduced per urethram, when the fluid will wash out through the upper opening. On

the third or fourth day the tube is removed and the irrigations continued, or not, according to the condition of the bladder.

When it is necessary for a fistula such as this to remain permanent, some contrivance must be used in which to collect the urine as it dribbles away from the bladder. The most convenient will be a soft rubber catheter passing just through the sinus opening, and held in place by a silver cap. From this catheter the urine is drained through a piece of rubber tubing into a rubber receptacle strapped to the leg.

*Urinary Retention.* In prostatic enlargement two forms of urinary retention (acute and chronic) are commonly met with, in fact, form one of the most common complications.

*Acute Retention.* It has been well said that in prostatics this condition is quite as serious and demands as urgent attention as strangulated hernia. If the bladder for a long time has been contracted and lost its expansive power, it will not take a great deal of urine to cause great distress. This is the class of case in particular in which retention causes the most intolerable pain. The pain and intense suffering in this condition is probably as great as any to which the human flesh is heir. In the case of a contracted bladder, the danger of rupture is not as great as in the case of a dilated viscus from chronic retention, nevertheless it remains as an ever present menace. The great danger apart from the indescribable suffering endured, is the damming of the urine back onto the kidney, and the development of acute uraemia. Acute retention is usually the result of acute congestion of the veins at the vesical neck, and consequently no amount of hot poultices, of hot hip baths, or any of the so-called expectant treatment is likely to have the slightest effect.

Radical measures must be used at once. A soft rubber catheter should first be tried, and in the majority of cases—where there is no stricture and where no false passage exists—a little patience and perseverance will accomplish the desired result. This failing, the semi-flexible catheter moulded to the prostatic curve should be tried, and in the event of this also proving futile, a metal catheter may be introduced. I may say, however, that where the webbed semi-flexible catheter has failed, the metal one is not likely to succeed.

All attempts having failed to introduce a catheter, no time should be lost in either temporary tapping the bladder or doing a cystotomy for drainage. If the surroundings are at all suitable, a cystotomy should always be done, as it will require some time for the congestion to subside and thus make patent the natural channel; but where this is inconvenient or impossible, the bladder must be tapped by trocar and cannula until suitable arrangements can be made to have the drainage established. If much time will be consumed in making such arrangements, it is better to leave the cannula in position rather than have to make several punctures.

Acute retention never occurs without leaving behind some serious result, and the longer it remains unrelieved the greater will be the disaster which follows. Atony almost invariably follows in its wake, and the condition passes from one of acute, to one of chronic retention. Hæmaturia is not an uncommon complication. As a result of the means employed to obtain relief, cystitis not infrequently is one of the various train of results following acute retention. Suppression and uraemia sometimes form the end result in this unfortunate class of case.

*Chronic Retention.* This condition is almost invariably caused by atony of the bladder walls, though occasionally it may be the result of the prostatic obstruction itself. The first may be tested by watching the force with which the bladder will empty itself through a catheter. If the urine drops perpendicularly down from the end of the instrument, atony may be assumed as the direct cause; while if the stream is expelled with considerable force, the cause may be looked for in an obstruction from the prostate itself. If atony is present, a catheter should be tied in the urethra for two or three weeks, and by thus keeping the bladder empty the tone of the wall may be recovered. If the chronic retention is caused by the prostatic obstruction, it is obvious that the obstruction must be removed.

*Vesical Atony.* Atony of the bladder walls, it will thus be seen, is a very serious condition indeed. In extreme cases it cannot be completely remedied even by the subsidence of the congestion around the vesical neck, nor yet by the removal of the prostate. In almost all cases, however, it can be greatly improved by habitual catheterization. The bladder should always be kept from becoming at all distended, and to accomplish this a catheter should be passed regularly and the last drop of urine drained away. By thus preventing distention, the tone of the bladder walls will, in the majority of cases, improve to a very great extent.

*Irritability of the Bladder.* Irritability cannot, in the true sense of the term, be considered a complication, but rather a symptom of prostatic hypertrophy. It may also indicate the presence of cystitis, of a calculus, or even of malignant disease. It may, however, in some cases, from its mere persistence and extreme annoyance be considered a complication. In the absence of cystitis or a calculus, this extreme irritability is usually caused by either the very rapid growth of the prostate or simple congestion. If no prostatic enlargement is present, this irritability soon yields to treatment. Confinement to bed, hot hip baths, the bowels kept well opened, a bland diet and the administration of alkalies, will, as a rule, rapidly clear up the trouble. Where, however, any considerable degree of enlargement is present, these remedies will not suffice—something more radical is required. Twenty drops of

a one or two per cent. solution of nitrate of silver passed into the neck of the bladder immediately the urine is drawn off, I find to give the best result. A one per cent. solution of protargol used in the same way sometimes answers equally well.

*Calculus.* Calculus is an exceedingly common complication in prostatic cases, some observers stating that stone will be found in one case in every five. This is the result of the presence in the bladder of a collection of stagnant urine in the post prostatic pouch, and consequently cannot be reached by a sound. They do not produce the ordinary symptoms because the stone never comes into contact with the neck of the bladder. The possible and even probable presence of stone in many cases of great irritability is a strong argument in favor of suprapubic cystotomy for drainage in these cases; as, by this method, the stone is easily searched for and removed.

*Haematuria.* On account of the chronic state of congestion around the neck of the bladder, haematuria is fairly common in prostatic cases from the irritation produced from the passage of a catheter. If the presence of blood is due to this cause, it usually comes away after the withdrawal of the instrument, while if due to the rupture of one of the varicose veins in the mucus membrane, it is more likely to be mixed with the urine. Retention of urine by producing great distention of the bladder and thus causing rupture of some of the numerous varicose veins, is a frequent cause of hemorrhage.

In but very few cases is any treatment required. The blood will come away with the urine, and where clots have formed they will usually break down and come away in the same manner. Occasionally, however, a hemorrhage is very severe, when even the bladder may become distended with blood. In these cases large clots are liable to form, and the viscus can be felt as a hard lump above the pubes. When this is the case, a suprapubic cystotomy should be done at once, the bladder cleared and thoroughly irrigated with normal saline or saturated boracic acid solution at 110 degrees F. to check all bleeding. If much pain is present, opium may be given.

*Renal Complications.* Surgical kidney, nephritis or uraemia are some of the most serious of all the complications liable to be met with in prostatic disease. They are usually the result of back pressure on the kidney, and all care must be exercised to prevent this as far as possible. Regular catheterization is usually sufficient, though sometimes it may become necessary to fasten a catheter in the urethra to secure persistent drainage. Where again, this is not feasible, permanent drainage must be secured through either the perineum or above the pubes by establishing an artificial channel. Permanent drainage when well secured is usually a sufficient guarantee against uraemia.

*Indications for Radical Operation.* When palliative treatment ceases to improve the condition of the patient, then, if his general health warrants it, radical operation is urgently indicated. This will be in the case of decided prostatic enlargement in a person of probably advanced years, where the symptoms are so urgent as to require the passage of a catheter habitually to evacuate the bladder of its residual urine. In recommending operation, however, one must take carefully into consideration the nature of the growth, to ascertain if it is capable of being completely enucleated, and above all, that there is nothing to contra-indicate operation—such as acute cystitis or acute or chronic nephritis. In practically every such case it will be found that a catheter has been long in use, probably for some years, and that the main indication for operation is the supervention of one of the complications so certain to appear at some period in the life of almost every prostatic. The most constant complication demanding operative interference is usually to be found either in a persistent cystitis, or great difficulty (or even the impossibility) of passing a catheter.

I am yearly becoming more firmly of the opinion that in the case of an otherwise healthy man, whose necessity for using the catheter is very frequent, that the supervention of serious complications should not be waited for, but should be anticipated, and the prostate removed at this time, when the mortality rate is so low as to be almost nil. Serious complications are certain to occur sooner or later, and if time is taken by the forelock, many valuable lives are thus certain to be saved.

There is one more danger, and that an exceedingly serious one, in delay; one which should weigh heavily in favor of early operation in all cases where a catheter must be used habitually. In this, I have reference to the ever present danger of the development of carcinoma from the constant irritation of the passing catheter.

In a progressive case of prostatic hypertrophy, any treatment other than radical invariably ends in disaster. At first the patient may be greatly encouraged by the results of catheterization, but as the growth becomes larger and causes greater obstruction, and contamination is introduced from time to time by an unclean catheter, the condition of the patient grows from bad to worse, until finally the clinical picture is dismal in the extreme. In the majority of cases which give any serious trouble at all, palliative treatment is only procrastination.

There are few diseases which cause more misery and suffering amongst men in the afternoon and evening of life than chronic hypertrophy of the prostate; and he who is the victim of this deplorable condition must indeed look forward into a dismal future, unless relieved by the surgical measures within our reach to-day. "Catheter life" should be a condition of the past, except in those cases where for some

definite reason operation is contra-indicated, as we all know the utter futility of attempting to cure a condition such as this by any means other than its removal.

The diagnosis of enlarged prostate is not a difficult matter, and having been made, no time should be lost in securing for the patient that complete relief which surgery alone can give. In advising operation, one must not lose sight of the fact that it is a serious one; that it involves a considerable risk, but not more so than many other operations which are being daily advised and performed. If we realize our responsibility in advising this operation, we must do so to an even greater extent if we do not advise it, for to temporize with an enlarging prostate which had already commenced to give trouble, is only to invite certain disaster. It has been truly said that deaths occurring after prostate operations "ought to be attributed to want of operation at the proper time, rather than to the operation done as a last desperate chance to save a dying man."

*Indications for Operation.* In all cases where palliative treatment has been given a fair trial, and yet failed to produce results, radical treatment in the form of total enucleation of the gland is urgently indicated—provided always that the growth is of such a nature that it can be removed, and there is nothing in the general health or age of the patient to contra-indicate this procedure. The immediate cause of reference to the surgeon in the majority of cases is usually one of acute complications—difficulty in passing a catheter, recurring or chronic cystitis, calculus, acute retention or persistent hemorrhage. When a patient once becoming the victim of regular catheterization, could only foresee the baneful results of such practice long continued, he would have no hesitation in submitting to the radical operation before any of the above baneful complications ensue, and at a time when the mortality is so low as to bring the operation within the realm of almost perfect safety. The danger in prostatectomy is increased in proportion to the amount of secondary troubles which have already ensued. When undertaken at a period before the advent of any complication, the mortality should be almost nil.

*Choice Of Route.* A considerable difference of opinion has existed as to the best route through which to attack this offending organ. The perineal and suprapubic routes both have their staunch supporters, and each has some advantages over the other. The operation which I find to give the best permanent results, and that which I am in the habit of performing, is that devised by P. J. Freyer, surgeon to St. Peter's Hospital for Stone and Other Urinary Diseases, London, Eng. It is a suprapubic operation.

Now, why do I favour the suprapubic rather than the perineal

route? Because a complete enucleation, if done early, means a complete cure. The power of retaining and voiding urine in the natural manner is restored. The wound speedily granulates, leaving no urinary fistula. There is no return of the symptoms, and, furthermore, since the ejaculatory ducts are left intact, there is no diminution of sexual power. This latter is indeed a very strong reason in favour of this route, because so many cases presenting themselves are not far beyond the age of fifty.

Can so much be said for the perineal route? I think not. In the first place, perineal prostatectomy is not a total enucleation, but a partial extirpation of each lobe. If total enucleation is accomplished, it must only be at the expense of the ejaculatory ducts—a very serious drawback indeed. If the ducts are left intact, it can be only after leaving a small portion of each lobe, a condition to be avoided if at all possible for many reasons. Primarily, the presence of any remaining glandular tissue favours the return of the former symptoms. In at least some cases where a portion of the gland is left to protect the ejaculatory ducts, even this portion may cause enough compression on the urethra to prevent the bladder completely emptying itself, hence we have the first retrogressive step toward old conditions—residual urine. This, of course, occurs in only a small percentage of cases, but it does occur.

The most serious drawback and gravest danger in leaving behind any portion of prostatic tissue, is that it is conducive to the ultimate development of cancer. That this is a very real danger indeed we knew, because in a large percentage of cases of prostatic cancer, the malignancy is grafted onto an adenomatously enlarged organ. Some observers calculate the percentage of adenomata of the prostate degenerating into cancer as high as ten per cent., and some even higher. Now, are we not as likely to have just as high a percentage of malignancy develop from a portion of the gland left behind as from the entire organ? By the perineal route the operator must decide this question: Shall I enucleate the gland in its entirety and thus run the chance of destroying sexual power, or shall I leave that portion protecting the ejaculatory ducts, thereby leaving a condition which in at least one case in ten, may, as life advances, degenerate into malignancy?

Then once again, by the perineal route it is a common thing for a temporary urinary fistula to remain, and in several instances I have known this condition to remain permanently.

No hard and fast rule can be laid down as to the manner in which a prostate must be removed. One operator chooses the suprapubic route; another, of just as great eminence and just as wide experience, prefers the route through the perineum, and each man appears to have equally

satisfactory results. The fact is, that no man should employ one route to the complete exclusion of the other, for there are many cases in which the organ can be removed much more easily and with greater safety to the patient by the route other than the one usually employed by him. Though in my own practice, I prefer and invariably employ, whenever possible, the route over the pubes, yet in certain cases—such as a small adenoma presenting very little or no vesical prominence—I would employ the perineal route. Every surgeon should be thoroughly conversant with both methods, and use the one which appeals to him as presenting the greatest advantage in each particular case. A fairly good rule by which to be guided is to use the upper route in all cases where the vesical prominence is at all marked; the lower where the cystoscope shows little or no projection into the bladder.

*Preparatory Treatment.* The average patient presenting himself for prostatectomy is not a promising subject for any operation, due to the fact that, as a rule, his system is already undermined by cystitis and the various complications incident to the presence of residual urine, or the continued passing of a catheter which is not as aseptic as it ought to be. Furthermore, arteriosclerosis is very frequently present.

The first essential for success in this operation is careful preparation of the kidneys. This is particularly true in those cases where no catheter has been used. We have all seen the old man, decrepit and frail, with marked arteriosclerosis and foul bladder due to long usage of a catheter, successfully stand a difficult prostatectomy and be well. We have also seen the man of younger years, apparently strong, and with no cystitis because a catheter has never been used, gradually weaken and die within a fortnight after operation. Why is this the case? I will venture to say that in practically every instance death is of acute nephritis and suppression of urine. If the occurrence of acute nephritis can be carefully guarded against beforehand, one of the gravest dangers in the operation has been overcome.

In enlargement of the prostate, be it ever so little, there is always a certain amount of residual urine. As this enlargement increases so does the residual urine, until at last the back pressure from such becomes a definite factor in the function of the kidneys by preventing free passage of the urine through the ureter. Should this pressure be kept up constantly for some considerable period of time, and then be suddenly relieved by removal of the prostate, thus allowing the urine to pass unobstructed, the effect on the kidney may be such as to throw it into a state of acute congestion, and even apoplexy of the kidney may occur. This will in many instances, especially where a chronic nephritis exists, result in acute nephritis and suppression. This applies particularly to those cases in which no catheter has been used. Practically all catheter cases will be free from the ill effects of back pressure.

To obviate this danger and render safer the operation about to be performed, some time may be necessary. It is well to commence by drawing off the urine per catheter every eight hours, gradually diminishing the time until at the end of a week it is withdrawn every two hours. A week will usually put the patient in good condition, though occasionally a longer time may be necessary.

Of course, in the case of a foul bladder, operation must not be undertaken until by the use of irrigations it is made perfectly clean and free from bacteria. Urotropin in ten grain doses will be found of much value in improving the condition of the urine.

Several consecutive twenty-four hour specimens should always be examined. The quantity and specific gravity are the most important factors. Albumin and blood in varying amounts are almost invariably present, but in the presence of other favorable conditions should not be considered contra-indications to operation. Of much more significance is the quantity and specific gravity. If the quantity is small, and specific gravity under 1010, operation should be delayed for several days until they are both increased by the forcing of fluids.

*Cystoscopy* does not add much to our knowledge in preparing a patient for operation. An enlarged prostate is usually diagnosed without difficulty, and its effects are self-evident. Moreover, the use of the cystoscope in these cases does occasionally produce acute retention.

Never remove a prostate in the stage of acute retention. If a catheter cannot be passed, suprapubic cystotomy should be done and the bladder allowed to regain its tone before attempting any more radical measure.

Some of the more important essentials for success may thus be enumerated:

1. Use wherever possible the suprapubic route.
2. Prevent as thoroughly as possible beforehand the advent of acute nephritis or uraemia, by avoiding the sudden relief of back pressure on the kidneys.
3. Secure high specific gravity and large quantity of urine before operating.
4. Never remove a prostate when the bladder is in a state of acute retention; neither when it is in a state of acute cystitis.

*Suprapubic Prostatectomy.* In the immediate preparation of a patient for operation, I always have the pubes shaved the night before, and after thoroughly cleansing the skin right up to the umbilicus with green soap, have a sterile dressing placed over it until the following morning, when the parts are well painted with iodine. On the evening before is also given two ounces of castor oil or laxol, which in turn is followed in the morning by a high simple enema. No more attention is

required until the patient is on the operating table and under the anæsthetic. If possible, a soft catheter is now passed into the bladder, and if not, a gum elastic or any one which can be passed. Through this the viscus is thoroughly washed out with a hot normal saline or boracic solution, and the irrigation continued until the solution returns clear. The bladder is now left full and the end of the catheter clamped to prevent the return of the fluid.

In all cases where the bladder can be made reasonably clean, it should be left full of fluid to ensure greater safety in opening it from above, as the peritoneal reflection is thus forced out of the way; but where there is strong probability of infection, I prefer to drain the bladder dry before opening, then by carefully dissecting back the peritoneal reflection, the viscus may be opened in perfect safety. By so doing any infection from the bladder will be prevented welling out through the fresh wound, and the prevesical space thus kept free, and a consequent more speedy convalescence is obtained.

The bladder having now been thoroughly cleansed, and the catheter left in position as a guide in commencing the enucleation, the dressings are removed from the suprapubic region and the whole again lightly painted with iodine. The surgeon now stands on the left of the patient, with his left hand gloved for intra-rectal manipulation, his right hand bare that the finger-nail may be used in the enucleation. The patient is now placed in the Trendelenburg position and the skin incision, commencing at the pubes and extending upwards in the median line at least three inches toward the umbilicus, is made. In very fat men this may have to be considerably longer. This incision is carried through the skin and superficial fat till the recti muscles are reached. These muscles are now separated with the handle of the scalpel till the prevesical space is opened. All bleeding points are stopped by forepressure, and the finger introduced into the lowest angle of the wound to catch the prevesical fat and push it upward off the bladder. This should be stripped up until the peritoneal reflection is reached, which in turn is pushed up out of danger, and the bladder immediately appears deep down in the wound. It will be easily recognized as a tense bulging of a bluish white colour. In a good light its glistening surface is seen to be covered with small veins, while larger ones may be easily recognized coursing underneath. Two large veins running downward from the visceral apex to the prostatic plexus may be readily recognized, and it is between these that the bladder wall is opened after it has been picked up by a couple of pairs of toothed forceps. The scalpel blade is pushed boldly through the wall and the incision carried down to the symphysis pubis, then upward far enough to make the bladder opening about one and one-half inches in length, being careful to avoid the peritoneal fold. If more

space is required the incision should be extended downward below the pubis symphysis.

As the fluid flows out freely, the two forefingers of the right hand are carried into the bladder, and a thorough exploration made. The internal end of the catheter is located, the internal orifice defined, and the thickness of the growth easily ascertained. It is now well to put a few sutures through the cut edges of the bladder wall to temporarily fasten it up to the recti muscles to prevent injury to the tissues in the prevesical space during the manipulations of removing the gland. I have found this precaution of much value in promoting rapid healing afterward.

The two forefingers of the gloved left hand are now carried into the rectum, and the prostate pushed upward, making its prominence in the bladder much more distinct. In this manner the growth is handled securely between the fingers of both hands. Its exact size and shape and attachments can now be readily made out, and the left hand holds it firm and prominent while the manipulations are being carried on by the other.

In order to get a clearer mental picture of the task before us, it may be well to briefly refresh our memories on the anatomical relationship of the gland. The prostate in its normal condition is composed of two lobes laterally situated on either side of the urethra. Each lobe is enveloped in its own sheath or true capsule. These capsules are united in front of, and behind, the urethra, by bridges of tissue, thus forming the anterior and posterior commissures. Along the posterior commissure, and at its upper extremity, the ejaculatory ducts pass, one lying on either side close to the inner border of the capsule, but not penetrating it, until they empty into the urethra. Each lobe moreover has its own gland ducts emptying into the urethra, so that it will readily be seen that the two parts of the prostate are entirely separate and distinct from each other.

Over the entire organ as thus constituted is another covering or capsule enveloping both lobes, and composed mainly of recto-vesical fascia. Thus we have two separate organs, each embedded in its own capsule, and the whole encased in a separate sheath or outer capsule. In this present operation this outer capsule is left, the inner lobes alone with their enveloping sheaths being shelled out.

In the normal prostate there is no middle lobe, the so-called middle lobe being but an overgrowth from one or other, or both, the lateral lobes. In the hypertrophied organ one or both lobes will be bulging to a considerable extent into the bladder. McGill was the first to advise, and Freyer the first to make use of his suggestion, that no sharp instrument such as scissors or scalpel be used to sever this outer sheath, as it is very

difficult to do so without also cutting through the true capsule. If the inner capsule is severed, the finger flounders around in the substance of the gland, which is accordingly removed piecemeal, and the ultimate results are far from satisfactory. With the finger-nail it is a comparatively easy matter to tear through the outer sheath, when a definite line of cleavage can be made out, and the finger having once definitely found this line, the greatest difficulty in the operation has been overcome.

One of two points may be chosen at which to commence the enucleation; either at the most prominent portion of each lobe, or at the urethra. This is a matter of choice which must be decided in each individual case. Having decided on the point at which to commence, and torn through the outer capsule with the finger-nail, the finger is gently insinuated between the inner and outer sheath; stripping downward and backward it then sweeps around latterly to the front, stripping the lobe out of its shell, as it were. During this process the two lobes usually become separated along the anterior commissure and the urethra is readily detected by the presence of the catheter. The ejaculatory ducts lying close to the capsule are left intact, the finger stripping the gland away, up to the point where they enter the urethra. The finger is now carried well down behind the inferior surface, and the gland stripped from the triangular ligament. The lobe is now lying entirely free in its outer sheath except for its lateral attachment to the urethra, which is usually torn across in its removal. This, however, will prove of no serious moment to the patient.

If, as frequently happens, the two lobes are so densely adherent along the posterior commissure as to be inseparable, the whole organ will have to be enucleated at once. In this case after stripping it free on all sides, after stripping it off the triangular ligament below, and after separating it from the ejaculatory ducts, it will be found to be hanging free on the urethra. The urethra should now be deliberately torn across at a point behind the entrance of the ejaculatory ducts, because at this point there is the satisfaction of knowing that this damage to the urethra can result in no harm whatever. As a matter of fact, the urethra is torn across at this point in more than ninety per cent. of prostatectomies.

The prostate having now been removed, the toilet of the wound is commenced. Through the catheter, which has been left in the urethra throughout, the bladder is flushed with a hot saturated solution of boric acid, the washings coming away through the upper wound. This process is continued until all clots and debris are removed, and the solution wells up quite clear. Hemorrhage is seldom troublesome, as the prostate, except in a condition of acute inflammation or congestion, is not a very

vascular organ. Should the bleeding prove at all serious, the temperature of the irrigating lotion should be increased to 110 degrees or 112 degrees F., which will usually control it without difficulty. Bimanual kneading will sometimes accomplish much. This is done by manipulating the two forefingers of the left hand in the rectum against those of the right hand in the prostatic sheath. In rare instances the cavity of the prostatic sheath may have to be packed.

The hemorrhage having entirely ceased, as shown by the irrigating fluid welling up perfectly clear through the wound, the temporary sutures fastening the cut edges of the bladder to the recti muscles are withdrawn, and the bladder wall allowed to drop back to the bottom of the wound. To complete the operation two methods are now possible. If the prostate is at all large and the bladder foul, the viscus should invariably be drained; if the prostate is small and the bladder free from contamination of any kind, it will be better if experienced after care can be had, to close the wound up tight at the time.

If it is to be tightly closed, great pains should be exercised in carefully approximating the cut edges of the bladder wall, then the balance of the wound is closed by layer sutures. If this method is pursued, it will require the exclusive attention of one house surgeon for at least twelve hours subsequently. A catheter is left in the bladder per urethram, and every four or five minutes it is carefully washed out with a few ounces of boric acid solution. This prevents the formation of clot and carries away any blood which may be oozing from the prostatic sheath. The periods between each washing may be gradually lengthened, until in twenty-four to thirty-six hours they may be discontinued altogether, as by this time all hemorrhage will have ceased. The catheter is left in the bladder, however, until the suprapubic wound is entirely healed. This method may only be used in selected cases, and its advantages are simply in the short time in which a patient is confined to bed.

In much the larger percentage of cases the bladder will require drainage, and in these a large India rubber drainage tube (I use red because it is usually softer and more pliable, thus producing less irritation) is introduced into the bladder at the lowest angle of the wound. As it is very essential that all the urine should pass through this tube, in order that none may well up into the prevesical space and thus cause cellulitis, it is very necessary the tube should be of large calibre. I now invariably use one four inches in length and seven-eighths of an inch. This allows the wound to grip it tightly, and prevent the escape of any urine around it.

Two large eyes should be cut in the tube on opposite sides and close to the vesical end, and these introduced just inside the viscus. Under

no circumstances should the tube be carried down to the prostatic cavity, as that must be kept free from irritation. As a rule one inch of tubing inside the bladder will suffice.

No buried sutures are ever used, as they invariably become infected by the urine and cause cellulitis. A couple of deep silk worm gut sutures will now bring the wound together, and a thin strip of gauze may be carried down beside the tube to the prevesical space, and left in position for twenty-four hours. It is well to pass one superficial suture through the skin and tube to keep it in position.

The bladder is now once again flushed out with boracic lotion to see that it is free from blood clot and that drainage is free, after which the catheter is removed, the wound covered with a moist gauze dressing, and the abdomen and sides deeply swathed in absorbent cotton.

*Perineal Prostatectomy.* In removal of the prostate gland through the perineum, the preparation is much the same as when the route over the pubes is chosen, the main point of difference being in the time the purgative is administered. When operation by the perineal route is to be undertaken, it is well to give a purgative of two ounces of castor oil or laxol on the second night preceding operation, and an enema the following morning. In this way the effects of the purgation are all over before the sterilization is commenced. The balance of the preparation, cleansing the skin of the perineum, painting with iodine, etc., is carried out in a manner similar to that when the suprapubic route is chosen.

The earlier attempts at perineal enucleation were carried out through an external urethrotomy opening, but these have long since been abandoned as impracticable because of the lack of sufficient room. To accomplish the best results the posterior surface of the gland must be fully exposed by an elaborate perineal dissection. The varieties of the operation thus performed are about as numerous as the number of men who extensively do this work, each man having his own particular modification. Two particular features, however, stand out prominently in each and every modification; viz., the thorough exposure of the posterior surface of the gland, and the bringing of it well down into the wound where it can be seen as well as felt. If these two essentials are carried out, it makes little difference in what manner the further steps of the operation are completed.

The technic of perineal prostatectomy by an elaborate dissection, thus permitting the complete removal of the gland (with the exception of that portion which is left for the preservation of the ejaculatory ducts) was first formulated by Proust, of Paris, and later elaborated by Dr. Young, of Baltimore. It is in reality the only method in which to remove the prostate per perineum. For this purpose it is best to have

the patient in an exaggerated lithotomy position with the pelvis raised to an angle of at least forty-five degrees from the horizontal plane, and the thighs fully flexed and held apart as far as possible. It is found that this position gives the greatest possible amount of room, and consequently much greater ease in drawing the prostate down into the field of operation.

The bladder having been emptied and thoroughly irrigated until the return flow is as clear as can be obtained, a grooved metal sound is now introduced into the viscus and held tightly against the pubic arch in order to retract and protect the bulb of the urethra in the operative field. An incision, V-shaped, with its apex in the median line and midway between the anus and the root of the scrotum, is now made through the skin and superficial structures, and may be lengthened as far as necessary to give sufficient room. The external sphincter ani is divided through its attachment to the perineal centre, and then by continuing the dissection posterior to the transverse perineal muscles, the posterior layer of the triangular ligament is defined. By now exercising the greatest care not to injure the bulb in front nor the rectum behind, the dissection is carried down between the centrum tendineum and the triangular ligament dividing the attachments of the muscles surrounding the bulbous and membraneous portions of the urethra. This dissection should be carried out with a pair of scissors, and the fibres divided very close to the membraneous urethra in order to prevent the dissection from being carried below the posterior layer of the aponeurosis of Denonvilliers.

The rectum can now be pushed back out of the way, and the posterior surface of the prostate covered by the levatores prostatae muscles, exposed. The prostate will now in most cases be found to recede away from the finger when it is touched. It is well at this juncture to open the urethra at the apex of the prostate, and after withdrawing the sound already in the bladder, to introduce through the new opening a tractor with which to draw the gland well down into the wound. Probably the best instrument for this purpose is that devised by Dr. Young, of Baltimore. It is a perfectly straight instrument with reversible flanges, which when opened out in the bladder come in contact with the vesical surface of the prostate, and gentle traction holds the gland firmly in the wound during enucleation.

The prostate being now firmly held down in the wound, its sheath, which is in reality the anterior layer of the aponeurosis of Denonvilliers, is opened by a longitudinal incision on either side, and close to, the urethra. Dealing through each one of these incisions separately, the finger is insinuated between the layer of fascia and the capsule of the prostate, and the gland gently shelled out, commencing on the side farthest

from the urethra. After freeing this portion, it is separated below and then above from the vesical membrane, great care being taken to prevent an opening into the bladder. The lobe is now hanging free on the urethra and the ejaculatory duct. The other side is now similarly dealt with and the prostatic tractor removed.

The opening in the urethra is now enlarged by lengthening the incision from the apex of the prostate to the neck of the bladder, and the finger introduced to act as a guide in separating the prostatic lobe from it. In order to prevent contusion, it is better to effect this separation by means of scissors. In many cases a careful dissection will save the prostatic urethra, though in the majority of cases, and especially in all those whose lobes have become densely adherent along the posterior commissure, the urethra must be sacrificed.

Two distinct methods are used in dealing with the ejaculatory ducts. Proust, the leader of the French school, advises their ligation, believing by this means to prevent the onset of orchitis, and also by so doing he is able to remove the lobe in its entirety. The great drawback to this is, of course, the destruction of sexual power.

Young deals with the ejaculatory ducts in an entirely different manner. His incision into the prostate on either side of the median line is made with a scalpel, and is carried down through each lateral lobe parallel to, and as deep as, the urethra. This leaves between these two incisions a definite and distinct bridge of prostatic tissue, including both the posterior commissure and the ejaculatory ducts intact. That portion of prostatic tissue lying external to this incision is now freed from its sheath and its attachment to the urethra and anterior commissure divided by scalpel or scissors, thus leaving also in position and undisturbed the anterior commissure as well. It will thus be seen that Proust does a total prostatectomy, and by so doing destroys sexual power. Young, latory ducts, preserves sexual power and accomplishes but a partial prostatectomy.

Through the opening in the urethra, the interior of the bladder is now explored to ascertain if there is any further outgrowth, or a calculus in the post prostatic pouch. This is best accomplished by the finger.

Each prostatic cavity is now packed with gauze and a drainage tube carried into the bladder through the urethral opening. As it is necessary in many cases to maintain continuous irrigation for some days, it is well to introduce a catheter through the penis. The calibre of the prostatic urethra is usually large enough to accommodate both these tubes, when, if not, a double one should be carried through the perineal opening.

Around the perineal tube the prostatic urethra is now sutured with

interrupted catgut stitches, and after leaving free beside the tube the end of the gauze which is used for packing the prostatic cavity, the perineal wound is closed by interrupted sutures of silk worm gut.

In the subsequent treatment the irrigations are best carried out by allowing the fluid to pass in through the penile catheter and out through the perineal tube. The gauze packing the prostatic cavities is loosened on the second day, and removed at the end of a week. The tubes are removed about the same time. For at least another week the bladder should be irrigated per catheter per urethram.

*After-treatment and Complications.* The after-treatment in prostatectomy cases is of the utmost importance, and the ultimate success of the operation will depend to a very great extent indeed upon the care and judgment with which it is carried out. The patient should be kept lying flat on his back in the prone or semi-prone position, for at least twenty-four hours, after which he may be turned alternately from one side to the other. For the first few days, at least until after the drainage tube has been removed, he should not be allowed to make any exertion of any kind himself for fear of starting a hemorrhage, and any change of position should be effected with the aid of a nurse. Any oozing of blood will generally be controlled by the administration of ergotin by hypodermic injection. Mild shock, a very frequent accompaniment of severe operations on the prostate, may be combatted by hot water bottles, by hypodermic injections of camphorated oil and by enemata of hot strong coffee and brandy. Occasionally severe pain is present, and should be controlled by morphine given hypodermically. The head and shoulders should be raised as shortly after twenty-four hours as possible, in order to prevent hypostatic congestion of the lungs or pneumonia, a condition so liable to develop in old men of the prostatic age.

According to the quantity of urine secreted, the dressings should be changed every four to six hours. During the first twenty-four hours there will likely be found some blood-clots in the drainage tube, and these should be carefully removed with dressing forceps at each dressing. For the first week the bladder should be irrigated daily with a saturated boracic acid solution, to remove all clot and debris, and keep the viscus perfectly clean. This irrigation is best effected by introducing the nozzle of a fountain syringe into the rubber drainage tube in the bladder and letting the solution flow in gently. Care should be taken to avoid too great a force to the flow, otherwise it may dilate the prostatic sheath and commence oozing of blood. If the irrigating bag is placed about a foot above the level of the patient's abdomen, it will usually be found to have force enough.

When the suprapubic route is chosen the time for removal of the drainage tube will depend on the thickness of the abdominal wall. In

the average individual, it should be removed in four days, while in a very thin person three days will be quite sufficient time to leave it; and again in a very stout man it may become necessary to leave it five days. It should be left in position until a coat of lymph has filled the pre-vesical space and thus prevented the danger of infection and cellulitis from that source. It used to be my practice, on the removal of the large tube, to replace it by a smaller one; but for some time past I have discontinued this, and when the large tube is removed, simply leave the wound open and allow it to granulate as speedily as nature will permit.

About the tighth day primary union will have taken place in the wound, save in the track left by the tube, and the stitches should now be removed. After the fifth or sixth day it is well to flush the bladder alternately per urethram and per the suprapubic opening. One day it is flushed by introducing the nozzle through the opening last mentioned and allowing the solution to flow back around the nozzle. The next day a catheter is introduced through the urethra and the flow allowed to pass out through the opening above. In this way the bladder is kept constantly flushed out and perfectly clean. During the transition period between the time when a nozzle cannot be introduced through the suprapubic opening, on account of its contraction, until it is entirely closed, the bladder will require to be washed out per urethram each alternate day.

Prior to operation the bowels should be thoroughly evacuated daily for at least three or four days, and on the morning of the operation when the suprapubic route is chosen, the lower bowel should be thoroughly cleansed by an enema. Succeeding operation, the bowels should be left perfectly quiet for the first three or four days, and then a gentle movement obtained by the use of castor oil, after which they should be kept moved at least once every day.

If all goes well the patient should be allowed to sit out of bed in from a week to ten days' time, and under ordinary circumstances the wound will be entirely closed in from three to four weeks.

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Every practitioner in Ontario should be making his arrangements to attend the meeting of the Ontario Medical Association this year in Toronto. An excellent programme is in preparation, and the date fixed is May 26, 27 and 28.

## CURRENT MEDICAL LITERATURE

## SURGERY

UNDER THE CHARGE OF A. H. PERFECT, M.B., SURGEON TO THE  
TORONTO WESTERN HOSPITAL

## CONTROL OF CANCER.

J. C. Bloodgood, Baltimore (*Journal A. M. A.*, December 27), says that while we have evidence that cancer can be cured if taken in time, many physicians are still skeptical and the patients themselves sometimes question the diagnosis when they find themselves relieved. We have therefore to meet this skepticism in both the profession and the public. The proportion of cures of fully developed cancer, i.e., cancer in which there can be no doubt as to the histologic evidence of malignancy, is small, but cures have been made and the possibility of increasing their number is by no means out of the question. In the Johns Hopkins Hospital Surgical Clinic 80 per cent. of the cases that could be diagnosed only by exploratory incision or after operation were cured, while in the cases that could be diagnosed as cancer by retraction of the nipple or skin adhesion the proportion of cures after five years was 25 per cent., but both tumours alike were pathologically the same. It is the same type of cancer, yet the patient has eighty chances in one case to twenty-five in the other. This needs to be impressed on the profession and the public: that waiting for a possible clinical diagnosis means greatly lessening the chance of cure. This is true of all types of cancer in all parts of the body. Everywhere that we find cancers we also find tumours or growths which histologically are not cancer, and Bloodgood, in studying 820 pathologically developed cancers, found no well-taken history that did not reveal a previous defect that might be accepted as one of these so-called benign growths. He calls these "precancerous" growths, and believes that with their early recognition we can greatly reduce the cancer mortality, especially that from external or mucous membrane cancer. In cancer of the internal organs it is more difficult to demonstrate the precancerous lesion. In cancer of the stomach the patient is fortunate if the appearance of obstruction is early, and his chances are greatly lessened if the early symptoms are slight. In curable cancer good surgery is important, and delay or too restricted operation may be disastrous. Bloodgood goes at some length into the description of the groups of cases of malignant disease, those hopeless and inoperable which can at best have only palliative measures for their relief; those

clinically malignant but offering a possible surgical cure, the clinically benign which are at first hopeful and the precancerous cases, on the timely recognition of which our hopes of the control of cancer mainly depends. In most external cases of the last type the lesion can be cut under local anesthesia at slight expense and inconvenience. In any apparently benign growth a properly performed operation does no harm and if malignancy is found existing it may remove a probable focus of future malignant disease. It is the education of the public on these matters that is needed at the present time.

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### CANCER OF THE PROSTATE.

P. J. Freyer, (*Lancet*) believes that it is possible to enucleate the prostate complete in every case of cancer in which the disease is confined within the true capsule of the gland. When such can be accomplished, a perfect cure may be looked for with the fullest confidence in every case. The operation, moreover, should be attempted in every case in which there is any possibility of enucleation of the gland, even if there are marked adhesions to the surrounding structures, as, even if recurrence ensues, the operation always gives great relief to the patient for a considerable length of time. It also postpones the distress of a permanent suprapubic fistula, a procedure to be left as a last resort. Freyer believes that, when malignant changes develop in the gland before it undergoes adenomatous hypertrophy, it is not possible to remove it effectually by any method yet devised, because, by the time that the disease causes symptoms, it has already invaded the adjacent structures.—Russell Howard describes a new operation for the removal of a carcinomatous prostate, one which includes the removal of all pelvic tissues, . . . . "between the symphysis in front, the muscular coat of the rectum behind, the constrictor urethra below, and the entrance of the ureters above. . . ." With the patient in the lithotomy position, a horse-shoe incision is made in the perineum; the exposed muscular wall of the rectum is followed, the structures in front of it being separated from it to the level of the upper portions of the seminal vesicles; the lateral fibres of the levator ani are severed so as to free the prostate and the base of the bladder, and the wound is temporarily packed with gauze. Then, with the patient in the Trendelenburg position a suprapubic cystostomy is made, the incision being extended downward to admit the entire hand outside of the bladder. Stripping back the peritoneum, the loose tissue in the space of Retzius is removed; the posterior layer

of the triangular ligament is dissected from the pubes; the urethra is then divided distally to the fascia, and the lateral separation of the prostate and neck of the bladder is completed. The prostate, still in its capsule, together with the urethra and the neck base of the bladder, is drawn into the abdominal wound, and the base of the bladder is amputated just below the entrance of the ureters. After ligation of the bleeding points the bladder is replaced in the pelvis, and a rubber catheter, having lateral holes at the proper point, is inserted through the remaining urethra into the bladder and is carried out of the abdominal wound, thus allowing escape of urine in both directions. Both wounds are then closed and drained. Recovery is rapid. The abdominal wound is allowed to close first, later the perineal, and, by means of bougies, a urinary channel is established from the bladder to the remaining urethra. Control of urination is soon learned to the extent of a person's being able to retain his urine for six hours.—*New York Medical Journal*.

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#### CENTRAL DISLOCATION OF THE HEAD OF THE FEMUR.

M. HAUDEK (*Wien. klin. Woch.*, July 24th, 1913) records the case of a man, aged 60, who jumped on to a railway platform while his train was still in motion. He landed on his left foot, rotated to the left, and fell on his left side without much force. He felt no pain, and could walk five or six paces after he got up. Then he suddenly lost all power in his left leg, and had to be carried home. The point of insertion of the adductors was much swollen, and here and over the great trochanter there was pain on movement. Great pain was momentarily felt in the pelvis when this was raised. No fracture could be discovered, and a skiagram was too blurred to be instructive. The diagnosis of a mere bruise was confirmed by the patient being able to walk upstairs, and after six months climbing mountains for eight hours at a time. He felt, when defaecating, a sense of obstruction in the left side of the pelvis. After about a year and a half the whole of the left leg was much atrophied, and the point of insertion of the adductors and the great trochanter were painful when he rose from a chair or turned in his bed. There was 1.25 cm. of shortening the left leg, which was in a position of slight outward rotation and adduction. The great trochanter was raised 2 cm. above its fellow, and the limb could be flexed to an angle of 70 degrees. The pelvis followed the limb in movements of abduction, adduction, and rotation. A hard spherical body could be felt above the left Poupart's ligament in the depths of the pelvis. The left trochanteric region was somewhat flattened, and the distance between the tro-

chanter and symphysis was somewhat shortened. A second skiagram showed central dislocation of the head of the femur, two-thirds of which had penetrated to the true pelvis, where a secondary capsule had been formed. The great trochanter almost touched the anterior, inferior spine of the ilium. The ischium and the horizontal ramus of the os pubis seemed intact. The ilium was in direct bony contact with the new capsule formed around the head of the femur. It is rare to find such a lesion unaccompanied by others, and, out of 41 cases collected by Wörner, only 16 were unaccompanied by other lesions. The cause is usually a fall on to the hip or feet from a considerable height, and it is the exception for a slight accident, as in the author's case, to result in this lesion. The head of the femur must occupy a central position in the acetabulum, and the femur must be in a position half way between adduction and abduction if a direct blow on the trochanter is to effect a central dislocation. But such a relation between the bones of the hip-joint is rare. Other factors favourable to a central dislocation are a strong neck between the femur and its head, and a weak acetabulum. Hence this dislocation is exceedingly rare among elderly people, in whom the neck of the femur is relatively fragile, while the acetabulum is firmly ossified. Two cases have been recorded by Wolff of young adults, aged 18 and 21 respectively, in whom the lesions of the acetabulum followed the lines of union of its component bones. Enumerating the diagnostic signs of central dislocation of the femur, the author recapitulates the signs observed in his case, which was, apparently, typical. Latterly this dislocation has been reduced in a few early cases under anaesthetics. The limb is flexed and forcibly adducted, a wooden prop held on the inner side of the thigh acting as a pivot. Extension, lasting for at least six weeks, is then applied; and yet another four to six weeks if the dislocation is not reduced. In 70 per cent. of the recorded cases this accident was fatal, and in many others it was followed by much crippling. The author's patient was therefore unusually fortunate.—  
*British Medical Journal.*

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#### SOME INTRAABDOMINAL COMPLICATIONS FOLLOWING LAPAROTOMIES.

A. E. BENJAMIN, (*J.A.M.A.*), refers first to preexisting derangement of the functions of the alimentary canal, and speaks of the importance of a prolapsed stomach and colon. With adhesions around the pylorus, there may result dilation of the stomach which interferences with the large and small bowel action. In such cases the outcome may be

general intraabdominal tension, which forces the coils of intestine into close contact, and, in the presence of infection or any raw or denuded surfaces, adhesions necessarily follow which may be temporary or permanent according to the circumstances present. He then takes up the following points: Mucous colitis and membranes peri-colitis; state of the muscle tone of the abdominal wall; character of infection; raw surfaces or denuded areas left within the abdomen after operation; removal of appendix; operative traumatism; undue exposure of the viscera; foreign substances; drainage; closure of the peritoneum and of the abdominal wall. In speaking of the postoperative management the author says that in acute gastric dilation the stomach tube should be used at the earliest possible moment; a procedure which will save many lives and go a long way toward preventing the adhesions which follow in the wake of operations. Great care should be observed in the regulation of the diet, and the position of the patient should also be considered. If there has been extensive pelvic work done not requiring drainage, and especially if there has been a prolapsed stomach, elevating the foot of the bed will assist restoration of position and function of the stomach and intestines; often obviating the possibility of adhesions within the pelvis.—*New York Medical Journal*.

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#### THE SURGERY OF EXOPHTHALMIC GOITRE.

J. M. BATCHELOR, (*New Orleans M. and S. Journal*.), says it is generally agreed that ligation should be done in the very mild and in the very late or aggravated cases, when other and harsher measures would not be tolerated. Often the operation is performed in steps, allowing intervals of from a few days to a few weeks. Excision of gland substance is applicable, first, to cases of the second and third stage in which cure has not been effected by ligature, or which have been sufficiently improved to permit of the more radical operation; second, in cases where it is apparent that visceral degeneration is not extreme. The amount of gland to be removed cannot be measured by any rule that is applicable to every case. Removal of one lobe and the isthmus usually meets the necessities of a case, and this is regarded as a thyroidectomy, 'as practised by most surgeons. The dangers of thyroid surgery relating to anesthesia, infection, hemorrhage, and shock have been reduced to a parity with those connected with any other major surgical operation. The one intrinsic danger is acute hyperthyroidism. Crile believes that the final causative factor of this is traumatic stimulation of the brain, imparted by nerve impulses originating in the field of operation, and

recommends blockage of nerve impulse by the use of a local anesthetic. To eliminate the emotional element he advises that the patient be kept in ignorance of the day fixed upon for operation, and that at the last moment the anesthetic should be administered without the patient's knowledge. These methods are based upon the scientific principles of anoci association, and should always be employed in the graver types of the disease.—*New York Medical Journal.*

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## GYNÆCOLOGY

UNDER THE CHARGE OF S. M. HAY, M.D., C.M., GYNAECOLOGIST TO THE  
TORONTO WESTERN HOSPITAL.

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### THE DEATH OF MARY I. OF ENGLAND.

Mary Tudor, who was born at Greenwich Palace on February 18, 1516, was the only surviving child of Henry VIII. and Catharine of Aragon, his first wife and legitimate queen. Like her younger half-brother, afterwards Edward VI., she was mentally precocious, and at the age of nine was proficient in music and in the Latin tongue. As a girl she suffered much from dysmenorrhea and scanty menstruation. She was several times betrothed to various different foreign princes, but did not marry until she was 38 years of age. She was proclaimed queen at Norwich on July 13, 1553, a week after the death of Edward VI.; crowned at Westminster on October 1 of the same year; and married at Winchester on July 25, 1554, to Philip II. of Spain.

In due season after this it was believed that she was pregnant, a supposition for which her habitual menstrual irregularity easily gave occasion. But the abdominal enlargement, which gave further verisimilitude to this pseudocyesis, proved in fact to be due to an ovarian cyst. The mortification and disappointment associated with this episode combined with the physical discomfort of her disease to make the remainder of Mary's life miserable. The surgery of the time dared do nothing to relieve her. As the tumor grew she became progressively more cachectic. Finally, in September, 1558, she became infected with "the new burning ague," apparently a virulent influenza, then epidemic in England; and of this, a terminal ailment, she died on November 17, 1558. Her physician was Dr. Caesar à Dalmariis, a naturalized Italian.—*Boston Medical and Surgical Journal.*

## AN OPERATION FOR THE CURE OF RECTOCELE AND RESTORATION OF THE FUNCTION OF THE PELVIC FLOOR.

George G. Ward (*Surgery, Gynaecology and Obstetrics*) has utilized the following operation for the past two years with uniform success: A gauze sponge on a spongeholder is inserted into the rectum as a guide. Short bullet forceps are caught at each posterior caruncle immediately below the orifices of Bartholini's glands, care being taken not to occlude them. A third forceps is attached to the posterior vaginal wall in the median line, marking the crest of the rectocele. Traction is made on these tenacula and the resulting triangle is outlined with a scalpel. This triangle represents the excess vaginal wall which is to be subsequently removed. By inserting the blades of blunt pointed scissors in the line of cleavage and opening them widely, the vaginal wall is entirely separated from the rectal wall from side to side and as high up as the culdesac of Douglas. The rectum having been completely mobilized, a catgut suture is passed through the vaginal wall in the median line as high up as possible in the region of the cervix. The suture is brought down and made to catch up the lower portion of the rectum and made to emerge through the vaginal wall in close proximity to its original insertion. When this suture is drawn up and tied, it obviously carries the dilated rectum up with it far beyond the limit of the subsequent resection of the vaginal wall. The rectocele having been disposed of, the excess vaginal wall which entered into the formation of the rectocele is cut away along the lines marked out with the scalpel at the commencement of the operation, and the cut vaginal edges are then sutured together with catgut. A pair of closed scissors are then passed through the fascia in the vaginal sulcus. They are opened widely, and withdrawn, thus making a large buttonhole which opens into the space in which lies the levator. The index finger locates the anterior edge of the levator and the muscle is caught with a pair of sponge forceps and drawn out of the buttonhole. The opposite muscle is secured in the same manner, and they are sutured together in the median line with chronic catgut. The outer edges of the fascial buttonholes are next sutured together over the approximate muscles with catgut. The operation is then completed by passing three or four silk-worm gut sutures from the skin surface behind the entire muscular approximation.—*New York Medical Journal*.

## RETROVERSION, RETROFLEXION, AND THE GRAVID UTERUS.

Pacobs (*Prog. méd.*, Nov. 1, 1911) says that in twenty years he has

had to interfere thirty times to reduce a gravid uterus that was retroflexed or retroverted. In such cases the practitioner should use every measure to reduce the incarceration, before operating, and these endeavors may continue several days. The diagnosis is assisted by making pressure at the posterior wall of the vaginal junction with the uterus where the retrodisplaced fundus is felt. If such pressure causes a flow of urine, incarceration has taken place. By crowding backward and upward the uterus it indirectly lessens the pressure on the neck of the bladder. When the pregnancy is of but a few weeks standing reduction is comparatively easy, and the use of a Hodge pessary will keep the uterus in place. If the uterus is large, soft and fills the pelvis, the best result is obtained by placing two fingers in the vagina and trying to reach the promontory, at the same time crowding the fundus upward. The uterus is raised and at the same time made to roll forward by the pressure of the fingers. Success will be shown by a sudden yielding and slipping upward of the fundus. If these manœuvres are not successful, chloroform is given to produce relaxation and another attempt to reduce the uterus is made. The knee-elbow position may assist so that anesthesia will not be necessary. If the retention of urine persists, and edema of the vulva and lower pelvis comes on, with absolute constipation, the surgeon must interfere by laparotomy. In these cases it is the promontory that resists the rise of the uterus, which was situated low down at the time of conception and developed below it. Lesions of the adnexa, situated forward, such as ovarian cyst, may complicate the condition. The most serious condition that may be found is adhesion of the fundus due to past parametritis, pelvi-peritonitis, or annexitis. If these adhesions do not soften, the uterus remains bound down in the pelvis. These adhesions may be ruptured, and the necessary manipulations do not often produce abortions.—*American Journal of Obs. and Dis. of Women and Children.*

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### SUPRAPUBIC OPERATIONS.

G. MacGowan, Los Angeles, (*Journal A. M. A.*, November 22), points out certain difficulties in approaching the bladder by the usual longitudinal suprapubic incision from above and advocates a method that he has employed which he has never seen described which largely obviates these troubles. He makes an incision from 3 to 6 cm. long transversely through the skin and superficial and deep fascias to the sheaths of the recti muscles. This is made about 6 cm. above the pubic spine with a slight convexity upwards. When the muscle sheath is

divided its edges retract exposing the body of the muscle. Then the intramuscular septum as it dips down between the recti is slightly nicked below with scissors and rolled back with the sheath on each side, exposing the pyramidal muscles. The space between these is to be sought for and they are to be separated or pressed apart. As soon as this is done the recti muscles can be easily retracted. If the bladder has been previously filled with water or air it then appears in the wound, covered only with a little fatty areolar tissue. Sutures are passed through its muscular coat to hold it in place after the bladder is emptied. The incision into the bladder is then made either transversely or longitudinally. MacGowan prefers the latter. As soon as it is opened from two to four sutures should be inserted through all the coats of the bladder and the rectus muscle or its fascia on each side and the needed operations within the bladder can then be performed. When it is finished and there promises to be some continuous hemorrhage which might interfere with the closing of the wound it is partly closed and a large drainage tube is inserted, large enough not to be clogged with clotted blood. It should be placed so that the eyes will be in the bladder but not permitting its end to touch the bottom of the bladder and thus causing tenesmus or strain. The muscles are then sewed together and the edges of the sheath so that they overlap without tension. The details of this part of the operation are given in full in the paper. For many years MacGowan has used a system of continuous irrigation in suprapubic cystotomies in which the salt solution flowed into the bladder through a catheter in the urethra and passed out through a drainage tube. He later devised a method which seems superior in requiring no expensive apparatus and because it can be managed by ordinary attendants. A catheter a little longer than the drainage tube and about half its diameter but sufficiently large to prevent clogging is introduced through the drainage tube previously mentioned so that the eye of this catheter reaches about one cm. beyond the distal end of the drainage tube. The drainage may be continuous or interrupted, but he thinks it is best to begin with the latter to prevent lack of attention on the part of the nurses, but after the first twelve hours he uses continuous irrigation. The wound left after this operation does not heal any quicker than that left by the longitudinal incision, but it is a funnel-shaped wound from the skin to the bladder and everything is within sight. It leaves a good scar and no weakness in the abdominal wall. MacGowan does not see why the suprapubic operation should be considered so dangerous. He is sure that the wound made by this method would of itself never cause death.

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## PERSONAL AND NEWS ITEMS

*Ontario.*

Mr. John Ross Robertson has donated \$10,000 to the furnishing of the new wing of the Children's Hospital.

Dr. F. J. Doherty, of North Toronto, has gone to Port Coquitlam, British Columbia.

The new wing of the Chatham Hospital was opened a short time ago by Dr. John L. Bray, of Toronto, Registrar of the College of Physicians and Surgeons.

A new Isolation Hospital has been built in St. Thomas, and was opened last November.

Dr. James Forrest has removed from Mount Albert to Toronto, and is at 164 Dowling Avenue.

Professor B. P. Watson has removed from 320 Bloor St. West to 14 Madison Avenue, Toronto.

Dr. George McDonagh, Toronto, has gone to the Panama Canal and Barbadoes for an extended trip.

Dr. W. E. Ogden, formerly of the Muskoka Hospital for Consumptives, and who has been doing post-graduate work abroad, has returned to Toronto.

Dr. K. McIlwraith has gone for a trip to the climes of Europe.

The Sisters of Providence have opened a new hospital at Haileybury.

Dr. Hon. J. O. Reaume has returned from Europe. He visited France, Germany and Britain.

Dr. C. S. Murray left \$1,000 to St. Michael's Hospital, \$1,000 to the House of Providence, \$500 to the Sunnyside Orphanage, and \$500 to the Sisters of the Good Shepherd.

The district health officers find that there can be effected much improvement in the sanitary conditions of the Province, and are urging the local health officers to greater activity.

The Associated Charities of Toronto, as an organization, has gone out of existence, and handed its work over to the Social Service Commission.

\* Dr. and Mrs. A. Bowlby, of Waterford, celebrated their diamond jubilee a short time ago. He is now in his 93rd year. He studied at McGill in 1845-6, and passed the Lower Canada Medical Board in 1846. He also graduated from Columbia University, N.Y., of which he is the oldest living graduate.

The Nurses' Home of the old General Hospital, Toronto, is now used as a Measles Hospital.

The Ross Memorial Hospital, Lindsay, has fixed the following scale of charges: Public wards, \$1 a day; semi-private, \$1.50, and private, \$3.

The vital statistics of Hamilton for 1913 show that there were 237 more births and 183 more marriages than in the previous year. The statement is as follows: Births, 1912, 2,554; 1913, 2,791; deaths, 1912, 1,430; 1913, 1,393; marriages, 1912, 1,255; 1913, 1,438.

In the early part of January nine cases of smallpox were found in one family in Yarmouth Township, near St. Thomas.

Toronto's health was better in 1913 than in 1912, according to the evidence of various tables of statistics which were available recently. For example, the number of deaths from reportable contagious diseases was 585 last year, a reduction of 64 compared with 1912. Births in the city numbered 14,086 in 1913, an increase of nearly 3,000, while deaths numbered 6,949, an increase of only a little over 600. There was an increase of nearly 300 in marriages, which numbered 6,421. In the latter instance, however, December was an unromantic month last year, the number of knots tied being 453, a decrease of over 300.

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### Quebec.

The Montreal Maternity Hospital cared for 1,243 patients during the year ending 30th September, 1913.

Dr. Louis Laberge, who has been for more than 28 years Medical Health Officer of Montreal, has resigned on account of ill health.

The infant mortality of Montreal remains abnormally high. It was 9.2 per 1,000.

The City Hospital for Quebec is to be built at Beaufort, and a site has been secured.

The Montreal Foundling and Baby Hospital is now incorporated. It will supply an urgent need in the city.

A plan has been outlined for the enlargement of the Western Hospital in Montreal.

The Dominion Government is going to erect a four-storey hospital, 200 by 75, at Grosse Isle. The hospital will be for infected immigrants.

The Grey Nuns of Montreal propose building a hospital at Westmount, 600 by 300, and to cost \$500,000.

Dr. J. R. Dutton has been appointed superintendent of the Alexandra Hospital, at Montreal.

The McKay Institute, Montreal, for the blind, deaf and dumb, had seventy pupils during the year, who made satisfactory progress.

Hon. C. J. Doherty, for the Dominion Government, and Sir Lomer Gouin, for the Quebec Legislature, have promised the Council of Women that a reformatory institute will be established for delinquent women.

Details of his discovery of a germ which is believed to be the cause of scarlet fever were told to the Society of American Bacteriologists by Dr. Newell S. Ferry, of Detroit, at the closing session of the society's convention at McGill University on 2nd January. Dr. Ferry's discovery is considered of the greatest importance, for, should it prove entirely satisfactory, as is expected, the result will be the practical elimination of the disease.

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#### *Western Provinces.*

Thirty-five candidates wrote on the recent examinations in British Columbia, and twenty-three were successful.

Dr. F. X. McPhillips and Dr. R. E. McKechnie, of Vancouver, have been appointed to the Board of Governors of the Clinical Association of North America.

The medical inspection of school children in British Columbia shows that 16,774, out of 29,774, are not vaccinated.

Dr. L. N. McKechnie, Vancouver, has received instructions to make a careful investigation as to the prevalence of bubonic plague.

The Board of Governors of the Regina General Hospital has issued instructions to the architect to prepare plans for a Nurses' Home.

Dr. John Arthur Cullum has been appointed to the army medical corps at Regina, and Dr. Andrew Croll, at Saskatoon.

An attempt was made to amend the Medical Act of Saskatchewan in such a manner as to place the entire control of examinations in the hands of the University of Saskatchewan, and otherwise limit the practice of members of the profession to such branches as they elected to be examined on.

Over \$10,000 has been subscribed for the St. Paul's Hospital, Vancouver. The hospital is nearing completion.

The Isolation Hospital, of Edmonton, is now under the management of the board of the General Hospital. A permanent building and proper equipment will cost \$225,000.

The sum of \$400,000 will be spent on the Royal Jubilee Hospital, of Victoria.

The Ladies' Board of the Summerland Hospital, B.C., is raising \$12,000 for a hospital.

The city of Calgary is preparing to build a tuberculosis hospital, at a cost of \$30,000.

The additions to the Winnipeg General Hospital cost \$600,000, and accommodate 488 patients.

An effort is being made to secure a hospital for Lamont, in Alberta.

The Board of Trade of Perdue, Sask., have recommended the establishment of a hospital there.

The old hospital at St. Boniface is to be rebuilt at a cost of \$80,000.

Dr. A. Braithwaite, of Edmonton, has been appointed to the Dominion Medical Council. He takes the place of the late Dr. G. A. Kennedy.

Money has been collected for the purpose of awarding a prize annually for an essay for original work on physiology or physiological chemistry in the laboratories of the University of Manitoba.

The Winnipeg General Hospital has made application to the Legislature to have the Commissioner of Public Utilities appointed as the person that will investigate all complaints made by any one on the finance or management of the hospital.

The following have secured their license to practise in Alberta: H. Barrow, L. C. Conn, R. G. Douglas, J. F. McCracken, W. A. Proud, W. A. Scanion, F. Standish, B. C. Sutherland, J. A. Jardine, A. B. Wickware, C. F. Atkinson, and P. Dahl.

The Vancouver General Hospital is having built a Nurses' Home to cost \$115,000, and an administration building at a cost of \$90,000.

Dr. C. D. Holmes has been appointed Medical Health Officer for Saanich, in place of Dr. H. R. Nelson, resigned.

Rev. Herbert Gray, M.D., C.M., who was recently appointed medical superintendent of the new Hugh Waddell Memorial Hospital, at Canora, Sask., was given a splendid send-off recently at the Deaconess Training School, Grosvenor Street, Toronto, when he was tendered a reception by the board of the Presbyterian Women's Home Missionary Society. Miss J. F. Botting, a nurse, who is to accompany him to the West, was also a guest of honor.

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*From Abroad.*

Dr. E. C. Spitzka, an authority on nervous diseases, died in New York on the 13th January. He was 61 years of age. He testified in the Guiteau trial.

London charities have received the large sum of \$1,250,000 through the death of a boy, Geoffrey Ansell. The father left his fortune to the boy, but so that it would go to certain hospitals in the event of the boy's death.

Mrs. Agnes Thomson, the first woman in the world to be chloroformed, died 7th January, at Steatham, aged 83. She was present at 52 Queen Street, Edinburgh, on November 4, 1847, when her uncle, Sir James Simpson, discovered the use of chloroform. She proved a happy subject and was often chloroformed in order to demonstrate its pleasing effects.

Dr. Siler, of the United States Commission, has stated that Pellagra is not caused by diseased corn, but by an infection—and is spread through the agency of an insect.

An intercolonial conference for the promotion of an Imperial health exhibition is being arranged by the Victoria League, to be held in London next May, with the object of interchanging opinions from various parts of the Empire on the questions of housing and child welfare. Delegates from official and unofficial bodies in Great Britain and the dominions overseas will be present, and several of them will contribute papers.

Dr. Maria Montessori is the first woman graduate in medicine in Italy. She entered the college at Rome by only giving her initials, and was thought to be a male. She has given much study to the teaching of young children.

In the death of Dr. S. Weir Mitchell, science and letters have lost one of their most gifted men. Born in Philadelphia, February 15, 1830, he acquired from his father, Dr. John K. Mitchell, for many years professor of chemistry in Jefferson Medical College and a poet of no mean ability, a taste for the fields in which he gained distinction.

The 82nd annual meeting of the British Medical Association will be held at Aberdeen from July 24th to 31st, 1914. The president-elect, Sir Alexander Ogston, K.C.V.O., LL.D., Surgeon-in-Ordinary to the King in Scotland—an office which he also held in turn under Queen Victoria and King Edward VII.—Consulting Surgeon to the Aberdeen Royal Infirmary, and Emeritus Regius Professor of Surgery in the University of Aberdeen, will deliver his address on the evening of July 28. The sectional meetings will be held on July 29th, 30th and 31st. As at present arranged, there will be sixteen sections. The annual representative meeting will begin on July 24th, and the conference and dinner of the honorary secretaries of divisions and branches will be held on July 29th.

Lord Rayleigh unveiled a tablet to the memory of Lord Lister at King's College, London, on Wednesday, January 14th, at 4.30.

The taking over by the United States Government of all the deposits of radium-bearing ore in this country, and the establishment of a Federal institution for the production of radium and its distribution to physicians for the treatment of cases of cancer, has recently been suggested.

Report from Milwaukee, Wis., on Dec. 17, states that the Milwaukee Medical Society has voted that its members shall not issue, at the statutory charge of \$3, certificates of complete physical examination and fitness for marriage, as required by the new eugenic marriage law in that State.

It is announced that Dr. Charles Sedgwick Minot, professor of comparative anatomy at the Harvard Medical School, has been recently elected an honorary member of the Anatomical Society of Great Britain and Ireland.

More than five thousand persons attended the dedication of the group of new buildings of the Montefiore Home, in East 210th Street, New York, on Sunday, November 30th. There are nine large buildings, which will accommodate nearly seven hundred patients. The total cost of the new buildings, with equipment, was nearly \$2,000,000, and the expense of maintenance will amount to about \$300,000 a year. Dr. Siegfried Wachsmann is medical director and general superintendent of the institution.

The Federal Bureau of Education has compiled a report indicating a gradual decrease in the number of medical schools and medical students in the United States. During 1913, as compared with 1912, the schools were decreased by 14, the students by 1,200, and the graduates in medicine by 500. The number of women students, however, showed a considerable increase. Of a total of 18,451 students in 1912, 712 were women, while of 17,238 in 1913, 835 were women.

Louis Wickham, M.V.O., M.D., founder of the Laboratoire biologique du Radium and physician to the Hôpital Saint-Lazare, Paris, died recently, after a long illness, at the age of 53 years. Dr. Wickham was most widely known for his researches on the value of radium in the treatment of cancers and other diseases of the skin, researches which had twice obtained recognition from the French Academy in the granting of the Barbier and Benjamin Godard prizes, and shortly before his death secured for him the decoration of the Legion of Honor. He began his work on radium in 1905, and in 1906 established the Laboratoire biologique du Radium, where he instituted a school centre and with his colleagues developed this branch of physiotherapy.

The centennial anniversary of the discovery of iodine by Bernard Courtois was celebrated at Dijon, France, on Nov. 9. An address on the history of the discovery and on the development of the use of iodine

was made by Prof. A. C. Matignon, of the Collège de France. The actual discovery was made in 1811, when Courtois was examining the waste fluids produced in the manufacture of sodium carbonate from the ashes of seaweed, but he did not report it to the French Academy of Sciences until 1813.

Report from Southampton, England, states that on Nov. 15, Dr. Gorgas sailed from that port on his way to South Africa, where he is to advise the Chamber of Mines on the sanitation of the Rand, with special reference to the prevalence of pneumonia.

The Hospital Saturday and Sunday Association of New York, in a recent report states that the cost of running the forty-seven hospitals in the association during the last year was \$4,932,309.45, an increase of \$382,441.79 over the preceding year. The income from operation during that time was \$2,160,957.09, and from endowment \$1,023,158.94, leaving \$1,749,193.42 to be secured from voluntary gifts.

The medical board of St. Vincent's Hospital, New York, records with profound sorrow the death of Dr. Charles Phelps, who, for forty-three years, had been visiting and consulting surgeon to that institution. His great skill and kindly sympathy were always at the service of the sick and suffering poor, and his vast experience and wise counsel always available to his colleagues.

Professor Edwin Klebs, the well-known pathologist, recently died at Bern, in the 80th year of his age. He was born at Königsberg, in Prussia, in 1834, and after graduation worked in the physiological laboratory for a short time. He then devoted himself entirely to pathology, becoming assistant to Rudolf Virchow in 1861. In 1866 he was invited to occupy the chair of pathology at Bern. In 1871 he migrated in the same capacity to Prague, and in 1882 he moved to Zurich. There he taught till 1892, when he returned to Germany. He lived at Karlsruhe till 1895, when he went to Asheville, in North Carolina, as director of a sanatorium, to which a laboratory for the manufacture of bacterial therapeutic products was attached. In 1896 he became professor of pathology in the Rush Medical College, Chicago. A few years ago he returned to France.

Among the victims of the railway accident at Melun on November 4th was Professor Jaboulay, the distinguished surgeon of Lyons, whose remains were not found till November 8th. He was born at Saint-Genis-Laval, near Lyons, in 1860, and studied medicine at the Lyons Faculty. He was appointed demonstrator of anatomy and head of the anatomical department in 1886, almost immediately after taking his doctor's degree. In 1888 he won the title of *professor agrégé*, receiving a very high compliment from Professor Farabeuf on the occasion. After serving as assistant under Poncet, he was, in 1892, appointed surgeon

to the hospitals, and in 1902 succeeded Ollier in the Chair of Clinical Surgery. He was a singularly rapid and skilful operator, and his teaching brought crowds of students to his lectures. He was a man of great originality of mind.

The late Dr. Gavin Paterson Tennent, of Glasgow, by his will bequeathed his entire fortune in medical charity. To the University of Glasgow he left £25,000, as endowment for the Faculty of Medicine. The residue of his estate is to be divided equally between the Royal Infirmary, the Victoria Infirmary, and the Royal Hospital for Sick Children, Glasgow.

On December 4th, a bill was introduced in the House of Representatives, by Congressman Lefferty, known as H. R. Bill No. 9832, which provides that it shall be illegal to transport from one State to another, or to export, or to sell in the District of Columbia, any package of food or medicine which does not bear a complete statement of the contents.

After twenty-six years in the service of the City of New York, Dr. Herman M. Biggs, on December 3rd, resigned his position of chief medical officer of the Department of Health, and his resignation was accepted to take effect on December 31, 1913. Dr. Biggs will devote himself to the duties of chairman of the Public Health Council of New York State, to which he was appointed on the creation of the Council last year.

Many will have noticed with much regret the announcement of the death, at the age of 82, of Mr. Sydney Jones. For many years he was the most prominent figure in the surgical work of St. Thomas' Hospital, to which his reputation brought many visitors, both from home and abroad.

The Equitable Life Assurance Society, of New York, has recently issued a review of its statistics, showing that during the past ten years the indicated death rate from cancer has increased thirty per cent. among males, and twenty-two per cent. among females, in the United States registration area. The increase has occurred in every age group, but is, of course, largely due to more exact diagnosis.

The statute recently enacted in New Jersey, authorizing the sterilization of the feeble-minded, epileptics, criminals, and other defectives, has been declared unconstitutional by the Supreme Court of the State. The Act is held to be contrary to the Fourteenth Amendment to the Constitution of the United States guaranteeing equal protection of the laws to all, and to exceed the police powers of the State. The Court points out the danger of permitting Legislatures to prescribe those upon whom the operation should be performed, since, if sanctioned, the penalty might be extended to include those regarded as undesirable by a majority of a prevailing Legislature.

The Boston Medical Library is the residuary legatee of the estate of Miss E. B. Wyman, of Newburyport, Mass., who died in Italy last February. The bequest will, it is estimated, amount to about \$86,000, and is to be known as the Samuel Wheeler Wyman Memorial Fund, in honor of the testator's father, a graduate of the Harvard Medical School in 1818.

Major Herbert C. French, R.A.M.C., died on 13th October last. He was a son of Sir George French, so well known in the British army.

Antonin Poncet, professor of clinical surgery, University of Lyons, died suddenly at the age of 67.

On Nov. 22 the new Mary Curzon Hospital for Women, at King's Cross, London, was formally opened by Alexandra, the Queen Mother, as a memorial to the late Lady Curzon.

A National Medical Union has been formed in Britain. Its main objects are opposition to the Insurance Act and the policy of the British Medical Association.

James Rutherford Morrison, M.A., M.D., F.R.C.S., has been appointed consulting surgeon to the Royal Victoria Hospital, Newcastle-on-Tyne, in recognition of his services to the institution, and an illuminated address was presented to him.

A monument to the memory of Professor Dieulafoy has recently been erected in the Hotel Dieu, of Paris. The ceremony of unveiling was the occasion for addresses by Professors Widal and Landouzy, and by M. Mesureur, of the Assistance Publique.

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## OBITUARY

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### JAMES SPENCE.

While attending a man who had been frost-bitten, on 20th January, Dr. James Spence, of Thessalon, went upstairs to get a drink, and without watching what he was doing poured carbolic acid from a bottle into a glass and drank it. Death resulted shortly afterwards. He was well-known in the district, and deep regret is expressed at his unfortunate death.

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### JOHN M. CAMERON.

Dr. Cameron was a student in the Toronto School of Medicine from whence he graduated in 1887. For some years he was located in Galt.

Latterly he was practising in Yakima, near Seattle, Washington State. He died of an abscess on the brain caused by mastoid disease, on 28th November last, at the age of 53.

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#### R. J. TRUMPOUR.

Dr. Trumpour died at Unionville on the 19th November, 1913. He was in his 62nd year, and had resided in Minorville for fifteen years. He died of a paralytic attack. He was a highly esteemed medical practitioner.

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#### ODELL ROBERTSON.

Dr. Robertson, of St. Jacobs, died last November. He was in his 87th year. He had practised in St. Jacobs for 45 years.

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#### CHARLES S. MURRAY.

Dr. Murray died of pneumonia on 6th November. He graduated from the University of Toronto. He practised in Newark, N. J., for some years. When he retired he removed to Toronto where he died.

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#### GEOFFREY STRANGE BURT.

Dr. Burt died at Port Arthur where he had practised for many years. He was in his 54th year.

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#### ANDERSON R. ABBOTT.

Dr. Abbott was born in Franklin 77 years ago, and graduated from Toronto School of Medicine. He practised at one time in Chatham and Dundas and Oakville. He retired 25 years ago. He is survived by his widow, two sons and three daughters. Death occurred on 30th December.

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#### JAMES D. BALFOUR.

Dr. Balfour, of London, died 7th January. In his early life he was a school teacher. He graduated from the Western University in 1887. He was a splendid student and a fine practitioner and esteemed by his confrères. He was in his 58th year, and leaves a widow and three sons.

## COLIN WALKER.

Dr. Walker, a former resident of Chatham, died in Berrytown, Michigan, where he practised. He was a graduate of Detroit Medical College.

## CHARLES S. B. FAIRBANKS.

Dr. Charles S. B. Fairbanks, a well-known resident of Coburg, died very suddenly 19th January at his home, College Street. He arose about 8 a.m., looked out of the window, made some remark about the weather, and lay down again, though he had not complained of feeling unwell. In a few minutes his wife heard him breathing heavily and rushed to his side. She at once summoned aid, but he was past speaking and died before a physician arrived. He is survived by his widow, formerly Miss Hague, and one son, Mr. Charles Fairbanks.

## BOOK REVIEWS

## GENITO-URINARY DISEASES AND SYPHILIS.

Genito-Urinary Diseases and Syphilis. By Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinary Diseases, Atlanta Medical College; Editor Journal-Record of Medicine; Urologist to Westley Memorial Hospital; Genito-Urinary Surgeon to Davis-Fisher Sanatorium; Urologist to Hospital for Nervous Diseases, etc., Atlanta, Ga., assisted by Omar F. Elder, M.D. The Warrermann Reaction, by Edgar Paullin, M.D. Second edition revised. 527 pages, with 109 illustrations and 5 colored plates. Price, \$5.00 net. Atlanta, Ga.: E. W. Allen & Co.

In this volume we have an accurate and up-to-date statement of medical and surgical knowledge on these diseases. Gonorrhoea, cystitis, calculus, prostatic troubles, syphilis, chancroid, sexual neurasthenia, diseases of the penis and scrotum, diseases of the testicles, diseases of the kidneys, the Wassermann reaction, and the salvarsan treatment, are all carefully considered. The author and his associates have done well to issue so excellent a treatise in such small bulk. The paper and press work are good, and there are a fair number of illustrations. We can quite confidently recommend this volume.

### ULCER OF THE STOMACH.

*Ulcer of the Stomach.* By Charles Bolton, M.D., D.Sc., F.R.C.P., Director of Pathological Studies and Research, and Lecturer in General Pathology, in University College Hospital Medical School; Physician (with charge of out-patients) to University College Hospital. London: Edward Arnold, 1913. Price, 15s net.

There has been much and excellent work done on the stomach of recent years. Both medical and surgical experts have been bending their energies to the solution of the many phases of gastric ulceration. The present volume is bound to take its place at once among the best. It is well written and beautifully illustrated. The paper, typography and binding are all that could be desired. The causes, the course, the complications, and the treatment of ulcer of the stomach are fully dealt with. This is a book that stimulates the reader, and at once gives to the reader the desire to read on, as it never lacks in interest. It is a sure guide to what is best and most modern. As a volume in any well-stocked library this book will make an excellent addition.

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### NERVOUS SYSTEM DISEASES.

*Diseases of the Nervous System for the General Practitioner and Student.* By Alfred Gordon, A.M., M.D., late Associate in Nervous and Mental Diseases, Jefferson Medical College; late Examiner of the Insane, Philadelphia General Hospital; Neurologist to the Mount Sinai Hospital, to Northwestern General Hospital, and to the Douglas Memorial Hospital; Member of the American Neurological Association; Fellow of the College of Physicians of Philadelphia; Corresponding Member of the Société Médico-Psychologique de Paris; Member of the American Institute of Criminal Law and Criminology. Second edition, revised and enlarged, with 169 illustrations. Philadelphia: P. Bakiston's Son & Co., 1913. Price, \$4.00, net.

This book covers the ground usually traversed in such works. It is well written and illustrated. The work is divided into a convenient system of paragraphs, marked out by black-face type. Two features attract one's attention, namely, briefness and accuracy. The author reveals a thorough familiarity with the literature of neurology, and handles this knowledge skilfully in the make-up of his own book. The more one reads of this volume the more one is impressed with the labor the author must have been at to compress so much matter into these 600 pages. To condense well is a rare gift in an author. We wish for this work a large sale.

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### THE HEART BEAT.

*Clinical Disorders of the Heart-beat.* A Handbook for Practitioners and Students. By Thomas Lewis, M.D., D.Sc., F.R.C.P., Assistant Physician and Lecturer in Cardiac Pathology, University College Hospital; Physician to the Out-patients, City of London Hospital for Diseases of the Chest. London: Shaw & Sons, 7 and 8 Fitter Lane, E.C., Printers and Publishers.

It has become well known that Dr. Lewis is one of our most careful and painstaking of clinical workers on cardiac diseases. We look, therefore, with interest on anything that he contributes towards the elucidation of the clinical manifestations of heart diseases. In this little volume of 115 pages, the author takes up Disorders of Cardiac Mechanism, Sinus Irregularities, Heart Block, Premature Contractions, Simple paroxysmal Tachycardia, Auricular Flutter, Auricular Fibrillation, and Alternation of the Pulse. It is not a book that one can read while he runs, as it must be studied closely; but the reward is great. It is really a pleasure to peruse this little volume. Every page is full of material for thought. The applications to practical medicine form a prominent feature throughout. Of this book we cannot speak too highly.

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#### HUMAN ENERGY.

Human Energy. By Albert Abrams, A.M., M.D., LL.D., San Francisco.

This brochure is a print of the author's address before the American Association for the Study of Spondylotherapy. Those who wish to acquaint themselves with the views held by this school of medical men will do well to read these pages. There are many who will not follow the author, but this does not detract from the vigor with which he advances his views.

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#### PREVENTION OF TUBERCULOSIS.

The Canadian Association for the Prevention of Tuberculosis' Thirteenth Annual Report, with Transactions of the Annual Meeting, held in Ottawa, Ont., March 12th and 13th, 1913.

In this report there is much evidence of progress in the way of prevention. The papers to be found here are of interest and value. If the report has a wide distribution it will do much good.

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#### ONTARIO BOARD OF HEALTH.

The 31st Annual Report of the Provincial Board of Health of Ontario, Canada, for the Year 1912. Printed by order of the Legislative Assembly of Ontario.

This report deals with many interesting topics. There are many useful papers and tabular matter of considerable value. These reports from year to year are wielding a great influence in the spread of information on health subjects. The public is reaping a good harvest for the outlay expended in this way.



9. Live in the country if you can.
10. Watch the three D's—Drinking water, Damp, Drains.
11. Have change of occupation.
12. Take frequent and short holidays.
13. Limit your ambition.
14. Keep your temper.

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#### RESEARCH WORK ON TUBERCULOSIS.

In order to find a vaccine which will cure tuberculosis, which, it is estimated, kills more than 120,000 persons in France every year, Dr. Albert Calmette, head of the Pasteur Institute at Lille, has come forward with a novel proposition. He asks the French Government to give him one of the little islands off the coast of French Guinea. There, in a climate which is warm and free from sudden changes, Dr. Calmette proposes to establish a laboratory in which he can experiment with monkeys in their natural habitat. It is impossible in the countries of the north, such as in France, England, Germany or Italy, to conduct such experiments with satisfaction.

In order to carry out his plan Dr. Calmette asks an annual appropriation of \$60,000 for ten years. In an interview he tells what he has already accomplished in fighting tuberculosis.

"I have made a long series of experiments," he says, "which have shown me that a new line has been opened up in anti-tuberculosis vaccination. I have succeeded in vaccinating calves against tuberculosis so that they remain immune from the disease for a year and a half. Virulent cultures of Koch bacilli were introduced into their food and the bacilli caused no trouble whatever in the functions of their organs. Other cultures of living bacilli were injected under their skin, while hundreds of millions of germs were injected into their veins. The latest experiments on these animals demonstrate that they do not show even the slightest trace of bacillary infection.

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#### ROYAL COMMISSION ON VENEREAL DISEASES.

The following is the official report issued to the press by the Secretary of the Royal Commission on Venereal Diseases:

At the eighth meeting of the Royal Commission on Venereal Disease evidence was given by Sir William Thompson, Registrar-General for Ireland.

He said that as a cause of death venereal diseases played relatively a small part in Ireland. The death-rate from syphilis and allied diseases was 0.78 per 10,000 of the population, whereas the figures for tuberculosis at the head of the list were 21.52 per 10,000.

Compared with the previous years the deaths from syphilis and general paralysis of the insane appear to show a tendency to increase, but Sir William Thompson thought that much of the increase was more apparent than real, and was due to the more careful recording of deaths.

The greater part of the deaths from venereal diseases occurred in the two cities Dublin and Belfast. In Dublin the figures were abnormally high, the death-rate from syphilis and general paralysis of the insane being about twice those for London.

On the whole the incidence of venereal diseases in Ireland was very much lower than in the rest of the United Kingdom; the syphilis death-rate was only that of England and Wales, while with regard to infant mortality the number of deaths due to syphilis per 1,000 births in the three kingdoms were—England and Wales 1.29, Scotland 1.4, Ireland 0.59.

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#### OPERATIONS UNDER DIFFICULTIES.

A few weeks ago a workman engaged on the top of the roof of a tall building at Springfield, Mass., dislocated his shoulder.

It was impossible to bring him down, so a surgeon climbed up, and, coolly sitting astride a girder, hundreds of feet above the crowded street, proceeded to chloroform the injured man and reduce the dislocation.

To the man in the street the skill of the surgeon is always something of a miracle. To carve living flesh with steady hand and sure eye, to secure each streaming vein, to remove diseased organs, and then to mend up the wound so perfectly that hardly a scar remains, seems to him to require almost superhuman skill.

And there is no doubt but that a big operation calls for the very highest qualities that man possesses. Even in the perfectly lit and perfectly appointed operating theatres of a great hospital, with every possible aid at hand that modern science commands, the task is a severe one.

Yet often and often the surgeon is called upon to perform operations without any such aids, and then the ordeal may be almost as severe for the doctor as it is for the patient.

For instance, in a railway accident.

One raw winter morning, two years ago, a passenger alighting in a hurry from a train at the little station of Earlestown, near Warrington, slipped and fell between the still moving train and the platform.

A doctor, summoned in haste, found that the only possible method of extricating the unfortunate man was to amputate one of his legs.

Instruments were fetched, and as it was not yet daylight, a ring of porters stood round with station lanterns, while other persons struck matches to assist the surgeon.

In spite of the cramped position in which the surgeon was compelled to work, and the lack of light and appliances, the operation was quickly and successfully finished, and the sufferer removed to a hospital.

Often in war time surgeons have had to operate on the battlefield, sometimes actually under fire. But it was under fire of a different sort that two American doctors performed an operation at the hospital at Biddeford, in the State of Maine.

The operation was to remove an internal ulcer, but five minutes after they had begun it was discovered that the hospital was afire.

To move the patient was to kill her. The surgeons stuck to their work. The roar of the flames was plainly heard, and the hiss of water from the fire hose. Presently water began to pour through the roof and pieces of wet plaster to fall thudding to the floor. The nurses put up umbrellas and held them over the patient and the doctors. No one dreamed of moving until all was finished and the wound sewn up. Then the patient was removed to a place of safety.

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#### THE ACADEMY OF MEDICINE, TORONTO.

At the December meeting of the Medical Section of the Academy of Medicine the programme provided by the Fellows was a clinical one. The cases and reports of cases were all of special interest and brought out a good discussion.

##### ELEPHANTIASIS.

Dr. H. B. Anderson exhibited a case of elephantiasis. This patient, a stenographer and unmarried, was 29 years of age. In her previous history she had typhoid and malaria fevers, and at present she is troubled with headache due to eye-strain. This case had been before the Academy, October 7th, and at that time the statement of the case was that at fifteen years of age her ankles began to swell and this enlargement had continued for the last fourteen years, until at the first exhibition before the Fellows of the Academy there was found a uniform swelling of the legs with no pitting on pressure and no puffiness.

The swelling was confined to the lower extremities. One leg, the left one, was very much enlarged. Its circumference at the middle of the thigh being 24 inches, and circumference at the calf 23 inches; the right thigh 20½ inches, and the right calf 19 inches. The swelling on both sides extended up to the groin. The blood examination was negative, no filaris being found either of diurna or nocturna variety. Also there was no eosinophilia.

On the treatment of rest, bandaging and the use of thiosinamin, marked improvement was the result. In two months the measurements were reduced by a maximum of eight inches and a minimum of six. As a great deal of improvement took place before the administration of the medicine, probably by compressing the lymph from the lymph places, it was difficult to say how much of the improvement was due to the thiosinamin. There is no doubt the case is due to filaria, but this parasite was not found in the blood.

#### MUSCULAR DYSTROPHY.

Dr. Julian Loudon presented a case of muscular dystrophy. Relating shortly the peculiarities of the disease, Dr. Loudon said that muscular dystrophy was a disease of the muscles differing from spinal forms, such as progressive muscular atrophy, and in children spinal muscular atrophy. The general characteristics of this disease to note are, first, the heredity; second, distribution of the atrophy; third, absence of fibrillary twitching; fourth, diminution in electrical excitability, but no typical reaction of degeneration, this showing to faradism as well as to galvanism. The disease he classified under the headings:

1. Simple atrophic.
2. Pseudo hypertrophic, here there is atrophy with the false hypertrophy.
3. Erb's juvenile or scapular form.
4. Facio scapulo humeral form, where the muscles of the face, especially around the mouth, and sometimes around the eyelid, are involved.
5. Pelvic type.
6. Myotonia atrophica.
7. Transitional form.
8. Distal type.

A characteristic sign for diagnosis is that these patients, when arising from the recumbent to a standing posture, turn first into a prone position, and, drawing up the feet, rise in that way. The gait is waddling, and the pelvis is raised unduly. Also the gait is high-stepping, and it is difficult for the patient to climb stairs.

The case presented was Erb's juvenile form of the muscular dystrophy. She had no atrophy of the muscles in the lower extremities, and the ordinary superficial reflexes showed no change from normal. This young girl had three sisters married and quite healthy; three sisters younger than herself, quite healthy. She showed a marked lordosis and drooping of the shoulders, with weakness of the shoulder girdle. The protruding abdomen and waddling gait were features of the case. It was a case of congenital disease.

#### LUPUS VULGARIS.

Dr. King Smith presented a case of lupus vulgaris. The patient, a female, had had lupus for nineteen years and it now had progressed over a greater part of the lower right side of the body and upper right thigh.

#### PEMPHIGUS VEGETANS.

Dr. King Smith also reported a case of pemphigus vegetans, which had presented difficulties in diagnosis. The patient was shown to the International Medical Congress. Some disagreed about the diagnosis, but Sir Malcolm Morris called it pemphigus vegetans. The case was unique in that it had lasted seven years.

#### RADIUM THERAPY: ANGIOMA.

Dr. G. S. Young presented a case of angioma which had not yielded to operation, but had been successfully treated with radium, which Dr. W. H. B. Aikins had applied. This patient Dr. Young saw some nine months previous to the date of exhibition. He came to Dr. Young at that time with a growth that had been present for a number of years, but now began to be painful. In the preceding seven or eight years this man had had two operations performed for the relief of the condition, but improvement was only temporary. The tumor, before radium treatment, projected about one inch from the surface of the face and extended over a large area. At the last operation this entire growth was removed, but it was not very long until it was as large if not larger than before. Inside of two weeks after radium treatment was begun the growth had markedly decreased in size, and the patient now is completely cured. The result was certainly spectacular. The treatment of this case was by the application of radium for forty hours and the injection of twenty-one hypodermics of radium salt.

#### PAPILLOMA OF THE MOUTH.

Dr. Aikins then presented a case which had been referred to him

by Dr. B. Z. Milner. This was a young lady, age 23, first seen in April, 1913.

In December, 1911, the patient had noticed a small lump in the upper gum on the right side. The lump became larger and she consulted Dr. Milner in February, 1912, but not again until November, 1912, when Dr. Milner excised the mass and removed the wisdom tooth. The pathologist's report was a benign papilloma.

When the patient commenced treatment there was a mass of spongy tissue on the alveolar margin of the upper jaw, and also some on the lower. The tissue broke down very rapidly with bleeding. Under two applications of a tube of radium the papillomatous mass has disappeared and left a smooth healed margin.

This case illustrates very well the action of radium on ordinary warty growths. In the same way warts on the skin can be made to disappear readily and without discomfort.

#### EPITHELIOMA OF THE SKIN.

The patient was a man aged 77, referred by Dr. Chas. Foster, in February of this year. About three years ago the ulcer appeared below the right ear. It increased in size slowly, and when the patient was first seen it was  $1\frac{1}{2} \times \frac{5}{8}$  inches in area. The edges were hard, thickened and everted, and the condition was definitely epitheliomatous. The lower edge of the auricle was also involved. After three heavy exposures to radium, healing gradually took place and was completed in about two months.

#### RODENT ULCER.

Mr. W., aged 77. An ulcerated lesion began about twenty years ago in the nasal fold of the left side of the face. When seen in April of this year it was one inch in diameter, with very thickened, hard, raised edges. The ulcerated part extended through almost to the mucus membrane of the lip.

Various treatments had been used, such as cautery, caustics, ointments, etc. He had X-ray treatment seven years ago. Radium was used at intervals, and complete healing has occurred.

Dr. Aitkins also gave lantern views of several cases he had treated—

1. Angioma of the upper eyelid in a young infant, which caused considerable deformity. Within two months after the use of radium the mass had almost entirely disappeared.
2. A case of lupus vulgaris, which was referred by Dr. James Third, of Kingston, in May, 1911. The condition was of about ten years' duration. It began on the mucus membrane of the left nostril and gradually spread. Various treatments were used, as cauterization, electrolysis, X-ray, currettage.

In 1905 her general health was very poor and the condition extended, and perforated the septum. Since then the skin at the alar margins had become involved, and shortly before Dr. Aikins saw her nodules had appeared on the left cheek. The nose when first seen presented a most distressing appearance, the margins of the nostrils being covered with large unhealthy granulations. There was a free foul discharge from the nostrils. Very heavy destructive doses of radium were employed, and as a result the diseased tissue had been removed, and the nostrils now present a healed margin. The disease present inside the nasal cavity was treated by radium tubes, which were inserted into the nostrils. On the cheek the nodules present have cicatrized. The patient's general health is not very good, and close watch has to be kept over the condition for fear of a recurrence of the disease. The present local appearance is regarded as very satisfactory.

3. The patient, who had been referred by Dr. H. L. Anderson, of Niagara-on-the-Lake, Ont., in September, 1911, had an epithelioma behind the left ear, which had started some four years previously. At the date mentioned the area was as large as a fifty-cent piece, with raised, hard, everted edges. The part was everted under cocaine and a radium plaque with one lead screen left in position subsequently for 12 hours. When seen a month later there was still an area three-eighths of an inch in diameter, which had not yet healed, but was quite healthy looking. The healing process continued and the condition had remained satisfactory since then. Photographs were shown to illustrate the condition before and after treatment.

4. Lantern slides were given showing the results obtained by radium treatment in a very large naevus, which caused great disfigurement. The patient was a young man. The skin of the face was of a deep purple red, studded with angiomatous nodules. There was considerable involvement of the lip extending through to the mucus membrane. On pressure the blood could be driven out to a certain extent, but not entirely. The second photograph showed the result six months after radium treatment was begun. The nodular appearance has disappeared, the distorted lip was much improved, and the color had faded to a very considerable extent, so that the patient was more than satisfied with the result.

#### PROGRESSIVE MUSCULAR ATROPHY.

Dr. J. H. Elliott presented a case of progressive muscular atrophy. The patient was one from Dr. Anderson's service in St. Michael's Hospital. Previous to this he had been compelled to give up his employment as a boilermaker because of weakness in his hands, making it impossible for him to hold and work the compressed air riveter apparatus.

An examination of this patient showed that he could not grasp firmly with the hand, and there was weakness of the muscles of the forearm and marked atrophy of the interossei muscles. The biceps and triceps muscles were also weakened, and in addition to the atrophy, there were sensory changes. Tactile sensation was not lost, but very much altered. He could not distinguish readily whether he was being pricked with the head or with the point of a pin. When pinched, he felt it, but there was little pain. The sensation of heat and cold was practically lost. The most pronounced changes were in the distribution of the ulnar nerve. The most marked disturbance was in the right hand, the left being stronger and exhibiting very little atrophy. The left foot was weaker than the right, and both feet showed a partial anæsthesia. There was no progress of the disease during the two months in hospital, but there had been no further loss of strength. There was no Rombergism present, the pupil reflexes were normal. The clinical picture is that of progressive muscular atrophy, but with the added sensory changes there is the question whether this is not a case of syringomyelia. The Wassermann reaction was negative.

Dr. Loudon, discussing the case, said he had had opportunities to see the patient before the meeting, and that this loss of sensation was not only to heat and cold, but to all forms of sensation, therefore this could not be a case of syringomyelia. From the symptoms presented he would think of some peripheral lesion, involving both the sensory and the motor sides. For example, it might be a case of cervical rib, and he would not care to say it was not cervical rib until an X-ray had been taken. If not cervical rib, then he would consider it a case of syphilitic disease, but this seems to be ruled out by a negative Wassermann. The other disease one would think of was lead poisoning. He did not consider it a case of syringomyelia nor a spinal cord condition, and it is not progressive muscular atrophy.

Dr. Graham Chambers asked whether the anæsthesia corresponded to the peripheral type or to the central type. In reply it was stated that the anæsthesia was distributed over both hands and both legs fairly equally, and on the right hand it was distributed, especially over the area of distribution of the ulnar nerve.

#### THORACIC ANEURISM.

Dr. J. E. Elliott gave the following history of an aneurism case and presented the specimen removed from the autopsy. A man who had been ill three months came into St. Michael's Hospital because of pain in the chest. He was in the hospital some eighteen months and then died of hæmoptysis. The post mortem finding was an enormous

dilation of the ascending arch of the aorta. During life there was no diastolic murmur, but there was a systolic one over the area of the aneurism. Death was due to perforation into the lower part of the upper lobe of the lung and hæmorrhage into the lung. The clinical fact of interest is that he developed this enormous aneurism in three months' time. The Wasserman was positive and the X-ray showed the shadow of the tumor.

#### HICCOUGH.

Dr. Brefney O'Reilly reported a case of hiccough. This occurred in a female patient under treatment of cirrhosis of the liver. It was a very serious form in which all the usual routine treatment proved of no value. When it seemed as if there was no hope and the patient was dying, the ears were searched and wax was removed. Since that there has been no return of the hiccough.

#### ASTHMA.

Dr. O'Reilly also reported a case of asthma caused by the presence of a parrot. Paroxysms occurred whenever the patient was in the same room as the parrot. She was completely relieved when the offending ethiological factor was removed.

Dr. Fotheringham reported a case of asthma which was brought on as a result of eating strong cheese. When the cheese was prohibited there was no more asthma.

Dr. Marlow showed a specimen of a hard concretion which had been coughed up by a woman who had had asthma for eight years. During this period she was subject to paroxysmal attacks of coughing, and it was during one of these attacks that she coughed up this little calcereous substance one-half inch in length. These attacks had developed frequently, and after losing one of her false teeth, but she had forgotten about this until after she had coughed up this specimen. Dr. Elliot considered this a concretion formed in the lung itself and later cast off.

Dr. J. H. Elliot referred to a patient who had asthmatic attacks only when she went out in the wind. It was found that her attacks were due to exanations from horses.

Dr. J. F. Ten Eyck reported two cases of asthma, in each of which a cure was effected by change of place of residence.